graduated from the Saint Louis Medical College in 1883. He then accepted the opportunity of entering the office of John Green. Three years of this training was followed by two years, at the "Koenigliche Christian-Albrechts" university, Kiel, Germany, after which he returned to Saint Louis and associated himself with Drs. Green and Post. He was associated with the eye department of Washington University throughout his life, assuming the professorial chair in 1902, and being active in the development of ophthalmology in the school until his retirement in 1921, to become professor emeritus. Of the many honors given him suffice it to mention that he was a member of each of the national ophthalmic societies; held the office of vice-president of the section on ophthalmology of the American Medical Association, and received the degree of master of arts from Washington university in 1912 and that of doctor of science from the same university in 1926. He insisted on there being a laboratory connected with his office and if ever there was a slack day he would get out his specimens and work on them. The young men trained in his office were urged to make investigations and to present their studies before the medical societies. AJO 1929,12:235-236

Exner, Siegmund (1846-1926) Austrian ophthalmologist of Vienna. He studied there and in Heidelberg, where →Helmholtz was teaching. He received his M.D. at the University of Vienna in 1870, and from 1875 was professor of physiology there. His writings deal chiefly with neurophysiology and physiologic optics. *Die Physiologie der facettirten Augen von Krebsen und Insecten* Leipzig & Wien 1891.Albert

Eyre, J.W.H. (1870-1944) British bacteriologist and ophthalmologist. After qualification from Guy's Hospital in 1893 he became ophthalmic assistant to →Brailey and →Higgens. In that period of life he published in an important series of papers, the results of his work on bacteriology of the eye , in which he was one of the pioneers.BJO 1944; 28:202.

F

Fabini, Friedrich (?-?) Born in Siebenbürgen, he received his medical degree at Pesth, Hungary, in 1822. In 1823 he became Fellow of the Medical Faculty at Pesth. A year or two later he settled in Klausenberg, where he practised for many years. His most important ophthalmologic writings are: "*Beobachtungen über den Grauen Staar"*(v. Graefe u. Walther's Jour.der Chir., xiv, 1830); "*Pflege Gesunder und Kranker Augen* " (Leipzig,and Pesth,1831, 1835).

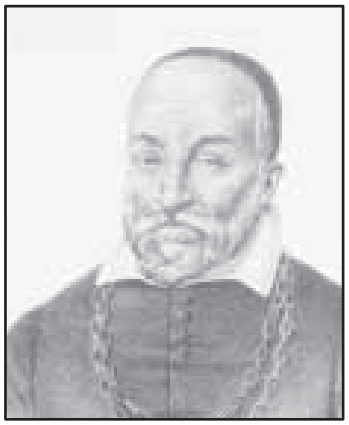
Fabini, Janos T. (1791-1847) Hungarian Ophthalmologist. Fabini was born in the Hungarian village of Hassag. He attended a grammar school in Kolozsvar, Transylvania, and studied medicine in Vienna. For two years, from 1815, he was Assistant of Professor →BEER and during the same period he worked together with many well-known ophthalmologists, as von→Graefe, →Jaeger, →Rosas, →Quadri, →Mackenzie, →Flarer and →Ammon. In 1817 Fabini was appointed to the Chair of Ophthalmology at the University of Budapest. The clinic with its 24 beds was in a rather primitive condition, and he worked hard to modernize it. He lectured on ophthalmology for two terms both in Hungarian and German. He was one of the Ophthalmologists of international reputation who did extensive research work and wrote highly estimated scientific contributions. His favourite subjects were diseases of the cornea, ophthalmological instruments, operations for squint, etc. The manuscript of his papers as well as his handwritten case histories from the years 1820 to 1830 are preserved in the library of the II. Eye Clinic of the University Medical School in Budapest. He performed numerous cataract operations. In the beginning he preferred reclination to extraction but in the eighteen—forties his cataract operations were extractions in 70 per cent. His best-known work, the '*Doctrina de Morbus Oculorum*' is a university textbook in Latin on Ophthalmology, published in Pest. It was, indeed, the last book on Ophthalmology to appear in Hungary in Latin. In 1831 it was translated into Hungarian, German, Italian and Dutch. The book was considered so well written for university tuition that it was used not only in the University of Pest but also in Padua and Utrecht. His monograph on the diseases of the cornea, '*Praecipuis Corneae Morbis*' is equally noteworthy, it was published in Buda in 1830 also in Latin. Also: *Einige Bemerkungen über das Schielen*" (Med.Jahrb.des k.k. Oesterr. Staates,xxxiv, 1841.) and numerous articles in the Encyclopedic Dictionary of the Medical Sciences and in "*Orvosi Tár*.". Magda Radnot: *Famous Hungarian Ophthalmologists* (Budapest, 1970)

Fabini, Johann Gottlieb *see* **Fabiani, Janos T.**

Fabri, Honoré (1606-1688) French mathematician and physicist, who was born near Belley, France, educated at the College de la Trinite in Lyons, and ordained a Jesuit priest in 1635. He taught metaphysics, astronomy, mathematics, and natural philosophy at the College from 1640 until 1646, then was transferred to Rome as a member of the Penitentiary College (the Inquisition), remaining there for the rest of his life. Fabri engaged in research and controversy on a wide range of scientific issues, including helio-centrism, the explanation of tides, and the circulation of the blood (he discovered the latter, independently of Harvey, about 1636); his writings on light and colors contributed to the science of optics. *Synopsis optica* Lugduni 1667. *Tracatus duo: quorum prior est de plantis, et de generatione animalium; posterior de homine*. Paris 1666. Albert

Fabricius ab Acquapendente. See **Fabricius, Hieronymus**.

Fabricius Hildanus. see **Fabry, Wilhelm**.



Hieronymus Fabricius

Fabricius, Hieronymus (1533-1619) Also called Fabricius ab Acquapendente. Born in Acquapendente (Aquila Tuscia) near Orvieto, Italy, Fabricius studied, at Padua, first ancient languages and philosophy, and, later, medicine and surgery. He was pupil and successor of Falloppio, as well as eminent teacher of William Harvey, the discoverer of the circulation of the blood. Though Fabricius was one of the most celebrated surgeons of all time, and author of the greatest work on surgery composed in the Renaissance period, it nevertheless possesses but little ophthalmologic importance. Thus, his ocular operations are all essentially taken from the Greeks and the Arabians-chiefly Celsus, Paulus and Albucases—and he even admits that he himself has performed the cataract operation only twice or thrice all told. Later, he renounced this operation absolutely, recommending for cataract the use of a certain collyrium in an eye-cup.He wrote:"*De Formato Foetu*" Venice 1600[GM465]; *De Formatione Ovi et Pulli*" Patavii 1621 [GM 466]; *De visione, voce, auditu*. Venice 1600 ; *Tractatus anatomicus triplex. Quorum primus de oculo* Frankfurt 1614; *Oeuvres chirurgicales* Lyon 1649 (French translation of Opera chirurgica); *Opera chirurgica in pentateuchum, et operationes chirurgicas distincta*. Editio quinta ... Padua 1666; *Le opere chirurgiche* Padova 1684American Encyclopedia of Ophthalmology,Vol.7, p.5132-5133. Albert

Fabriz, Wilhelm. see **Fabry, Wilhelm**.

Fabrizzi, Girolamo see **Fabricius, Hieronymus**.

Fabry, Wilhelm (1560-1634) He is also called Wilhelm Fabriz, Fabricius Hildanus, and "The Other" Fabricius (in contradistinction to Fabricius ab Acquapendente). The son of P. A. Fabry, clerk of a court at Hilden,Germany, the subject of this sketch was born at Hilden (hence the name,"Hildanus"),June 25, 1560. Fabry was a classical scholar and a brilliant and resourceful surgeon. He is often called, and properly, "the first learned German surgeon." He was the first to amputate the thigh, and was equally daring and ingenious in otology and ophthalmology. He is often said to have been the first in history to remove from the eye a piece of steel or similar foreign body by means of the lodestone or magnet. This honor, no doubt, belongs to →Braunschweig, or Brunswick, but Fabry's operation is, nevertheless, so extremely important and the original narrative thereof is so quaintly exact and interesting that we here subjoin an almost literal translation: *"A patient from the region of the 'Bieler See' wishing to buy a fire-steel, first tested it by striking it on a stone. A spark then flew up into that part of the cornea, where the iris can be seen, and took fast hold under heavy pain. His neighborhood employed upon him for many days all its industry, but in vain. When the pain and inflammation had powerfully increased, he came to me at Bern on the 5th of March, 1624. I put him on right diet, emptied his body by purgatives and phlebotomy, for he was plethoric, and sought at various times and on divers days to remove the iron splinter. But it was so small that it could not be removed by means of instruments. Then my wife thought up the most appropriate cure. While I, that is to say, with my two hands, open the lids, brings she the magnet to the eye, as near as the patient can bear it. When we had done this many times and repeatedly (for not long could he bear the daylight, which however in this matter was an absolute necessity) then, finally, sprang forward before our eyes the splinter onto the magnetstone. After that, the patient got well rapidly under the employment of a pain-relieving collyrium. So you see that much which cannot be carried out by main strength can be easily performed by care. One must,*

however, well observe that mostly the opposed powers of this magnetstone must be found in one and the same piece-that is, that the iron attracts at the one end, but at the other repels: which indeed was looked after in the case of our magnet. In order, therefore, to avoid error, one must, before the operation, test all the corners of the stone exactly, in order that no part which drives iron away front it may be brought toward the eye. That is, moreover, easy to test, by bringing the magnet gradually toward iron filings which have been strewed upon a table or on a clean piece of paper." Another remarkable operation of Fabry's (which, once more, he was not the first, but the second, to perform) was that of total removal of an eyeball. (The first to remove the entire eye was George →Bartisch). Fabricius seems to have been a man of the highest moral character. All his contemporaries speak well of him in this respect. He was also very pious. His motto, engraved on a copper plate, was "*Omnis tutela a Deo*.". Among his more important writings are:"*New Feldt Arztny Buch von Kranckheiten und Schäden, so in Kriegen den Wundarzten gemeinlich fürfallen*" Basel 1615[GM2142]."*De Combustionibus*" Basel 1607[GM2245], "*De Gangraena et Sphacelo*" Cologne 1593[DM5566]. *Observationum et Curationum Chirurgicarum Centuriae* 6 volumes, Basel,Franckfort & Lyons 1606-1641 [GM5570] ; *Selectae observationes chirurgicae quinque & viginti*. Geneva 1598. *Opera quae extant omnia* Frankfurt 1682. American Encyclopedia of Ophthalmology,Vol.7,p.5133-5134.Albert

Fairclough, William Aiken (1881-1968) New Zealand ophthalmologist. Fairclough's interest in the specialty started with his spell as resident house surgeon at the Royal Westminster Ophthalmic Hospital in 1907, after which he passed the F.R.C.S.E. examination and returned to New Zealand. He became a Foundation Fellow of the Royal Australasian College of Surgeons in 1928, and for 28 years was a senior honorary ophthalmic surgeon at Auckland Hospital. He became particularly interested in gas keratitis, contact lens work (he attended Dallos's clinic in 1938), and heredity in retinoblastoma. In addition he presented papers at meetings of zoological societies and similar institutions. Fairclough was a man of great integrity who never hesitated to defend his own rights or those of his profession, and he was a force majeure in New Zealand ophthalmology for four decades. BJO 1968, 52:942

Fajardo, Romeo V. (1927-) Filipino Ophthalmologist, Professor Emeritus of the University of the Philippines, College of Medicine. He graduated from the University of Philippines (UP) in 1952 with M.D. degree granted and studied Ophthalmology at the UP Hospital under Prof. G. DeOcampo. He completed residency training at Wills Eye Hospital and received Diplomate of the American Board of Ophthalmology in 1960, worked as a Fellow in Uveitis at the same Hospital. On home coming, he received Diplomate of the Philippine Board of Ophthalmology in 1973. The academic positions he has held are Assistant Professor (1966-74), Associate Professor (1974-85), Professor (1985-92) of the University of Philippines and retired in 1993. He was chairman of the UP Department of Ophthalmology from 1988-91. He is currently serving as the Chairman of the Manila Doctors Hospital since 1998. In the professional Societies, he served in many key positions and some examples are President of Philippine Society of Ophthalmology (1975-76), Philippine Board of Ophthalmology (1971-present), Chairman (1987-97) and Chairman Emeritus (1997-) of the Board, Councillor (1981-) and the President of XVII Congress of the Asia-Pacific Academy of Ophthalmology (APAO), Director of the Philippine Society for Prevention of Blindness (1978-), President of the Association of Philippine Ophthalmology Professors (1991-), Country Representative to the International Agency for the Prevention of Blindness (1976-), Councillor of the International Ocular Inflammation Society (1991-), Regional Secretary of the International Geographic Ophthalmology Society (1982-) and many others. He established a Uveitis Clinic at the Philippine General Hospital of UP, expanded the Neuro-ophthalmology Clinic, founded Research Units at the Hospital and organized many courses for advanced study of Ophthalmology. Furthermore, he established Rural Eye Clinic adopting a community approach and Station Eye Clinics to distribute manpower to rural areas and also the Ophthalmic Aid Training Course. He adopted a modular eye care system for prevention of blindness throughout the Country. He has written many textbooks in Ophthalmology and monographs, e.g. *Textbook of Ophthalmology*, JMC Press, 1980, *Prevention of Blindness*1979-1999, JMC Press, Quezon City, and *Posterior Chamber Implantation*, UP

1987, and 36 original papers in International Journals and 139 papers in National Journals. He has been editor to the *British Ophthalmic Literature*, *Oftalmologia International* (Madrid), *Archivos Oftalmologia* (Madrid), *Afro-Asian Journal of Ophthalmology* (New Delhi) and *Asia-Pacific Journal of Ophthalmology* (Singapore). He is currently Editor-in-Chief of the *Philippine Journal of Ophthalmology*. For his outstanding contributions, he received many Honor Awards: some examples are Award of Merit, Philippine Society of Ophthalmology (1977), Distinguished Service Award of APAO(1981, 1999), XVI Jose P. Rizal Memorial Lectureship (Recurrence in Uveitis, a concept in prevention) of the Philippine Academy of Ophthalmology, (1985) and many Alcon Research Awards. (Chairman, Manila Doctors Hospital, 667 United Nations Ave. Manila, Philippines, 1000. phone/fax: +632-523-0421; e-mail: fajardo@evoserve.com) (SM)

Fallopia see **Falloppio**.

Fallopius see **Fallopio**

Falloppia see **Falloppio, Gabriele**

Gabriele Falloppio

Falloppio, Gabriele (1523-1562). He was also called Fallopio, Fallopius, Falloppia, Fallopia. This great contemporary and pupil of Vesalius and, after that marvelous master, the most important of all anatomists, was born in Modena, Italy. He studied at Padua, travelled in Greece and France, became professor of anatomy at Ferrara, then at Paris,and, finally at Padua. He was the teacher of →Fabricius ab Acquapendente, who, in turn, became a teacher of William Harvey. Falloppio is said to have been just, modest, and gentle, but, on the other hand, he is also declared, at least by some, to have accepted gifts from certain convicts and then to have destroyed these poor creatures by poisoning.In ophthalmology , Falloppio is to be remembered because of his having shown that the retractor bulbi muscle (Choanoides) does not exist in the human subject. This structure was described as a portion of the human ocular apparatus by Galen (who had really observed such a muscle in cattle, sheep and other large herbivore) and the error had been conscientiously, propagated for more than thirteen hundred years. He wrote: *Opuscula tria III. Tractatus de vulneribus oculorum* Venice 1569. *Opera omnia ... Mutinensis, physicae chirurgi praeclarissimi, in felicissimo gymnasic patavine olim rem anctonicame chirurgicam admirabilicum laude protitentis* Frankfurt 1600. American Encyclopedia of Ophthalmology,Vol.7,p.5142. Albert

Louis Salomon Fallot

Fallot, Louis-Salomon (1773-1872) Belgian ophthalmologist. Fallot was born in The Hague (Holland) the son and grandson of physicians, he accompanied a series of military expeditions in his medical and surgical capacity (As military physician he participated to the Napoleontic wars from 1808 to 1815), founded in Namur (Belgium) an ophthalmic hospital in 1817, and at last, in 1848, retired, settled down in Brussels. He wrote his very important papers on *military ophthalmia* before 1850 : "*Recherches sur les Causes de I'Ophthalmie qui Règne dans quelques Garnisons de I'Armeé des Pays-Bas, etc*." (Brussels, 1829). We have to cite here his later papers in the *Annales d'Oculistique* and his chairmanship of the *First International Congress of Ophthalmology* in 1857. He was a member of the French Belgian Academy of Medicine since its foundation in 1841. (Verriest)JPW

Fan, Richard F.T. (?-) Singapore Ophthalmologist. He graduated in 1973 from the University of Singapore with MBBS, then obtained Fellow of the Royal College of Surgeons of Glasgow (1980), FRCS (Edinburgh) and FRC Ophth (UK). He also obtained FAMS (Singapore). On his return from the UK where he spent one year at Moorfields Eye Hospital, he worked at the Department of Ophthalmology, Singapore General Hospital, Ministry of Health. He was promoted to Consultant in 1986 and Senior Consultant in l991. He was a Fellow in vitreo-retina subspecialty at Eye Research Institute, Boston and at the Retina Associates and at the Massachusetts Eye and Ear Infirmary, Harvard University in 1985. He also spent some time at Addenbrooks Hospital, Cambridge, U. K. and at the Tennent Institute, University of Glasgow. He served as the Head of the Department of Ophthalmology, Tan Tock Seng Hospital (1988-1990) and as the Head of the Department of Ophthalmology, Singapore General Hospital and Senior Consultant, Singapore National Eye Centre (1990-1992). Presently, he is a Consultant Ophthalmologist, Mt Elizabeth Hospital and serves as Examiner to the Master of Medicine

(Ophthalmology), University of Singapore and on the panel of examiners, Royal College of Surgeon of Edinburgh. He is the President of the Singapore Association of Visually Handicapped since 1997. (Dr. Richard Fan: 3 Mount Elizabeth #15-12, Mount Elizabeth Medical Centre, Singapore 228510: Phone: 65-7386997; Fax: 65-7387323) (SM)

Fano, Salvador (1824-1895) Dutch-Parisian ophthalmologist, born in Amsterdam, Holland. He received his medical degree at Paris in 1851, and, in that city, taught, investigated and practised until his death. He wrote: "*Recherches sur la Contusion du Cerveau"* Paris 1851; graduation thesis ; "*Des Tumeurs de la Voûte Palatine et du Voile du Palais*" 1857, with 2 pl.) ; "*Mémoire sur la Catarrhe du Sac Lacrymal, etc.*" Paris 1863 ; "*Des Lunettes et de leur Emploi en Oculistique*" Paris 1867; *Traité Pratique des Maladies des Yeux* (2 vols.) Paris 1866; "*Traité Elémentaire de Chirurgie*" 2 vols, 1869-72. From 1873 to 1882 he was editor of the *Journal d´Oculistique et de Chirurgie*.

Fanta, Helmut (1916-) Austrian ophthalmologist. MD 1937. Lecturer Vienna University 1949.Director department of ophthalmology Rudolphstift clinic in Vienna since 1956. Professor since 1959. He wrote: "*Ophthalmologie*" 1982; "*Praxis der Allgemeinmedizin*",VI,1984 . Contributions in volumes 9-10 of *Fortschritte der Augenheil-kunde* . Over 150 papers in *Klinische Monatsblätter f. Augenheilkunde* and in *Ophthalmologica* (Basle). Co-editor of *Klinische Monatsblätter f. Augenheilkunde*.and *Augen-ärztliche Fortbildungen.*Kürschners Gelehrten- Kalender 1966,p.511 and 1987,p.992; F. Hollwich Ophthalmologenverzeichniss 1964, p.97.

Faraday, Michael (1791-1867) one of the most distinguished of English chemists and natural philosophers,was born in Newington Butts, near London, England, where his father was a blacksmith. Chance having procured him admission, in 1812, to the chemical lectures of Sir Humphry Davy,the latter engaged him as his assistant at the Royal Institution. In 1827 he succeeded to Davy's chair of chemistry in the Royal Institution. Some of his chemical discoveries or investigations were: new compounds of chlorin and carbon (1821) ; alloys of steel (1822); compounds of hydrogen and carbon (1825) ; and the very valuable series of experiments, made in 1829-30, on the manufacture of glass for optical purposes. As practical applications of science his suggestions as to the preparation of the lungs for diving and the ventilation of lighthouse lamps are conspicuous. Amongst his most prominent publications are those concerning the condensation of the gases,limits of vaporization, optical deceptions, acoustical figures, re-gelation, relation of gold and other metals to light, and conservation of force. The great work of his life is the series of Experimental Researches on Electricity, published in the Philosophical Transactiom during forty years and more. These give an account of his many discoveries relating to electricity, magnetism, electromagnetism, and dia-magnetism. Some of the most important of his discoveries are: induced electricity; identity of electricity from different sources; equivalents in electro-chemical decomposition; relation of electric and magnetic forces; hydro-electricity; magnetic rotatory polarization, and many others. He wrote: *Experimental researches in chemistry and physics.* London 1859. American Encyclopedia of Ophthalmology,Vol7,p.5162-5163. Albert

Fario, Leovigildo Paolo (1810-1863) Italian ophthalmologist and founder of the Annali Ottalmologici. Fario studied at Padua, Pisa, Florence, Pavia and Bologna, practised at Venice, later (and longer) at Brescia. American Encyclopedia of Ophthalmology,Vol.7,p.5164.

Farrar, John (1779-1853) mathematician, physicist, and astronomer, of Cambridge, Massachusetts, attended Harvard University (M.A., 1806), where he was a professor of mathematics and natural philosophy from 1807 to 1836. Farrar's translations and adaptations of the mathematical and astronomical works of Euler, Lacroix, Legendre, Biot, and others helped introduce the work of European scientists to American schools. He authored: *An experimental treatise on optics* Cambridge (USA) 1826.Albert

Farre, Frederick John (1804-1886) British, London ophthalmologist, second son of the still more distinguished John Richard Farre. He studied at St. Bartholomew's Hospital from 1829 to 1837. In 1834 he became Assistant Physician to the Royal London Ophthalmic Hospital, and also at St. Bartholomew's. In 1854 he was made physician to the latter institution, as well as to the Charterhouse. In 1838 he became a F. R. C. S. He wrote

little if, anything about the eye. He edited, however, the first edition of the British Pharmacopoeia, and Pereira's Materia Medica.American Encyclopedia of Ophthalmology,Vol.7,p.5164.

Farre, John Richard (1774-1862) British, London pathological anatomist and ophthalmologist, co-founder with Saunders of the Royal London Ophthalmic Hospital. Born in 1774, on the Island of Barbadoes,the son of a physician, he studied at Guy's Hospital and St. Thomas' Hospital, London, and practised for a time in the Antilles. Later, he practised in Glasgow, Aberdeen and London. He also became physician to the London Dispensary. He made an enormous collection of pathologico-anatomical specimens, which became the property of St. Bartholomew's Hospital. He wrote "*An apology for British Anatomy..etc..*" London 1827; "*The Morbid Anatomy of the Liver*" London 1815; *Oberservations on the Cure of Hydrocele etc.*. Medical Records 1813. American Encyclopedia of Ophthalmology,Vol.7, p.5164. Albert

Farrell, Charles (1779-1855) British military surgeon, received his M.D. at Edinburgh in 1798 and served in the army until 1833, rising to the position of Inspector General of Hospitals. He wrote: *Observations on ophthalmia, and its consequences*. London 1811.

Irving Fatt

Fatt, Irving (1920-1996) American Engineer and corneal physiologist. He received MS degree in 1948 from University of California, Los Angeles, and he worked as a Senior Research Chemist at Standard Oil of California. Concurrently, he completed his thesis and received his Ph.D. from the University of Southern California in 1955. He came to UC Berkeley in 1957 as an assistant professor of mineral technology, and in 1964 he created a Bioengineering Program in the College of Engineering, where he served as the Assistant Dean 1962-1966. He developed a micropolarography that allowed determination of oxygen tension in a very small circumscribed area: by this technology he determined the rate of corneal respiration and oxygen tension under the contact lens, and contributed greatly to the understanding of physiology of contact lens wear. He moved to the School of Optometry in UC Berkeley, where he trained many outstanding corneal physiologists, e.g., Robert Mandell, Richard Hill, Kenneth Polse and many others. His interest was not only contactology, but also the study of water flow and oxygen flow in the cornea. He wrote "*Polarographic Oxygen Sensors* (CRC Press, 1973) and "*Physiology of the Eye*"(Butterworths, 1978). He served as the Dean of the School of Optometry 1978-1979. His lectures include Max Schapiro Lecture to the American Academy of Optometry (1973) and Everett Kinsey Lecture at the Contact Lens Association of Ophthalmologists (CLAO) (1988). He retired from the University in 1984: he received the Berkeley Citation that is the highest honor of the University of California. (SM)

Faubert, Jocelyn (*1959-) Canadian scientist born in Montreal. Faubert received his Ph. D. (1991) from Concordia University, (Experimental psychology).He is presently Professor at the École d'optométrie, Université de Montréal. He is a member of the Institut de Génie Biomédical, Université de Montréal ; of the Centre de Recherche en Sciences Neurologiques, Université de Montréal, and of the Groupe de recherche en Neuropsychologie Expérimental, Université de Montréal. He received the following grants : Natural Sciences and Engineering Research Council of Canada (NSERC); Medical Research Council of Canada (MRC). MRC Scientist award and Operating grant. His group received also *Natural Sciences and Engineering Research Council of Canada* (NSERC)(Industrial and equipment grants) Essilor.(Industrial grant); Fonds Pour la Formation de Chercheurs et l'Aide à la Recherche (FCAR).(Operating grant). Faubert wrote : Habak, C. & Faubert, J. (In press) Larger effect of aging on higher-order function.*Vision Research*; Faubert, J., Bilodeau, L., & Simonet, P. (In press). Transverse chromatic aberration and colour-defined motion. *Ophthalmic & Physiological Optics* ; Faubert, J. & Overbury, O. (In press) Binocular vision in the elderly with adventitious visual impairment: Sometimes one eye is better than two. *Journal of the American Geriatrics Society*; Sara, M. & Faubert, J. (In press) Aging, perception, and visual short-term memory for luminance defined form. *Ophthalmic & Physiological Optics*; Faubert, J. & Herbert, A. (1999). The peripheral drift illusion: A motion illusion in the visual periphery. *Perception*, 28, 617 – 622; von Grünau, M.W., Faubert, J., Iordanova, M. & Rajska, D. (1999) Flicker and the efficiency of cues for capturing attention.*Vision Research*, 39, 3241-3252; Faubert, J, Simonet, P., & Gresset, J. (1999). Effects of induced

transverse chromatic aberration from an ophthalmic lens on spatio-temporal thresholds. *Ophthalmic & Physiological Optics*. 19, 336-346; Bittar, R., Ptito, M., Faubert, J. Dumoulin, S.O. & Ptito, A. (1999). Activation of the remaining hemisphere following stimulation of the blind hemifield in hemispherectomized subjects. *NeuroImage*. 10, 339-346 ; Labonte, F., Le Dinh, C.T., Faubert, J. & Cohen, P. (1999). Spatio-temporal spectral coding of stereo image sequences. *IEEE Transactions on Circuits and Systems for Video Technology*. 9, 144-155; Ptito, M., Johannsen, P., Faubert, J. & Gjedde, A. (1999). Activation of human extrastriate pathways after damage to area V1. *NeuroImage*. 9, 97-107; Bilodeau, L. & Faubert, J. (1999). Global motion cues and the chromatic system. *Journal of the Optical Society of America A*. 16, 1-5; Bilodeau, L. & Faubert, J. (1999). The oblique effect with colour defined motion throughout the visual field.. *Vision Research*. 39, 757-763; Faubert, J., Diaconu, V., Ptito, M., & Ptito, A. (1999) Residual vision in the blind field of hemidecorticated humans predicted by a diffusion scatter model and selective spectral absorption of the human eye. *Vision Research*. 39, 149-157; Faubert, J.(1998) Visual processing throughout the visual field. *Proceedings of the International Simposium on Computer Graphics, Image Processing and Vision. IEEE Computer Society Press* . October 20-23, Rio de Janeiro, Brazil, pp. 2-9; Bellefeuille, A. & Faubert, J. (1998) Independence of contour and biological motion cues for motion-defined animal shapes. *Perception*.27, 225-236 ; Bilodeau, L. & Faubert, J. (1997). Isoluminance and chromatic motion throughout the visual field. *Vision Research* . 37, 2073-2081; Zackon, D.H., Casson, E.J., Stelmach, L., Faubert, J. & Racette, L. (1997). Distinguishing subcortical and cortical influences in visual attention: Subcortical attentional processing. *Investigative Ophthalmology & Visual Science.*38(2), 364-371; Stoerig, P., Faubert, J., Ptito, M, Diaconu, V., & Ptito, A. (1996). Do hemidecorticated patients have blindsight?*NeuroReport*, 7, 1990-1994; Faubert, J. (1996). Some optical, sensory, and perceptual factors to consider when viewing 3D displays. *Proceedings of the Third International Display Worshops: 3D Display Technologies and Human Factors*. Kobe, Japan, November 27-29; Faubert, J. (1995). Colour induced stereopsis in images with achromatic information and only one other colour. *Vision Research*35(22), 3161-3167; Faubert, J., & von Grünau, M. (1995) The role two spatialy distinct primers and attribute priming in motion induction. *Vision Research.*35(22), 3119-3130; von Grünau, M., Saikali, Z., & Faubert, J. (1995) Processing speed in the motion induction effect. *Perception*, 24, 477-490; Labonté, F., Shapira, Y., Cohen, P., & Faubert, J. (1995) A modal of global symmetry detection in dense images. *Spatial Vision,*9(1), 33-55; von Grünau, M. & Faubert, J. (1994) Inter and Intra-attribute characteristics of attentional priming in motion induction. *Perception.* 23(8), 913-928 ; Faubert, J. (1994). Seeing depth in colour: more than just what meets the eyes.*Vision Research*., 34, 1165-1186. Address : Ecole d'optométrie, Université de Montréal, 3744 Jean-Brillant, C.P. 6128, succursale Centre-Ville, Montréal (Québec) H3C 3J7. Tel :(514) 343-7289 Fax: (514) 343-2382 Email: faubert@ere.umontreal.ca (JPW)

Faure (19th Century) A celebrated French quack of the early nineteenth century, ophthalmologist to the Duc de Berry. He wrote a work, no longer extant, entitled "*Description graphique des Yeux de Plusieurs Ayeugles Jugés Incurables qui ont Recouvré la Vue au moyen d'un Instrument et d'un Procédé Inventé par l'Auteur"* (Paris, 1820); and another, entitled " *Observations sur l'iris, sur les pupilles artificielles et sur la keratonyxis, ou nouvelle manière d'opérer la cataracte* .Paris 1819, 2nd edition Paris 1820 in which he pretends to have invented the operation (already old) called "*Discission of the Lens.*"and *Propositions médicales, précédées d´une introduction contenant l´exposé d´un travail sur les passions* etc. Montpellier 1806 American Encyclopedia of Ophthalmology,Vol.7,p.5172. Albert, JPW

Faye, George de la (1699-1781) French ophthalmologist. Born in Paris, in the Faubourg du Roule, the son of a well-known surgeon and the nephew of the Surgeon-Major in the Military Hospital at Berg-Saint-Vinox, de la Faye began to study surgery with his uncle at the age of about fifteen, with whom however, he remained for only three years. Returning to Paris, he entered the Charité as a pupil of de la Peyronie, but shortly afterward became an interne in the Hôtel-Dieu. In this capacity he labored at the celebrated institution for more than ten years until, in fact, 1730. The year following, he received the degree of master of surgery. Almost immediately thereafter he became assistant-surgeon (aide-

major) in the army, in which position he served throughout the siege of Kehl. Returning to Paris, he entered into private practice, and though he wrote and published much, and invented many useful instruments,he never became again attached to a public institution until, in 1742, he accepted the position of Demonstrator Royal of Operations. In 1751 he was elected Vice-Director of the Royal Academy of Surgery. He retired from practice about 1775. Among his general compositions are: "Observations sur les Becs de Lièvre de Naissance" (Mém.de l´Acad.Roy. de Chir., vol.1, 1748);"Principes de Chirurgie" (Paris, 1731, and numerous succeeding editions both in Paris and Berlin,as well as several in Strassburg, Venice,Stockholm, and Madrid). He also wrote a number of ophthalmologic articles, the most important of which was "The Reform of Instruments for Cataract Extraction" (Mém. de l´Acad.Royale de Chirurgie,vol.2).Among his inventions for the use of general practitioners was an apparatus for the protection of shattered limbs, a device which remained in use for many years. Ophthalmologically, he was still more useful. He it was who invented the first cataract knife and the first cystotome, as well as also the name itself (not a very happy one) of the latter instrument. These new instruments and their use were described by de la Faye in "Mémoires de l´Academémie Royale de Chirurgie", vol.2,pp.563-577. The entire article in the "Mémoires" fills but fourteen pages, yet what an important article it is for the history of ophthalmology! If →Daviel invented cataract-extraction, de la Faye at all events rendered the procedure practical.A more complete understanding of the progress made in cataract surgery by de la Faye can be had by reading in connection with the present article that on Daviel.American Encyclopedia of Ophthalmology,Vol.7,p.5173-5175.

Fearn, John (1768-1837) English philosopher who for some years served in the Royal Navy before retiring to devote himself to metaphysical speculation. His writings deal mainly with consciousness, cognition, and sensory perception; several are focused on the physiology of vision. *A rationale of the laws of cerebral vision* London 1830; *An appeal to philosophers, by name, on the demonstration of vision in the brain, and against the attack by Sir David Brewster* London 1837. Albert

Fechner, Otto (1849-?) German physician who wrote: *Ueber die Beziehung von Hirntumoren und Augenerkrankungen*. Halle 1847.

Fedukowicz, Helena B. (1900-1998) American pioneer educator in ocular bacteriology of Russian birth. Born in the Ukraine, she graduated from the Yekaterinoslav Medical Academy, Dnepropetrovsk, Ukraine, in 1921 and joined its faculty. Thereafter, she lectured on ocular infections at the Moscow Eye Hospital and became a professor of ophthalmology at the Kiev Medical School, where she completed a thesis on intraocular melanoma. In 1942, she became a professor of ophthalmology in Vinniza (Ukraine) and married Waclaw Fedukowicz, a geophysicist. During this time, Dr Biantovskaya met Ivan Pavlov and Vladimir Filatov and encountered Nikolai Bukharin, leader of the communist party's right wing, while mountain climbing. When Stalin rose to power, that suspicious chance encounter prompted an investigation. A daughter of an Orthodox priest, she was next accused of poisoning a drinking well with laboratory bacteria. These "awful, miserable years" worsened with the Nazi invasion and closing of her medical school. Fleeing to Poland, the married couple were captured and sent to a work camp in Germany. They managed to escape, but spent 5 years confined at a Bavarian settlement village, awaiting assistance from the International Relief Organization. Ultimately, they were able to emigrate to America. When they arrived in America in 1949, the penniless couple lived in an unfurnished apartment in Brooklyn, NY. Through the Polish Committee, Dr Fedukowicz met an exiled aristocrat, Prince Sapieha, whose philanthropic connections changed her life. Through him, she met George N. Wise MD, at New York University, who was impressed by her clinical expertise and obtained a fellowship for her in the department of ophthalmology studying the eyes of children with tuberculosis. Although she did not have a US medical degree, she was appointed director of ophthalmic bacteriology at New York University's Bellevue Hospital. She insisted that residents bring every patient with a putative ocular infection to her laboratory, where together they would collect, examine, and culture microbial specimens and engage in Socratic quizzing. Dr Fedukowicz's research contributions were largely clinical. She authored more than 25 Russian publications, including articles on ocular rosacea, lysozyme, and pigmented limbal lesions. Her seminal American contribution involved the relationship between the

derelicts of New York's Bowery, near Bellevue Hospital, and the high incidence in that population of *Moraxella* keratoconjunctivitis. Leaving the laboratory, she and her residents would trek to the Bowery, culture material in hand, and examine the local derelicts. The team would enter bars, offering 50 cents to any who would submit to a quick swab. In this way, Dr Fedukowicz was able to trace *Moraxella* to its endemic source, link it to alcoholism and malnutrition, and clarify the organism's taxonomy, morphology, and clinical characteristics. In 1963, her classic text, *External Infections of the Eye, Bacterial, Viral and Mycotic* the first English text on the subject, was published, followed by a second edition in 1978 and a third in 1985. The unanimously applauded volume emphasized clinicomicrobiologic correlation, enhanced by remarkable color plates by Beatrice Grover, and found an instant niche at teaching institutions. Dr Fedukowicz retired to Sarasota, Fla, in 1976. Well into her 90s, she entertained her former students during the week of the Association for Research in Vision and Ophthalmology (ARVO) conference with home-cooked meals and an oral examination in Russian writers and composers. She was elected as an honorary fellow of the American Academy of Ophthalmology and was honored for lifetime scholarly contributions by the Immunology/Microbiology Section of the Association for Research in Vision and Ophthalmology. Arch Ophthal 118,595,2000.JPW

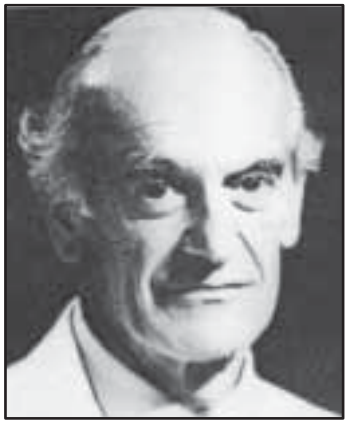
Feingold, Marcus (1871-1925) American ophthalmologist. Feingold was born in the little town of Botoshani, north Rumania. He received his preliminary schooling in an Austrian gymnasium. He then entered the medical department of the University of Vienna from which institution he received the doctoral degree in 1896. One year later he moved to New Orleans with his mother, sister, and brother. The father had preceded them on a business trip, and had decided to make that city his home. There Feingold began at once the practice of general medicine, in 1897. In 1898 he restricted his to the eye, ear, nose and throat and, years later, to the eye alone. In 1898 he founded a clinic of ophthalmology at Touro Infirmary. In 1906 he became professor of ophthalmology at the Tulane University, and was for a number of years, head of the department. He was also chief ophthalmologist at Touro Infirmary; ophthalmologist at the Charity Hospital; chairman of the Medical Staff at Touro; member of the Executive Faculty at Tulane; chairman, A. M. A. Section on Ophthalmology, 1924-25; Fellow of the American College of Surgeons; member, Louisiana Governing Board of the Gorgas Memorial; examiner of the American Board for Ophthalmic Examinations; collaborator on the American Journal of Ophthalmology. He kept up his scholarly pursuits until almost the last moment of his life. He was very fond of languages, and spoke with ease not only his native Rumanian, but also English, German, French, Spanish and Italian. He had a very large, and yet choice, library, 2000 volumes of which were on the subject of ophthalmology alone. This great collection he bequeathed to the medical department of Tulane University. AJO 1926,9:638-639

Feller, Christian Gotthold (1755-1785) German physician born at Lobau, Germany, who received his M.D. at Leipzig in 1780, and became town physician to Bautzen. Among his writings is a treatise on the treatment of eye diseases. Feller witnessed the public demonstrations of cataract extraction performed by Simon in Paris in 1777 and by Casa Amata in Leipzig in 1779. This publication is the only source to describe the procedure of these two surgeons: *De methodis sullusione oculorum curandi, a Casaamata et Simone cultis*. Leipzig 1782. He also wrote: *De Utero Canino Observatio* Leipzig 1782 Albert, JPW.

Fenner, Christopher Smith (1823-1879) American ophthalmologist born in Smithfield, Rhode Island, who received his M.D. at Yale University in 1844, and practiced ophthalmology in New Orleans (1844-1854), Memphis (1854-1872) and Louisville (1872-1879); he lectured on eye diseases at Louisville Medical College. Fenner wrote mainly about physiological optics. *Vision: its optical defects, and the adaptation of spectacles* Philadelphia 1875. He also wrote *Poems of many moods* Boston 1846. Albert, JPW.

Fenton, Frederick George (1904-1982) Australian ophthalmologist. After graduating MB, BS from the University of Melbourne in 1926, Frederick George Fenton became a resident medical officer at St Vincent's Hospital, Melbourne. Deciding to specialise in ophthalmology he became resident medical officer and later, registrar at the Royal

Westminster Ophthalmic Hospital, London. During the four years that he spent at the Westminster Ophthalmic (1934-1938) he also worked at Moorfields Eye Hospital and at Guy's. Returning to Melbourne he served with the RAAF as an ophthalmologist in their recruitment centre during the second world war and retired with the rank of Flight Lieutenant in the Reserve. In 1950 he became senior ophthalmic surgeon at the Royal Victorian Eye and Ear Hospital and on his retirement was appointed consulting surgeon emeritus. While at the hospital he was chairman of the honorary medical staff from 1955 to 1963. He took a special interest in orthoptics - he was chairman of the Orthoptic Board of Australia, 1948-1964, and served as a member of the Board of the Ophthalmic Research Institute of Australia, 1960-1968. He continued to maintain a lively interest in all the latest advances in ophthalmology and had no hesitation in suggesting relatively new procedures and treatments if he thought that they were in the patient's best interests. Fenton earned following titles: MRCS and FRCS 1936; M13,13S Melbourne 1926; DO Oxford 1935; DOMS London 1935; FRACS 1956. LFRCSE



Georges Fenwick

Fenwick, George De Lacy (? -1994) New Zealand Ophthalmologist. He graduated from Otago, with MB, ChB, in 1940 and attended Wellington Hospital as a house Surgeon in 1942, joined the RNZAF, in which service he attained the rank of squadron leader and served overseas in the New Hebrides. On demobilization, he returned to work in his old hospital as an eye registrar. In 1946, he went to England and became a FRCS and a FRCSE in 1947. He was appointed to Moorfields Eye Hospital, attaining the position of senior registrar. On returning to Auckland to take up private practice, he was appointed consultant eye surgeon in 1950 in which capacity he continued until retirement in 1982. During this time he pursued early research work of high quality on oxygen-induced retinal disease of the newborn. He was noted for his constant moral integrity and an abiding consistency in following the Hipocratic philosophy. He had abiding interest in education, encouraging the development of full fellowship qualifications in New Zealand. He was especially active in the Asia-Pacific Region and served as the President of the 4th Congress of the Asia-Pacific Academy of Ophthalmology and subsequently served as the Executive Member of the Academy until 1989. He was appointed to the Fellowship of the Royal Australian College of Ophthalmology (1971) and elected to be the President of the Ophthalmological Society of New Zealand (1976). (Ophthalmology awakens in Asia - 40 years of Asia-Pacific Ophthalmology, Lim, K.H. & Lim Arthur S.M. Singapore National Eye Centre 1999) (SM)

Féré, Charles Samson, 1852-1907) French physician, born in Auffay, Normandy,who received his M.D. in Paris in 1882. Attracted to neuropathology, and especially psychopathology, by Charcot, Féré wrote extensively on these subjects. He became 1887 medical director of the Bicetre mental hospital near Paris. He wrote: *Contribution à l'étude des trouble fonctionnels de la vision par lésions cérébrales (amblyopie croisée & hémianopsie)*. Paris 1882; *Sensation et Mouvement* Paris 1887, 2nd ed.1900; *Le Magnétisme Animal* Paris 1890 ; *Travail et Plaisir* 1904 ; *L´instinct sexuel* Paris 1899. Albert.JPW.

Fergus, Andrew Freeland (1857-1932) British ophthalmologist. Fergus graduated in Medicine, B.M., C.M., at the University of Glasgow in 1881 ; and received from that Institution the degrees of M.D., in 1891, and LL.D. in 1921. After services as hospital resident, he studied ophthalmology in Paris with Edouard Meyer, and with Snellen and Donders at Utrecht. He translated, from the third French Edition, with notes from the fourth German Edition, the "*Diseases of the Eye*" by Professor Edouard Meyer of Paris. This translation was published in England and America, in 1887. He became Assistant Surgeon to the Glasgow Eye Infirmary, and Surgeon the Royal Infirmary of Glasgow; was Lecturer on Ophthalmology, and on Physics in Anderson College, and Examiner in Ophthalmology to the Royal Faculty of Physicians and Surgeons, of which he later was President. He was Ophthalmic Surgeon for West Scotland, under the Blind Persons Act, and became President of the Scottish National Institutions and Societies for the Blind. He became a member of the-Ophthalmological Society of the United Kingdom, in 1889. In connection with his early papers and his translation of Meyer's book he used the name - Freeland Fergus; but after the death of his father, prefixed the initial A. His more important papers were published in the *Ophthalmological Society Transactions*, the *Ophthalmic Review*, the *Lancet*, the *British Medical Journal* and *The Ophthalmoscope*. He

published a small manual on *Ophthalmic Optics*. He showed a particular interest in diplopia and the operative treatment of strabismus, miners' nystagmus, workmen's compensation, and sclerocorneal trephining. In 1906 he visited America, to attend the meeting of the British Medical Association, held at Toronto, at which Dr. A. R. Reeves was President; and contributed three papers to the Section on Ophthalmology, presided over by R. Marcus Gunn. His writings exhibited his interest in the practical applications of ophthalmology, and were always specimens of the best English. It was characteristic of him, that he was most highly esteemed by those who knew him longest and best.

Ferguson, William John Wellwood (1896-1972) British ophthalmologist. Ferguson left school in Edinburgh to study medicine at the University of Glasgow but the first world war interrupted his studies and he rendered distinguished service in the campaign in France with the R.A.S.C. for which he was mentioned in dispatches. Returning to Glasgow he graduated in 1920 and after house appointments at the Glasgow Royal infirmary became an assistant surgeon at the Glasgow Eye Infirmary; in 1927 he was appointed consulting surgeon at the Royal infirmary, Sheffield, and lecturer in ophthalmology in the university where he spent the remainder of his working life. He earned his reputation for his work on dark adaptation and illumination. His interest in this was excited by his researches on the cause of nystagmus in miners, for whom he conducted a special rehabilitation clinic in Sheffield until his retirement. At one time this was a common condition in the coalfields of Yorkshire, and to a considerable extent, because of his work this distressing complaint was practically eliminated by revolutionizing the illumination at the coal-face. This led to his studies on dark adaptation for the Medical Research Council during the second world war. Eventually he became chairman of the MRC Committee on Lighting and Vision which established standards for hospital lighting, and was a prominent member of the National Illumination Committee and the Commission Internationale de l´Éclairage. During this time he became President of the Illuminating Engineering Society in 1952. All these activities were maintained alongside a busy life in hospital and private practice and a deep personal concern for his many friends and patients. BJO 57:73 (1973)

Fernandez, Dunstan Sixtus (1941-) Malaysian Ophthalmologist, Chairman of the Ophthalmological Society of the Malaysian Medical Association. He graduated from Madras Medical College, India, in 1966 and returned home to serve at the General Hospital in Kuala Lumpur. He then pursued postgraduate training in Ophthalmology at the Royal College of Surgeons of Edinburgh and Ireland and in completing the study he was granted FRCS. On his return, he served as the first Ophthalmologist to the Armed Forces Hospital in Kuala Lumpur and Malacca. He joined the Ophthalmological Society in 1975, and served as the Secretary Treasurer (1977-1980), Committee Member (1981-1982) and the Chairman (1989-1991). He served as Organizing Committee Member of the 11th Congress of the Asia-Pacific Academy of Ophthalmology in 1987. He completed the Army duty and retired in 1980 and is in private practice. (SM)

Fernandez, Juan Santos (1847-1922) Cuban ophthalmologist. Founder of ophthalmology in Cuba, born at Alacranes, Matanzas Province, Cuba. Having received at the Jesuit College, Havana, the degree of B.S., he was sent to Spain at the age of 18, in order to study medicine at the University of Madrid. On this trip he was accompanied by a younger brother and by two other youths. These four students lived together in a large apartment in Madrid, and tales are still told of the merry pranks indulged in by the younger Fernandez and the two anonymous youths. The subject of this sketch, however, though he enjoyed to the full the practical jokes of his companions, never took part in them, and, in fact guided and restrained his comrades almost like a father. His quiet, sober disposition had, in fact, been characteristic of his childhood, and it remained a striking feature of his personality until his death. Having obtained the degree of M.D., Fernandez studied ophthalmology first at Madrid under Jugo→Delgado. Later he went to Paris, where he became chief of clinic to Galezowski. Returning to Spain, he established an eye clinic near Toledo, and this he conducted for a number of years. In 1875 he went back to Cuba, where he was, it is said, the first on that island to practice ophthalmology exclusively. Since that time he has always been in the front rank of medical and sanitary advance. In fact there has not been any single manifestation of scientific progress in Cuba to which Dr. Fernandez's name has not been attached. In 1875 he founded the "*Crónica*

Medico-Quirúrgica de la Habana," a medical monthly. In 1900, with Dr. Menacho of Barcelona, Spain , he founded the "*Archivos de Oftalmologia Hispano Americanos*" In 1887 Dr. Femandez founded the *Laboratorio Anti-ribico*, the first to be opened in America, and second only in the world to the Pasteur Institute of Paris. Many thousands of persons were thus saved from death by hydrophobia. Years before, he had bought and given to the Mercedes Hospital the first sterilization plant in Cuba. He was a member of the Havana Academy of Sciences, its president since 1900, a member of the Society for Clinical Studies, of the Cuban Anthropological Society, of the French Ophthalmological Association, of the Société d´ophtalmologie de Paris, of the Mexican Academy of Medicine and of the American Academy of Ophthalmology and Oto-Laryngology. He published over one thousand papers in scientific journals in Europe and North America and authored *Higiene de la Vista* Habana 1879. He had numerous pupils among them his nephew F.M. →Fernandez, founder of the *Revista Cubana de Oftalmologia* AJO 6:433-434.JPW

Ferree, C.E. (1877-1943) American psychologist of importance to ophthalmology. Ferree was born in Sydney,Ohio. He took the B.A and M.A. from the Ohio Wesleyan University in 1902 and became *Sage* fellow in psychology at Cornell University. In 1909 he was awarded the Ph.D. at Cornell and 30 years later his old University gave him the D.Sc. For more than 35 years he was at work (with Rand) on the sensory functions, and on the evaluation of methods for their accurate control, recording and measurement. Ferree, with Rand, worked also on perimetry, the testing of light sense, multiple exposure tachistoscope, visual acuity under low illumination, flicker, and industrial and hygienic illumination. Ferree was at one time professor of psychology and director of the psychologic laboratories at Bryn Mawr College and professor of physiological optics and director of the physiological optics research laboratory at the Wilmer Eye Institute.He wrote round 250 papers.BJO 1944; 28:155-156.

Ferree, John W. (1904-1975) American ophthalmologist, native of Indiana. Dr. Ferree attended the University of Pennsylvania, received his M.D, from Indiana University, and a Master's in Public Health from Johns Hopkins University. He was named Indiana state health commissioner in 1940, and served as a commander in the Navy medical department in World War II. Preventive medicine was a guiding precept throughout his career. From 1946 to 1947, he was director of education of the American Social Hygiene Association, then associate director of the National Health Council from 1947 to 1948, and associate medical director of the American Heart Association in charge of community service and educational activities for eight years. He was named executive director of the National Society for the Prevention of Blindness in 1959 and held the post until his retirement ten years later. During Dr. Ferree's tenure as executive director, outstanding progress was achieved through his professional competence, strong leadership, wealth of knowledge about public health programs and medical research, his high standards of performance, and most importantly his rare understanding of human relationships. A founder of the American Academy of Preventive Medicine, he was ahead of his time in his commitment to improving the health-care system through strong emphasis on preventive medicine. During his professional career, he was secretary-general for the Western Hemisphere, International Association for the Prevention of Blindness; co-chairman of the Committee on Prevention of Blindness of the Pan American Association of Ophthalmology; member, Committee on Continuing Professional Education Programs of Voluntary Health Agencies of the Council on Voluntary Health Agencies, American Medical Association; member, National Advisory Eye Council of the National Institutes of Health; member of the Board of Trustees of the Illuminating Engineering Research Institute. Following retirement, be served as a member of the board of director of the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped and of the American Foundation of Overseas Blind. Dr.Ferree was a fellow and life member of the American Public Health Association, and a diplomate of the American Board of Preventive Medicine. He was a member of the Medical Society of New York State and of the Medical Society of Westchester County, New York, and a fellow of the American College of Physicians and the American Medical Association. AJO 1976,81:111

Ferrein, Antoine (1692-?) French surgeon. Born in Frespech, Argenois, he studied at first theology, mathematics and law with the Jesuits at Agen. His attention having been turned

toward medicine by Borrelli's "*De Motu Animalium*'," he betook himself to Montpellier, where he received the Bachelor's degree in 1716, and, a little later, the Doctor's degree. He served for a time as army physician in the French campaign in Italy, then, in 1741 (after many vicissitudes) he became anatomist at the Academy of Sciences. Next year he was made professor of medicine and surgery at the Royal College in Paris. Ferrein composed a handbook, or treatise, on practical surgery and medicine, and a number of articles on the anatomy and therapy of the tear-apparatus. Ferrein claimed that he was the first to propose and practise laceration of the posterior inferior quadrant of the lens-capsule as a preliminary to reclination of the lens. The opening in the capsule Ferrein called "*the button-hole*." History has awarded the palm for priority in this procedure to J.L.Petit who, at all events, was the first to give information concerning the matter to the public.American Encyclopedia of Ophthalmology,Vol.7,p.5180-5181.

Ferrer, Haracio (1876-1960) Cuban ophthalmologist, soldier of Cuban independence, civic leader, and beloved, gentle pater familiae. Born in Union de Reyes in the province of Matanzas, Cuba, his family traced its ancestry in Spain to the 12th century, with physicians in its roster of notables since the 17th century. Both grandfathers were doctors. The death of his father, Dr. Benito Jose Ferrer y Toledo, when Horacio was five years of age, left his mother, the former Dolores Diaz Galvez, to care for his older brother, Virgilio, and himself. His studies at Matanzas were interrupted by a period of military service in the Cuban war for independence. The youthful Horacio and his brother joined the forces of General Maximo Gomez in Camaguey in July, 1895. On August 13, 1895, Horacio Ferrer was seriously wounded in the face in the assault on the fort of Baga. Taken to the Bahamas and then to New York for reparative surgery, he recovered and returned to Cuba to take part in major engagements of the war. After the signing of the peace treaty at Washington on August 12, 1898, the brothers Ferrer returned to civil life. After graduating in medicine from the University of Havana in 1901, Ferrer served as Military Public Health Officer, doing general surgery until 1910, when he devoted himself to ophthalmology. Married to Tasita Paisan, he left five daughters, Olga, Bertha, Martha, Tasita, and Piedad. Dr. Olga Ferrer Sklar has followed in the footsteps of her famous father and has continued his ophthalmic practice. Ferrer received many decorations and honors from a grateful government, as well as medals from the Cuban and Spanish Red Cross and the Republic of Mexico. Before specializing in ophthalmology, he published valuable studies on the "*Ophhalmo-reaction of Calmette*," on the diet of Cuban workers, and statistics of typhoid vaccinations in Cuba. He wrote biographical on Dr. Carlos Finley, Osvaldo Cruz Lopez. His interest in the history of ophthalmology was life long. In 1924. on the occasion of his admission to the Academy of Sciences of Havana, he gave a historical paper dealing with the contribution of Cuban ophthalmologists to the progress of ophthalmology. His book, Con el Rifle al hombro is an autobiographical record. A busy clinician and ophthalmic surgeon, he also made many valuable contributions to the literature. His first paper in the field of ophthalmology dealt with the visual acuity of members of the regular army (1908). In 1912, Dr. Ferrer recorded the results of his ocular examination of 9,000 children. He reported, in 1932, the results in the first four cases of retinal detachment treated surgically in Cuba. In 1939, he presented a new instrument for cataract extraction by suction. His numerous writings included the subjects of optic atrophy after pituitary tumor, cataract, dacryocystitis, proliferating retinopathy, therapy of ocular tuberculosis, aniridia, glaucoma, and the use of sulfa drugs and penicillin in ophthalmology. Ferrer was one of the founders of the Pan-American Association of Ophthalmology, and he attended its first meeting in Cleveland on October 11 and 12, 1940. He was a member of the Mexican and French Ophthalmological Societies. The Instituto Horacio Ferrer of Havana, Cuba, was established in honor of the country's leading ophthalmologist. The first publication of this organization, printed early in 1960, contains many of the papers of Dr. Ferrer and much biographical material.

Ferrer, Henry (1850-1890) American ophthalmologist from California. Born in Santiago de Cuba, he obtained his general education at Bordeaux, France, then studied medicine at Heidelberg, receiving his degree in 1872. After a considerable graduate period, at London, Paris, and Vienna, Ferrer became assistant to Professor Soelberg →Wells, at London. In 1875 he settled in San Francisco, Cal., where he soon had a large practice. Among his most important writings are: "*Abscess of the Middle Ear and Mastoid Cells*" (1877) ;

"*Report of a Case of Disease of the Mastoid Process, with Remarks*" (Knapp's Archives of Otology, Vol.XVII and XVIII).American Encyclopedia of Ophthalmology,Vol.7,p.5181.

Fick, Adolf Eugen (1852-?) German physician who wrote: *Über microorganismen im conjunctival sack*. Wiesbaden 1887; *Lehrbuch der Augenheilkunde* Leipzig 1894; *Diseases of the eye and ophthalmoscopy* Philadelphia 1896-1900. Albert

Fielding, George Hunsley (1801-1871) English anatomist, who paid considerable attention to ophthalmology. Born in Hull, England, the son of a physician, he became in 1824 a Member of the Royal College of Surgeons of England, and practised for a number of years in his native town. He then proceeded to Erlangen, Germany, where he received the degree of Doctor in Medicine in 1836. Returning to England, Fielding settled in Tunbridge, Kent, where he practised for many years.In 1843 he was made a Fellow of the Royal Society. Fielding wrote but two ophthalmologic articles, as follows: 1. On a New Membrane in the Eye, etc.(London, 1832.) 2. On the Influence of Color on the Effect of Light, Heat and Odors.American Encyclopedia of Ophthalmology,Vol.7,p.5189

Filatov, Vladimir Petrovich (1875-1956) Russian ophthalmologist, born in Saransk in the Ukraine and who graduated in medicine in Moscow in 1897 where he held his first hospital appointments. In 1908 he went to Odessa where he eventually became the Director of the Ophthalmological Institute; here he worked until the time of his death, the latter part of his life being spent as Director of the Ukrainian Experimental Institute for Eye Diseases and tissue Therapy. In addition to his ophthalmological work, which embraced many aspects of ophthalmology, he took a considerable interest in general medicine and was also a deputy of the Ukrainian Suprerne Soviet. He was undoubtedly one of the great ophthalmologists of the 20th century, and it was regrettable the fact that closer contact with him and a more personal appreciation of his ideas have been impossible because of the "cold war". In ophthalmology his greatest contribution was in the biology of cortical grafts and the perfecting of the surgical techniques of keratoplasty. It will be remembered that von Hippel of Göttingen was the pioneer who, towards the end of the last century, made this operation a clinical possibility. Filatov shares with Elschnig of Prague the distinction of evolving the technique to make the operation a practical surgical procedure. As early as 1913 he was experimenting on the feasibility of total corneal grafting, transplanting the entire cornea with a margin of sclera and conjunctiva. This drastic procedure, of course, gives no clinical results of value, but the attempt illustrates his courage as a surgical enthusiast. There are two big advances with which his name is associated in connexion with corneal grafts. The first of these concerns the use of cadaver eyes. Some time previously →Magitot of Paris had shown that a graft could be preserved for a period varying from one to two weeks at a low temperature in haemolysed blood. With this as basis Filatov went further and popularised the use of grafts removed from cadaver eyes which, as early as 1934, he was using 41 hours after death. This, of course, opened up a vast source of graft material and is universally practised to-day with great benefit. He wrote, translated into German by A. Obal and edited by Maxim Zetkin: *Optische Keratoplastik und Gewebepathologie* VEB Verlag, Berlin 1954. BJO 41, 63-64; Mannis/*Corneal transplantation-A History in Profiles* Ostend 1999. JPW

Filius-Mesue *see* **Abu Zakarija Juhanna b. Masawaih**

Fincham Edgar Frank (1893-1963) British, specialist in physiological optics. The youngest of three brothers, he was educated at Hornsey County School which he left in 1909, when only 16 years of age, to take a position as laboratory assistant at the Northampton Polytechnic. After a short time there he was employed at Messrs. Newton and Co. and also at Messrs. Carpenter and Westley, and obtained the Diploma of the Worshipful Company of Spectacle Makers in 1914. In 1915 he volunteered for the R.A.M.C. and after training in the Pathology Laboratory at Millbank was drafted to Macedonia where he remained until 1919. Although only a young man, his keen powers of observation and great experimental skill were already evident and during this period he perfected his histological techniques with the human retina. Some of his photomicrographs (Photomicrographs of Sections of the Human Eye, 1925) have never been bettered. He also detected and photographed malarial parasites in the blood vessels of the human retina. For his work in Macedonia he was awarded the Meritorious Service Medal. At the end of the 1914-18 war he was appointed Lecturer in the Applied Optics Department of the

Northampton Polytechnic, where he worked and lectured until 1950. In spite of his heavy teaching responsibilities, this period was a most fruitful one, producing a series of papers on the mechanism of accommodation in the human eye that culminated with his classic monograph published by the British Journal of Ophthalmology as Supplement No. 8 in 1937. This year saw also the commercial production of his Coincidence Optometer, an instrument in widespread use for the precise and objective measurement of the refractive state of the eye. In 1950 he was invited to start a Research Department in Ophthalmic Optics at the Institute of Ophthalmology. Here, with a much lighter burden teaching, his research was given full rein, and the period until he left to return to his old love, the Northampton Polytechnic, in 1961, produced a series of important papers on the factors controlling ocular accommodation, the stimulus to the accommodation reflex, and the reciprocal actions of accommodation and convergence. During his life Edgar Fincham received many honours. He was Commander of the Order of St. John, the only honorary recipient of the Higher Diploma of the Spectacle Makers' Company, and a Fellow of the Royal Photographic Society. He was the first Wiseman Memorial Lecturer; he also gave the Ettles and Owen Aves Lectures, and was awarded the Ernest Aves Medal by the London Refraction Hospital " for work of outstanding merit in ophthalmic optics".Brit.J.Ophthal,1964,48:120

Finkelstein, Daniel (1940-) American Ophthalmologist, with an university education at Harvard College and a medical education at the University of Pennsylvania, followed by one year in neurophysiology at the Free University of Berlin and two years of neurophysiology at the National Institutes of Health. Residency and Chief Residency in ophthalmology was at the Wilmer Eye Institute at the Johns Hopkins University School of Medicine. Dr. Finkelstein then joined the Retinal Vascular Centre of the Wilmer Eye Institute under the direction of Dr. Arnall Patz and has continued there until the present. He has been Professor of Ophthalmology at the Wilmer Eye Institute since 1993 to the present. Dr. Finkelstein has also had an interest in medical ethics and was chairperson of the Johns Hopkins Hospital Medical Ethics Committee from 1997 to 1999 and has a joint appointment in the Johns Hopkins University Bioethics Institute. He is an Officer of the Macula Society and has been awarded its Arnall Patz Medal in 1995. He has published many original papers in the field of retinal diseases and medical ethics, and some examples of recent publications are "Finkelstein, D.: *Ischemic macular edema: Recognition and favorable natural history in branch vein occlusion*. Arch. Ophthalmol., 110:1427-1434, 1992", "Finkelstein, D., Smith, M.K., Faden, R.: *Informed consent and medical ethics*. Arch. Ophthalmol., 111:324-326, 1993", "Holroyd, S., Rabins, P.V., Finkelstein, D., Lavrisha, M.: *Visual hallucinations in patients from an ophthalmology clinic and medical clinic population*. J. Nerv. & Mental Dis., 182: 273-276, 1994", "*The Central Vein Occlusion Study Group M Report: Evaluation of grid pattern photocoagulation for macular edema in central vein occlusion*. Ophthalmol., 102: 1425-1433, 1995", "*The Central Vein Occlusion Study Group N Report: A randomized clinical trial of early panretinal photocoagulation for ischemic central vein occlusion*. Ophthalmol., 102: 1434-1444, 1995", "Finkelstein, D., Clarkson, J.G., Hillis, A.: *Branch and central vein occlusion*. Focal Points. Am. Acad. Ophthalmol., vol. XV, 1-13, 1997", "Finkelstein, D., Wu, A.W., Holtzman, N.A., Smith, M.E.: *When a physician harms a patient by a medical error: Ethical, legal, and risk-management considerations*. The J. of Clin. Ethics, 8: 330-335,1997", "Fekrat, S., Goldberg, M.F., Finkelstein, D.: *Laser-induced chorioretinal venous anastomosis for nonischemic central or branch retinal vein occlusion*. Arch. Ophthalmol., 116: 43-52, 1998" and "Agard, E., Finkelstein, D., Wallach, E.: *Cultural diversity and informed consent*. The J. Clin. Ethics, 9:173-176, 1998".(Daniel Finkelstein, M.D., The Wilmer Institute, The Johns Hopkins Hospital, Baltimore , MD 21287-9227, U.S.A.) (SM)

Finsen, Niels R. (1861-1904) Danish physician, *discoverer* of the curative power of the chemical rays of light (sunlight, electric light, Röntgen rays, etc.) and founder of phototherapy, was born in the Faroe Isles, and taught anatomy at the University of Copenhagen. He has shown that the effects of light upon biological processes are due almost exclusively to the chemical, or violet and ultra-violet, rays of the spectrum. The Finsen lamp, which was employed to destroy certain pathogenic organisms, as in lupus, favus, ring-worm, and alopecia areata, concentrates the rays of an electric arc lamp by

means of a lens composed of one flat and one curved disc, between which is interposed a solution of copper sulphate.In 1903 he was awarded the *Nobel* prize for medicine.

Fischer, Friedrich P. (1897-1949) German ophthalmologist. Fischer's interest lay mainly in the basic sciences, particularly in physical chemistry. Much of his earlier work was summarised in his remarkable contribution on The Water Content of the Eye, published in *Documenta Ophthalmologica* in 1938. The bearing of this highly abstruse work on glaucoma and on retinal detachment is obvious, and though Fischer could give no final answer, the work he has done is a permanent contribution to an exceptionally difficult subject. An equally, important contribution bearing on the same clinical problems is represented by his paper on *The Mechanical Properties of the Eye and its Tissues*. His investigations on mycellia have a direct bearing on detachment, whilst his studies on elasticity and rigidity may ultimately help to clarify, the problems of glaucoma. Fischer's professional career was twice interrupted by the emergence of the Nazi horror. After 1933 there was no room for Fischer and his like in a Germany where all civilised values had collapsed. Through the wisdom of Professor →Weve, Fischer found a congenial home at the Clinic at Utrecht. When he went to Utrecht at the age of 36 he took with him an international reputation in his own sphere based on over 40 publications, and his subsequent industry brought lustre even to the Utrecht Clinic with its great traditions. The occupation of Holland by the Nazis in 1940 interrupted Fischer's career for a full five years. With the help of the highly organised Dutch resistance movement, and several false passports, he managed to elude the Gestapo, learning in the process how to trap rabbits in the woods, and to subsist on stolen chickens and stream-water. In the four years that were left to him at the end of the war he returned with renewed enthusiasm to his single-hearted devotion to research. A man of wide culture, he contributed to the study of the history of ophthalmology, as shown by his excellent paper on Goethe. He became one of the editors, and the leading spirit, of the revived Documenta Ophthalmologica and of the ophthalmic volumes in Tabulae Biologicae. In his work he was greatly assisted by his wife and his colleague, Dr. H. von Bunau. BJO 1948,33:591-592

Fischer, Johann Friedrich Christoph (1772-1849) German physician, surgeon and ophthalmologist, especially celebrated, as an operator for cataract. Born in Erfurt, he became at first an apothecary, in which capacity he lived for a time in Wetzlar, Mainz, Blankenhain, and Erfurt.Turning his attention to medicine, he studied at Jena and Erfurt, at the latter institution receiving his degree. After a considerable period of military service he studied again, at Vienna,and, settling as a physician, but chiefly as an ophthalmologist,in his native city, Erfurt, he founded there, in connection with a minister, an "Institution for the Blind and for Eye Patients." Fischer's most important (or only) ophthalmologic writing was *"Einige Bemerkungen über das Verhältniss der Extraction des Grauen Staares zur Keratonyxis hinsichtlich der Gefährlichkeit"*(in:Langenbeck's Neue Bibliothek, 1819.)

Fischer, Johann Nepomuk (1777-1847) born at Rumburg, Bohemia, Fischer received his M.D. at Vienna in 1806 and became professor of ophthalmology at the University of Prague. He was the first director of the Prague Ophthalmic Institute, established in 1814, and is considered the founder of modern ophthalmology in Bohemia. He wrote, according to Hirschberg, the first systematic textbook of ophthalmology based entirely on cases observed by the author: *Klinischer Unterricht in der Augenheilkunde*. Prag 1832 and *Abbildungen des Thraenenschlauches und einer merkwürdigen Metamorphose der Regenbogenhaut. Zu dem klinischen Unterrichte in der Augenheilkunde von Professor Fischer*. Prag, Borrosch & Andre, 1832. Fischer also was the first, since the old Greek and Arabian authors, to present a satisfactory description of trachoma in a textbook: *Lehrbuch der gesammten Entzündungen und organischen Krankheiten des menschlichen Auges ...* Prag 1846. He ***cannot*** have written: *Theorie des Schielens* Ingolstadt 1781 and *Beweis dass das Glockenläuten bey Gewittern mehr schädlich als nützlich ist..etc*. München (2nd edition München 1784). One, respectively both titels are listed in Albert/Source Book and in British Museum Catalogue, but in 1781 and in 1784 Fischer was only 4, respectively 7 years old![JPW] Albert, JPW

Fischer, Waldemar Edward (1877-1915) American ophthalmologist who died young. He was born in St. Louis, MO.,son of Dr. Joseph A. Fischer, a dentist. His medical degree was received at the Marion Sims College of Medicine, St. Louis, in 1898. He then took a

special course in ophthalmology at Berlin, Germany, and Vienna, Austria, from 1899 till 1901. Returning to St. Louis, Fischer became an assistant in the eye clinic of the Marion Sims College, and at the American Medical College, the Medical Department of the National University.He was also ophthalmic surgeon at the Missouri Baptist Sanitarium. When only thirty-seven years of age, Dr. Fischer, being seriously ill from overwork, committed suicide, Jan. 9, 1915.American Encyclopedia of Ophthalmology, Vol.7, p.5206.

Fisher, John Herbert (1867-1933) British ophthalmologist, born at Hillingdon, Middlesex, on 1 October 1867, the second child and second son of Ben James Fisher, M.I.C.E. and Sarah Yeale, his wife. Soon after his birth the family moved into Devonshire, and Fisher was educated at Exeter School, where he gained an exhibition and was a scholar. In 1887 he entered St Thomas's Hospital as Tite scholar and became afterwards Musgrave scholar and prizernan, so that in later life he used to say that it had cost his father nothing to educate him. He twice obtained the first College prize as the head of his year, and at the end of the curriculum he won the Treasurer's gold medal which was looked upon as the blue ribbon of the school. At London University he graduated M.B. in 1894, being placed in the first-class honours list at the M.D. examination, and winning the gold medal and scholarship in surgery at the B.S. He was equally good at football, playing forward at *rugger* for his county as well as for the Hospital. At St Thomas's Hospital he filled the posts of obstetric house physician, house surgeon, clinical assistant in the aural department, and ophthalmic house surgeon to Edward Nettleship. In 1895 he was appointed ophthalmic surgeon to out-patients in the Hospital on the resignation of Nettleship, and in 1915 he became surgeon and lecturer on ophthalmic surgery, positions he resigned in 1924. In the medical school of St Thomas's Hospital he was demonstrator of anatomy 1895-1903, dean 1904 to 1907, chairman of the committee of medical and surgical officers, president of the Medical and Physical Society, and president of the Rugby Football Club. At the Royal London Ophthalmic Hospital, Moorfields, after acting as clinical assistant to Edward Nettleship and William Lang, he was appointed surgeon in 1900. He resigned in 1927 on reaching the age limit, and was then invited to join the Committee of Management. At the Ophthalmological Society of the United Kingdom he was elected a member in 1915, was secretary 1907-10, vice-president 1918-20, and president 1920-22. He delivered a remarkable presidential address on "*The personal equation*". At the Royal College of Surgeons he lectured in 1930 as Hunterian professor of surgery and pathology upon "*Perforating wounds of the eyeball, and the localization of foreign bodies in the eye by X-ray examination*", and in the same year he delivered the Bradshaw lecture, when he took as his subject "*Ocular movements and judgements*". He served as a Member of Council from 1923 to 1931. During the war he was gazetted captain R.A.M.C.(T.) on 18 August 1915, and served with the 5th London General Hospital, a unit which was stationed at St Thomas's Hospital. He retired from practice in 1928 but retained the posts of ophthalmic referee to the Civil Service Commission and to the Ministry of Pensions. For some years he had charge of one of the trachoma schools in London, and was a member of the Prevention of Blindness Committee and of the editorial committee of the British Journal of Ophthalmology. He had also been president of the Council of British Ophthalmologists. He was a fluent and decisive lecturer, and an impressive clinical teacher. As a chairman or member of committee he was almost ideal, for he was firm and judicial, quick to sift the essential from the non-essential, and well able to express his judgement lucidly and on occasion emphatically. As an ophthalmic surgeon he was noted for his exceptional knowledge of all the structures appertaining to the eye. In any discussion that might arise upon some obscure case he was able to give an immediate and detailed account of the anatomical bearings of the symptoms. His love of anatomy was shown in his chief publication, his textbook of ophthalmological anatomy. His main publication is: *Ophthalmological Anatomy with some illustrative cases*. London, 1904. A detailed list of his publications can be found in *British Journal of Ophthalmology*, 1933, 17:381. He earned following titles and degrees: M.R.C.S. 12 November 1891; F.R.C.S. 8 June 1893; M.B., B.S. London 1894; L.R.C.P. 1891. The Times, 5 April 1933, p. 16c; Lancet, 1933, 1:831, with portrait; Brit. med. J. 1933, 1: 679, with portrait; Med. Pr. 1933, 186:301; St Thos. Hosp. Gaz. 1933,34:65, with portrait; Brit. J. Ophthal. 1933, 17:377, with portrait. LFRCS 1930-1951:269

Fisher, Ronald Frank (? - 1994) British ophthalmologist. Fisher received his medical education at the Westminster Hospital Medical School and qualified both with the London MB BS and the conjoint diploma in 1952. Deciding to specialise in ophthalmology after qualifying, he held junior appointments at the Westminster Hospital and at Moorfields. He won the Research Prize and the Treacher Collins Prize of the Royal Society of Medicine and his distinguished academic career took him to be consultant surgeon at the Western Ophthalmic Hospital and to the Professorship of Biophysics and Ophthalmology at St Mary's Hospital and the Institute of Ophthalmology. He wrote a number of papers on cataract and the properties of basement membranes. Fisher earned following titles: MRCS 1952; FRCS 1963; MB BS London 1952; MD 1965; PhD 1970; DSc 1978; LRCP 1952; DO 1957.

Fitzgerald J. Robert (1910-1973) American ophthalmologist, chairman of the Department of Ophthalmology, at the Stritch School of Medicine, Loyola University, Maywood, Illinois, from 1954 to 1971. Fitzgerald served as state supervising ophthalmologist, and for many years as a director of the Illinois Society for the Prevention of Blindness and most recently as vice-president. He served as secretary-treasurer of the Chicago Ophthalmological Society for four years, during his term as president of the Society, he initiated an annual Clinical Conference.AJO 1973,76:602

FitzGerald, Edward (1842-1916) Irish ophthalmologist born in Dublin.He was eductated at Trinity College where he took his B.A. degree in 1864 and the M.B. and M.Ch. in 1868 followed by the M.D. 1873. In 1885 he took the M.R.C.P. and the following year the F.R.C.P. Ireland. FitzGerald was appointed ophthalmic and aural surgeon to the House of Industry Hospitals and became later surgeon to the National Eye and Ear Infirmary. On amalgamation of the latter with St.Mark´s Ophthalmic Hospital to form the Royal Victoria Eye and Ear Hospital he retired from active participation in hospital work. Fitzgerald was lecturer on ophthalmic surgery at the Carmichael School of Medicine and Professor at the Royal College of Surgeons, Ireland in 1912. The Ophthalmoscope, 1916, p.390-391.

Flajani, Joseph (1741-1808) Italian surgeon and ophthalmologist especially famous for his work in connection with the artificial pupil and the treatment of dacryocystitis. He is sometimes said to have been the discoverer of exophthalmic goitre, which affection, therefore, is now and then designated by the term,"*Flajani's disease*." Flajani, however, cannot, in any proper sense,be said to have discovered the malady in question, which is far more properly known as "*Graves' disease*" and "*Basedow's disease*." All that Flajani did was to describe in Vol. III, at p. 270, of his "*Collezione d'Osservationi e Riflessioni di Chirurgia*," (1802) three cases of bronchocele accompanied (among other symptoms) by palpitation of the heart. He seems to have had no clear idea either that the goitre caused the palpitation, or that both the palpitation and the goitre might have been engendered by some common cause. Flajani was born near Ascoli,received the degree of Doctor of Philosophy and Medicine at Rome, settled in that city, there became surgeon at the Hospital San Spirito,as well as body physician to Pope Pius VI. Hirschberg gives the year of Flajani's death as 1802, probably as mistake, in as much as both Hirsch and Lippincott's "*Biographical Dictionary*" agree on 1808. Probably Hirschberg, when he wrote "1802," had still in mind the date of Flajani's book. American Encyclopedia of Ophthalmology,Vol.7,p.5221.

Flarer, Francesco (1791-1850) Italian ophthalmologist, especially remembered as the inventor of Flarer's operation for trichiasis . The dates of his birth and death are not procurable. He became, however, professor of ophthalmology at Pavia in 1819, as well as director of the Pavian Ophthalmic Hospital. His best known writing is "*Riflessioni sulla Trichiasi suite Trichiasi e sull´Entropio Acuto, Particolare Riguardo al Metodi di Jaeger e di Vacci*" (Milano 1828). He also wrote: *In nuperam myopiae aetiologiam dynamicam animadversio inauguralis* [respondent] Al. Gambarini. Mediolani: ex typographia Joannis Bernardoni, 1827 and *De iritide ejusque speciebus, earumque curatione* Ticini Regii 1841. American Encyclopedia of Ophthalmology,Vol.7,p.522. Albert

Fleet *see also* **Van Fleet, Frank**

Fleischer, Bruno (1874-?) German ophthalmologist. University lecturer Tübingen 1904,professor 1909, Professor at Erlangen University 1920, emeritus 1948. He

specialized in ophthalmology and genetics. Contributions found in Graefe-Saemisch *Handbuch der ges.Augenheilkunde* 1922; *Handbuch der Augenheilkunde und Erbkrankheiten*. Articles in *Deutsche Zeitschrift für Nervenheilkunde*, 1912; *Klinische Monatsblätter f. Augenheilkunde* 1914; *Graefe´s Archiv f. Ophthalmologie* 1918; *Archiv f. Rassen und Gesellschaftsbiologie* 1920; *Ergebnisse der allg. Pathologie und pathol.Anatomie.*Kürschners Gelehrten- Kalender 1966,p.553.

Fleischl von Marxow, Ernst (1846-1891) German physiologist, pathologist and physiologic optician. Born in Vienna, he studied at Vienna and Leipzig,at the latter institution receiving his degree in 1870. In 1880 he was extraordinary professor of physiology at the University of Vienna, and, seven years later, corresponding fellow of the Viennese Academy.A likeness in relief of this physiologist was unveiled in the Arcades of the University of Vienna Oct. 16, 1898, on which occasion a memorial address was delivered by Exner.Fleischl von Marxow's most important writings are: "*Die Doppelte Brechung des Lichtes in Flüssigkeiten*" and "*Die Deformation der Lichtenwellenfläche in Magnetischen Felde.*" A complete collection of his works was published by Sigmund Exner in 1893, together with a portrait of this distinguished physiologist and optician.American Encyclopedia of Ophthalmology, Vol.7, p.5225.

Flemming, J. (1874-1918) German ophthalmologist widely known for his experiments on trachoma corpuscles and on the therapeutic action of radium and mesothorium. He was a student in the Kaiser-Wilhelm Academy. Having received his medical degree, he soon was troop physician, later physician in chief to the "Plöner Cadet Institution." Promoted to the aerial service, he made a large number of experiments in aviation, and, in this way, was of great service to the German Government. He also thoroughly studied the aerial bacteria, of which he named large numbers. From 1907-1911 he was assistant to Professor →Greeff. He died of a wound in a field hospital in his forty-fourth year. AJO 1919,2:165-166

Flemming, Percy (1863-1941) British ophthalmologist, Emeritus Professor of Ophthalmic Medicine and Surgery at University College. A Londoner by birth, he was a product of University College, for his preliminary education was received at University College School and he proceeded to University College Hospital for his medical training. Having taken the conjoint diplomas in 1885 he obtained his M.B. London in 1887 with the University Scholarship in medicine and honours in most of the other subjects. He took the M.D. with gold medal in 1888, and the F.R.C.S.Eng. in 1889 after a brilliant academic career. Flemming succeeded to the vacancy in the ophthalmic department at University College Hospital caused by the resignation of Marcus→Gunn. His chief was Sir John Tweedy and on the latter's retirement he advanced to the senior post. In 1900 he was elected to the staff at Moorfields and served his full time becoming consulting surgeon to both institutions. He was also a Fellow of University College. Flemming was a brilliant ophthalmologist but was not a profuse writer on his special subject. His retiring nature and habitual modesty perhaps made him not quite so well known outside the hospital as he deserved to be. Flemming had a second string to his life's interests, in archaeology and the history of London on which he was a recognised authority. He printed for private circulation an address which he gave, on late mediaeval London from a medical point of view, to University College Hospital Medical Society. And he was the author of a paper on the monastic infirmaries, particularly that of Westminster Abbey. He was elected F.S.A. in 1931.He was largely concerned, together with Marcus Gunn, in founding the training school for nurses at Moorfields. Flemming wrote: *Harley Street from early times to the present day* London 1939. BJO 26, 90-92, 1942; The Times 23.12.1941, Lancet 1942,1:28. LFRCS 1930-51:292-293. JPW

Fles, Joseph Alexander (1891-?) Dutch ophthalmologist. Born in Breda, he received the degree of Doctor in Medicine in 1843 at the University of Utrecht. In 1851 he was appointed docent for descriptive and pathologic anatomy at his alma mater, and in 1862 for ophthalmology. In 1868 he severed his connection with the University, and devoted himself to private practice as an ophthalmologist until his death.American Encyclopedia of Ophthalmology,Vol.7,p.5225.

Flesch, Jacob Gustav Adam (1819-1892) German physician, who devoted considerable attention to ophthalmology. Born at Frankfort-on-the-Main he studied at Heidelberg and Berlin, at the latter institution receiving his degree in 1839. His dissertation, on this

occasion, was "*De Glaucomate*." He practised in Frankfort from 1841 until his death.American Encyclopedia of Ophthalmology,Vol.7,p.5225.

Fletcher, Robert (1925-) British Professor of optometry and visual sciences. Fletcher received his primary education at Hampton Grammar School. He visited subsequently the Northhampton Polytechnic, London, the London Refraction Hospital and the Manchester University receiving following qualifications: M.Sc.(Tech); F.S.M.C.(Hons); F.B.O.A.(Higher Diploma);D.Orth.;D.C.L.P.;F.C.Optom.;F.A.A.O. and A.M.C.T. During his career Fletcher received following awards: British Optical Association Research medal in 1963; Owen Aves medal in 1968 and the Gold Award of the Norwegian Optometric Association (NOF) in 1983. Fletcher became Professor of Optometry and Visual Sciences in 1964 and was in this position until 1981 at the City University in London. He was President of the College of Optometrists 1967-68; President of the Contact Lens Society in 1965; Chairman of the Advisory Board in 1965, Member of the editorial board of the Contact Lens Journal from 1966, Research Associate, Indiana University, USA, 1962. Fletcher is Expert Witness for High Court and Crown Court cases and ophthalmic as well university tribunals. He wrote following books: *Aspects of Intra Ocular Physiology* (Hatton Press, London 1954); *Ophthalmics in Industry* (Hatton Press, London 1960); *Field of Vision* (with K. Harwood) Reading 1972; *Careers in Eye Care* (with I.Fletcher de Tellez) London 1985; *Defective Colour Vision* (with J.Voke) Bristol 1985; *Glaucoma in Optometric Practice* (with F.G.Brown) Oxford 1990; *Eye Examination and Refraction* (as co-author) Oxford 1991, 2nd edition 1998; *Contact Lens Practice* (with L.Lupelli & A.Rossi) Oxford 1994; *MCQs in Optometry* (with K.Olliver) Oxford 1996; *Contattologia, una guida clinica* (with Lupelli & A.Rossi) Palermo 1998. Fletcher translated into English: Stenstrom *Optics and the Eye* (from Swedish) London 1964 and Saude *Ocular Anatomy and Physiology* (from Norwedian) Oxford 1993. He edited the *City University Colour Vision Test* (Keeler) Windsor 1975, 1980 & 1998 and the *Fletcher-Hamblin Simplified Colour Vision Test* (Keeler) Windsor 1984. He received the UK and USA patents for his *Vision Screener MAVIS* in 1959. Fletcher published countless papers, mostly in optical, optometrical and physiological journals. Adress: 2 Chestnut Close, Amersham HP6 6EQ. Phone 01494 729269 JPW

Fliesler, Steven J. (1951-) American biochemist/cell biologist. Born in Albany, New York. After completing undergraduate training at the University of California, San Diego and Berkeley (B.A., biochemistry, 1973), Dr. Fliesler underwent doctoral training at Rice University, Houston, TX (Ph.D., biochemistry, 1980), with Professor George J. Schroepfer, Jr. He then pursued postdoctoral fellowship training (1979-1982) at Cullen Eye Institute, Baylor College of Medicine, Houston, TX, with Professors Robert E. Anderson and Joe G. Hollyfield. After serving as a Research Assistant Professor (1983-1984) at Cullen Eye Institute, Dr. Fliesler joined the Bascom Palmer Eye Institute and the Department of Biochemistry and Molecular Biology, Miami, FL, as an Assistant Professor in 1985. In 1988, he moved to Saint Louis University School of Medicine, St. Louis, MO, as an Associate Professor (1988-1994) in the Department of Ophthalmology and the E.A. Doisy Department of Biochemistry and Molecular Biology. Dr. Fliesler was promoted to full Professor of Ophthalmology in 1994 at Saint Louis University School of Medicine, and was appointed as Assistant Director of the Cell and Molecular Biology Graduate Program at Saint Louis University in 1999. Dr. Fliesler's research interests include isoprenoid and phospholipid metabolism and intracellular transport, protein glycosylation and prenylation, glycoprotein and oligosaccharide structure and metabolism, and photoreceptor membrane assembly in the retina. Dr. Fliesler has served on the Editorial Board of *Exp Eye Res* since 1995 and *Glycobiology* since 1990. *Honors and awards*: Bank of America Science and Engineering Scholarship (1971); University Research Foundation Fellowship, UCSD (1972 and 1973); Advanced Studies Fellowship, Rice University (1974-1975); Robert A. Welch Foundation Predoctoral Fellowship (1977-1979); Research to Prevent Blindness James S. Adams Scholar Award (1992); "*Scientist of the Year*" Award, Saint Louis University Chapter of Sigma Xi (1999). *Publications*: *Arch Biochem Biophys* 1988; *Arch Ophthalmol* 1987, 1989, 1992; *Biochim Biophys Acta* 1982, 1983, 1992; *Biochem Biophys Res Commun* 1986, 1995; *Curr Eye Res* 1984, 1994; *Exp Eye Res*, 1984, 1990, 1992, 1995, 1997; *FEBS Lett* 1992, 1993; *Glycobiology* 1990, 1993; *Intl J Biochem Cell Biol* 1997; *Invest Ophthalmol Vis Sci* 1986, 1999; *J Biol Chem* 1983, 1987, 1990; *J Cell Biol*

1985, 1995; *J Neurochem* 1974, 1985, 1986; *J Neurosci* 1984; *Nature* 1974; *Neurosci Lett* 1988; *Proc Natl Acad Sci USA* 1985, 1986; *Prog Lipid Res* 1983; *Tissue and Cell* 1986; *Visual Neurosci* 1988. Current address: Saint Louis University Eye Institute, Saint Louis University School of Medicine, 1755 S. Grand Blvd., St. Louis, MO 63104-1540; phone:
+1-(314) 577-8259; fax: +1-(314) 771-0596; email: Fliesler@slu.edu.) (JPW)


DESCRIPTION

HISTORIQUE, THÉORIQUE ET PRATIQUE,

DE L'OPHTHALMIE PURULENTE

OBSERVÉE DE 1835 A 1839
DANS L'HOPITAL MILITAIRE DE SAINT-PÉTERSBOURG,

Avec planches coloriées

PAR PIERRE FLORIO,

Paris,
H. COUSIN, LIBRAIRE-ÉDITEUR,
RUE JACOB, 25.

1841

Florio, Pierre (1840-?) Italian who reached a high rank as a physician in Russia. At the beginning of his professional career he was affected with the purulent eye inflammation and studied the disease for twenty-three years in France (1817), Warsaw (1819-1832) and St. Petersburg where he was chief physician at the military hospital. Florio had an opportunity to observe ophthalmia in 1817 among the Russian troops stationed in France and later,by order of the Tsar, his book was translated into Russian and printed at the expense of the Russian government to be distributed among the military physicians of the Russian army: *Description historique, théorique et pratique, de l'ophthalmie purulente observée de 1835 a 1839 dans l'Hopital Militaire de Saint-Pétersbourg*. Paris 1841. (In Russian 1839[JPW]) Albert

Foerster, Carl Friedrich Richard (1825-1902) German ophthalmologist, inventor of the photometer (1857)and of the perimeter(1868). Born in Lissa, he studied medicine at Breslau, Heidelberg and Berlin, at the latter institution receiving his degree in 1849. In 1857 he settled in Breslau as an ophthalmologist. In 1894 he became a life member of the Prussian House of Lords on July 31, 1899, he celebrated the jubilee, or 50th anniversary, of his doctorate in medicine, and formally retired from practice. He published: 1.*Ueber Hemeralopie*.(Breslau, 1857.) 2. *Ophthalmologische Beiträge* (Berlin, 1862.)3. *Beziehungen der Allgemeinleiden zu den Erkrankungen des Sehorgans*.(in Graefe-Saemisch *Handbuch*,Bd.7,part V, 1877 [GM5915]) 4. *Künstliche Reifung des Cataracts*.(Archiv f.Augenheilk.1883.) 5. *Einfluss der Concavgläser auf die Weiterentwicklung der Myopie*.(Archiv f. Augenheilkunde; Bd. XIV.).American Encyclopedia of Ophthalmology,Vol.7,p.5238. Albert, Tonkelaar.

Foerster, Helenor Campbell Wilder (1895-1998) American female ophthalmologist, pioneering ophthalmic pathologist. Born in Baltimore, Md, and educated in her native city at the Bryn Mawr and Western high schools, Helenor Campbell initiated her long scientific journey in 1914 as an apprentice laboratory technician and bacteriologist at the Department of Pathology at The Johns Hopkins Medical School, Baltimore, where she worked under the direction of William H. Welch and his associate Milton C. Winternitz. For patriotic reasons, she briefly interrupted her activities at Johns Hopkins during World War I to serve as a bacteriologist at Camp Meade (now Fort George G. Meade), Maryland. When the war ended she returned to Johns Hopkins as a bacteriologist working with William MacCallum, who had succeeded Welch as Professor of Pathology. Her 33-year career at the Army Medical Museum (subsequently the Army Institute of Pathology and now the Armed Forces Institute of Pathology [AFIP]) began in December 1920 when she was recruited by the museum's curator, George C. Callender. Having completed 6 years of training, she was well qualified to take on the task of processing the influx of ophthalmic

and otolaryngologic specimens that began in 1922, after the museum formed an alliance with the American Academy of Ophthalmology and Otolaryngology for the dual purpose

of building a permanent collection of specimens (the Registry of Ophthalmic Pathology) and offering diagnostic consultative service. Helenor Campbell was the histopathology technician assigned to work with Callender to staff the newly inaugurated Section on Ophthalmic and Otolaryngologic Pathology. During the 1920s and 1930s she absorbed an exceptional understanding of ocular histology and pathology through her daily interactions with such outstanding military pathologists as Callender, James Ash, and Elbert DeCoursey; and also from Registry of Ophthalmic Pathology consultants who reviewed most of the difficult and unusual cases. Frederick Verhoeff, Jonas Friedenwald, and Georgiana Theobold were the ones who proved to be most helpful and timely in rendering their consultative reports. She also collaborated with Ash and DeCoursey in selecting and preparing illustrations for the first 3 editions of the *Atlas of Ophthalmic Pathology*, printed and bound at the Army Medical Museum. Later still, she would assist Friedenwald and members of the American Academy of Ophthalmology and Otolaryngology's Committee on Revision of the *Atlases* by preparing all of the illustrations and contributing portions of the text for the green-bound first edition of the atlas, published in 1952 by W. B. Saunders Co under a joint contract between the AFIP and the American Academy of Ophthalmology and Otolaryngology. During the ensuing 25 years she won the respect and admiration of her colleagues at the museum as well as the world of ophthalmology, and through steady excellence rose in rank to become head of the Section of Ophthalmic Pathology. To this day she remains the only person in AFIP history entrusted with the duties and responsibilities of a pathologist despite the lack of an undergraduate, medical, dental, or veterinary degree. Notwithstanding the lack of the "doctor" title, Mrs Wilder was not only "accepted" by departmental chairpersons throughout the world, but loved and even adored by many. Shortly after she informed DeCoursey of her plans to retire from the AFIP, he recruited one of his junior staff pathologists, Lt Col Lorenz E. Zimmerman, to become her successor. Several months later she escorted Zimmerman to the 1953 annual meeting of the American Academy of Ophthalmology at the Palmer House in Chicago, Ill, because she wanted to be certain he would meet every VIP in attendance. She delighted in presenting him to eminent professors and departmental chairpersons from all over the world, and boasted about his great potential; but it was clear from the way the attendees embraced and kissed her that she would be sorely missed. Helenor Campbell Wilder's acute sense of observation, combined with her persistent curiosity about the pathogenesis of ocular diseases, resulted in more than 35 scholarly contributions to the scientific literature in 17 different refereed publications. She was the sole author of 18 of these. She is best known for her twin discoveries of the protozoal organism *Toxoplasma gondii* as the cause of a form of blinding retinal inflammation previously attributed to tuberculosis, and of the presence of the larval form of the nematode *Toxocara canis* in enucleated eyes suspected of harboring retinoblastoma. Her classic reports not only called attention to the clinical and microscopic characteristics of these ocular infestations, which resulted in the institution of appropriate therapeutic and public health preventative measures, but also stimulated other basic and clinical scientists to further investigate these entities. She also deserves great credit for developing the Wilder stain for reticulin and for collaborating with Callender in formulating the widely used, and still valid, Callender-Wilder classification of intraocular melanomas. In 1947 Mrs Wilder was the first woman to be elected an honorary member of the American Academy of Ophthalmogy and Otolaryngology and was awarded the Academy Honor Society's Gold Key. Several additional honors were bestowed on her shortly after she announced her plans to retire from the AFIP in 1953 in preparation for her marriage the following year to Roland C. Foerster, a prominent San Francisco attorney. She was named Woman of the Year for Science by the Woman's National Press Club. The presentation was made in Washington, DC, by President and Mrs Eisenhower. Mrs Wilder was the only person ever elected a member of the American Association of Pathologists and Bacteriologists without an MD degree. In 1954 she received the Exceptional Civilian Service Award, the highest civilian award of the Department of Defense. In commenting about her studies of *Toxoplasma* species, DeCoursey, her former colleague and former director of the AFIP, stated: "It is the consensus of the medical profession that Mrs Foerster's discovery advanced ophthalmic science 50 years." When Mills College, Oakland, Calif, conferred an honorary LLD degree on her in 1954 she was recognized for her studies of disease, her contributions to public health, and her "*vision of human needs*." In 1956 she received the Leslie Dana Gold

Medal of the St Louis Society for the Blind. The move to San Francisco did not dull Mrs Foerster's keen interest in ophthalmic pathology. She maintained an official association with former colleagues at the AFIP as an appointed consultant to the professional staff and also accepted dual appointments at the Francis Proctor Foundation for Research in Ophthalmology as an associate research ophthalmologist, and at the Department of Ophthalmology at the University of California Medical School as a lecturer in ophthalmic pathology. There, between 1954 and 1976, she worked with Frederick Cordes, Michael Hogan, Phillips Thygeson, Levon Garron, William Spencer, and Brooks Crawford while continuing to contribute to the ophthalmic literature, present papers at national and regional meetings, attend weekly eye pathology sessions, and consult on difficult cases. In 1958, she and her husband also established a scholarship fund in her name dedicated to the continuation of ophthalmic pathology research at the University of California Medical Center. Mr Foerster died in 1961. In 1968 she was guest of honor at the European Ophthalmic Pathology Society meeting in Paris, France. In her later years, Mrs Foerster continued her contacts with her medical colleagues throughout the world. She attended Verhoeff Society meetings as an emeritus member until she was well into her ninth decade of life. Arch Ophthal 117,849,1999

Folker, William Henry (1826-1912) British surgeon. Founder of the eye department at the North Staffordshire Infirmary. The Ophthalmoscope, 1912, p.301-302.

Follin, François Anthime Eugène (1823-1867) French pathologist, surgeon and ophthalmologist. Born in Harfleur, France, he studied his profession at Paris, becoming in 1845 interne, in 1847 Aide d'Anatomie, in 1850 prosector to the faculty, and in 1853 surgeon to the Central Bureau. His degree was received in 1850,presenting as his dissertation*"Etudes sur les Corps de Wolf*." In 1853 he was made extraordinary professor of surgery at the University.Up to this time Follin had written a number of books and articles dealing with anatomy, pathology and general surgery. Now, however, about 1853, he began to devote his attention more especially to ophthalmology, and became a celebrated operator on the eye. He wrote a large number of articles on this subject, dealing with glaucoma, its pathology and treatment, iridectomy, illumination, accommodation,retinal hemorrhage and the medical and surgical treatment of diseases of the lachrymal passages. His most important writing, from the point of view of ophthalmology, was that entitled *Leçons sur I'Application de l´0phtalmoscope au Diagnostic des Maladies de I'Oeil* (Paris, 1859; Germ.trans., Weimar, 1859). This atlas was the earliest work in the French language, devoted to the use of the ophthalmoscope and second edition appeared under the title: *Leçons sur l'exploration de l'oeil et en particulier sur les applications de l'ophthalmoscope* Paris 1863. Follin also wrote a *Traité élémentaire de Pathologie Externe* (from volume 3 onwards with S.Duplay) that was started in 1861 and finished in 1888 with the 7th volume. American Encyclopedia of Ophthalmology,Vol.7, p.5240. Albert .JPW


LEÇONS

SUR

L'APPLICATION DE L'OPHTHALMOSCOPE

AU DIAGNOSTIC

DES

MALADIES DE L'ŒIL

PAR

E. FOLLIN

PARIS

Follin´s book on the Use of the Ophthalmoscope for the Diagnosis of Eye Diseases.

Foltz, Jean Charles Eugène (1822-1876) French anatomist, physiologist and ophthalmologist. Born in Nancy, he studied at the Strasburg Military School and at Val de Grâce. Settling in Lyons, he was appointed in 1854 assistant professor of anatomy and physiology, and,in 1865, full professor of the same subject, in place of his uncle, Richard Foltz. His ophthalmologic writings are: 1.*Sur le Traitement Méchanique de la Myopie*. (Annales de la Soc.de Méd. de Lyon,1859.) 2. *Anatomie et Physiologie des Conduits Lacrymaux*. (Ibid.,1862.). American Encyclopedia of Ophthalmology,Vol.7, p.5240

Foltz, Kent Oscanyan (1857-1908) American eclectic ophthalmologist of Cincinnati, Ohio. He was born in Lafayette, Medina County, Ohio, the son of Dr. William K. Foltz, who was one of the earliest and best known of eclectic physicians in the middle west. Foltz graduated from the Ashland, 0., High School in 1872, and attended Buchtel College, in Akron, Ohio, for two or three years. For a time he worked in the retail, then the

wholesale drug business. Then he became an optician. At length, under his father's preceptorship, he began to study medicine. His medical degree was received at the Eclectic Medical Institute, Cincinnati, Ohio, in 1886. For a brief period he practised general medicine, but, in 1888 and 1889, at the New York Post-Graduate Medical School, he made a thorough study of the eye, ear, nose and throat. In 1890 he became connected with, the Polyclinic, the Manhattan Eye and Ear Infirmary, and the Harlem Dispensary. Soon after, however, he gave up institutional practice, and engaged again in general work. In 1898 he moved to Cincinnati, having been appointed to the chair of Didactic and Clinical Ophthalmology, Otology Rhinology and Laryngology in his alma mater-the Eclectic Medical Institute.In 1891-92 he was President of the Ohio State Eclectic Medical Association. He was also one of the associate editors of the Eclectic Medical Journal for a number of years, during a part of which time he conducted the Eye, Ear, Nose and Throat Department of that publication.He wrote: "*Manual of Eye Diseases*" (1900) and "*Manual of Diseases of the Nose, Throat, and Ear*" (1906). He also contributed numerous articles to Prof.Herbert T.Webster's "*Dynamical Therapeutics.*" American Encyclopedia of Ophthalmology,Vol.7,p.5240-5242. The Ophthalmoscope, London 1908,p.652

Fong, Kee Siew (1962-) Singapore female Ophthalmologist, Consultant at the Singapore National Eye Centre. She graduated from the National University of Singapore in 1986 and started ophthalmology training in 1990. She received the Master of Medicine (Ophth) and Fellow of the Royal College of Surgeons of Edinburgh (Ophthalmology) in 1993 and has since joined the Singapore National Eye Centre. She was sent on an Oculoplastic fellowship to Sydney Eye Hospital in 1997. She is currently a Consultant of the Oculoplastic service at the Singapore National Eye Centre. Representative published articles include "*Using the phacoemulsification crescent knife in dacryocystorhinostomy. Ophthalmic Surg Lasers.* 1998 Apr 19(4): 343-4. Fong KS, Koh A, Choo CT"; "*Surgical management of upper lid epiblepharon*, Eye. 1998: 12(Pt 4): 623-6. Choo CT, Chan CML, Fong KS" and "*Hydroxyapatite orbital implants- our local experience*. Ann Acad Med Singapore 1997 July, 26(4): 405-8. Fong KS, Choo CT". (Dr FONG Kee Siew, 11 Third Hospital Avenue, Singapore 168751, Singapore. Phone: (65) 2277255; Fax: (65) 2277290) (SM)

Fontana, Felice (1720-1805) Italian physicist, chemist, and physiologist, whose name has been preserved for ophthalmologists in the expression, *canal of Fontana* .Born in Pomarolo, near Rovereto,he studied at Padua, Bologna, and Rome. After a brief period spent as instructor in philosophy at Pisa, he was commissioned by the Duke of Tuscany to establish in Florence a natural history museum. He wrote "*Ricerche de Motu del iride*"(Lucca, 1765)[GM1485]. He also wrote an important work on the effects of poisons: Traité sur le vénin de la vipere Florence 1781. An English translation was published 1787.American Encyclopedia of Ophthalmology,Vol.7,p.5343. Albert

Foot, Jesse (? -?) An English ophthalmologist of the early 19th century,whose life-dates cannot be ascertained. He was physician to the Westminster Ophthalmic Hospital, London, and published a work entitled *"Ophthalmic Memoranda"* (London, 1838).American Encyclopedia of Ophthalmology, Vol.7, p.5243.

Forbes, C. F. (?-?) English military surgeon who wrote *"Observations on the History and Treatment of an Epidemic Ophthalmia, which appeared in the Fourth Battalion of the Royals, in Edinburgh Castle, during the months of July and August 1807."*American Encyclopedia of Ophthalmology,Vol.7,p.5244.

Forbes, Edward (1815-54) British naturalist, born in Douglas, Isle of Man, entered the University of Edinburgh as a student of medicine; and in 1836 relinquished medical studies to devote himself to the natural sciences.In 1836-37 he studied at Paris under Geoffroy St. Hilaire,Jussieu,and De Blainville. In 1841 he joined the surveying ship Beacon as naturalist, and accompanied that vessel during the survey of a part of Asia Minor. On his return to England (1843) he became professor of botany at King's College, London, and curator of the Geological Society. In 1844 he was appointed paleontologist to the Museum of Geology; in 1851 professor of natural history in the School of Mines; in 1852 president of the Geological Society; and, in 1853 he was elected to the chair of natural history at the University of Edinburgh. Forbes did much to advance and systematize special departments of natural history. His classification of the British

starfishes opened a new era in that branch of zoology; and his discovery that air-breathing molluscs lived at the period of the Purbeck beds, rectified many erroneous hypotheses. Among his separate works, may be instanced, as of interest to ophthalmologists:"*Naked-eyed Medusae*"(1847).American Encyclopedia of Ophthalmology,Vol.7,p.5244.

Forbes, John. An English naval surgeon who wrote "*Observations on Tropical Nyctalopia*" (Edinburgh Med. and Surg. Jour.,1811).American Encyclopedia of Ophthalmology,Vol.7,p.5244.

Foreest, Pieter van (1522-1597) Dutch physician. This remarkable man is' known as the " Batavian Hippocrates". Born in Holland he received his medical degree at Bologna, and afterwards studied for a long time at Rome, Padua, Paris and Louvain (Leuven, Belgium). He practised for a time at Bordeaux, then at Pluviers, but settled at length in Alkmaar, Holland, which seems to have been his native town.Here he practised for twelve years, and then moved to Delft. At the founding of the Leyden University he was made (of course, the first) professor of internal medicine at that institution.He devoted considerable attention to diseases of the eye, and was one of the first physicians to prescribe concave lenses for myopia. He seems, however, not to have performed the cataract operation. After forty years of both medical and surgical activity at Delft, he returned to Alkmaar, where he died. His most important works, both of which contain ophthalmic observations of some importance in their day, are: 1. "*Observationum et Curationum Medicinalium Libri xxxii* „ (Leyden, 1587-1610)[GM3710.1 for "Liber xix"]. 2. "*Observationum et Curationum Chirurgicorum, Libri xi*.Leiden 1610"American Encyclopedia of Ophthalmology, Vol.7, p.5267-5268.

Forestus, Petrus see **Foreest**

Joseph Nicolas Blaise Forlenze

Forlenze, Joseph Nicolas Blaise (1769- 1833) Italian ophthalmologist, who was born at Picerno. Forlenze studied at first in various Italian and Greek universities, then, under Desault and Louis, in Paris, and under John Hunter in London. He settled as ophthalmologist in France, presumably in Paris. His death date cannot be learned. Forlenze's ophthalmologic, writings are as follows: 1. *Considérations sur I'Operation de la Pupille Artificielle*. (Strasburg and Paris 1804.) 2. *Observations et Reflections sur plusieurs Cataractes.*(Annuaire de la Soc.de Méd. du Départment de l´Eure, 1809.) 3. *Rapport sur les opérations de cataracte faites par M. le Docteur Forlenze ... observations faites sur un jeune homme opéré d'une cataracte de naissance*. [Strasbourg: F.G. Levrault, 1817] 4. *Relation des opérations et des expériences faites a Colmar par le célèbre oculiste*
Forlenze, sur neuf aveugles affectés de cataractes ... Colmar: Chez J.H. Decker, 1817 5. *Notice sur le developpement de la lumière et des sensations, dans les aveugles-nés a la suite de l'opération de la cataracte* . .. 3rd. ed. Paris 1820. American Encyclopedia of Ophthalmology,Vol.7,p.5273. Albert

Fossombroni, Vittorio (1754-1844) Tuscan statesman and mathematician, wrote a series of works on physics and mathematics during the early years of his career: *Saggio di ricerche sull'intensiti del lume* Arezzo 1781.

Foster, David (?-) British scientist, Professor of Visual and Computational Neuroscience. David Foster studied Physics at Imperial College, London. He graduated with first class honours and undertook postgraduate research in vision in the Applied Optics Section, receiving his PhD in 1970. After a 1-year research assistantship, he was appointed lecturer in the Department of Physics at Imperial. In 1976 he went to Keele University to join the Research Department of Communication and Neuroscience, where he was subsequently appointed to a readership, then to a personal chair in 1988, and then to the headship in 1994. He moved to Aston University in 1995 as Professor of Vision Sciences and head of department. In 1999 he moved to UMIST to take up a personal chair in the Department of Optometry & Neurocience. He was elected Fellow of the Institute of Physics and of the Institute of Mathematics and its Applications in 1981, and awarded a DSc in Biophysics from London University in 1982. He is an elected member of the Physiological Society, the Association of British Neurologists, the British Society for Clinical Neurophysiology, the Experimental Psychology Society, and others. He has served on the management committees of the Colour Group of Great Britain and of the Applied Vision Association, of which he was Chairman 1986-1995. He is a member of

the EPSRC Computing College. He co-founded the journal *Spatial Vision* in 1984, served as Editor-in-Chief for Europe and Australasia for 10 years, and is now Advisory Editor. He is also Associate Editor of *Computers in Biology and Medicine*. Address: Professor D.H. Foster, Optometry & Neuroscience, UMIST, P.O.Box 88, Manchester, M60 1QD, UK; Tel:+44 (0)161 200 3888/3889 Fax:+44 (0)161 200 3887 Email: d.h.foster@umist.ac.uk (JPW)

Foster, Gard Wilmarth (1853-1914) American ophthalmologist and otolaryngologist of Auburn, New York. Born in Burlington, Vt., he received the medical degree at Detroit Medical College in 1873. He was for a time surgeon to St. Luke's Hospital, New York City, and, in 1882, to the New York Ophthalmic Hospital. About this time he settled in Auburn, where he resided until his death.He was a collector of fine books, and an omnivorous reader. He founded *The Auburn Free Dispensary for Worthy Poor*.American Encyclopedia of Ophthalmology,Vol.7,p.5277.

Foster, John (1903-1984) British ophthalmologist. John Foster, the eldest son of John Robert Foster, an ophthalmic surgeon, was born in West Hartlepool. He was educated at Aysgarth School, Uppingham School and Caius College, Cambridge, before entering the London Hospital Medical School where he won prizes for clinical medicine, clinical surgery, minor surgery and the Treves Prize. After qualifying in 1928 he held three house appointments at the London Hospital and was then house surgeon at the Royal Westminster Eye Hospital where he secured the Guthrie Research Prize and passed the final FRCS in 1930. He was appointed consultant ophthalmic surgeon to the Leeds General Infirmary in 1933 and later recorded his professional indebtedness to Russell Howard and Charles Goulden in England, and to Hermegildo Arruga and Louis Paufique abroad. He served the Leeds General Infirmary for 35 years and was also senior lecturer in ophthalmology at the University of Leeds. He was a Hunterian Professor of the Royal College of Surgeons in 1956 and President of the Ophthalmic Section of the Royal Society of Medicine in 1961. At various times he gave the May, Middlemore and Montgomery Lectures; he also gave the Doyne Lecture at Oxford in 1951, later published as *Aims and obstacles in the ophthalmic clinic*. He edited the second edition of *Philps's Ophthalmic operations*, 1961. Foster received following titles: MRCS 1928; FRCS 1930; BA Cambridge 1924; MB,BCh 1930; MD 1938; DOMS 1931; MD (Hon) Melbourne 1952; LRCP 1928; Brit. med. J. 1984, 288:1465. LFRCSE

Foster, John Robert (1868-1948) British ophthalmologist born in Sleights, Yorkshire, father of John Foster (also an ophthalmologist). Foster qualified at Edinburgh in 1893. After holding House appointments at the Central London and Royal Westminster Ophthalmic and at the Golden Square Nose and Throat Hospitals, he was appointed as Ophthalmic Surgeon at the Hartlepools Hospital. A year later he was appointed as Ophthalmic Surgeon to the Cameron and Howbeck House Hospitals and the Hartlepools Education Authority as Aural and Ophthalmic Surgeon. He served in this capacity, being an excellent and careful surgeon, until at the age of 64 he had to retire from hospital and private practice owing to ill-health. BJO 1948,33:591

Foucault, Jean Bernard Léon (1819-68) French physicist, born in Paris. He improved Daguerre's photographic processes, and conducted, in cooperation with →Fizeau, investigations on the properties of light. Léon Foucault attained world fame with two experiments. In 1850, with what is known as the rotating mirror method, he determined the velocity of the propagation of light. In his famous pendulum experiment in the Panthéon in Paris in 1851, he made the earth's rotary motion visible to the general public. Foucault and Fizeau (1819 – 1896) initially worked together in the field of photography. In 1845 they took the first picture of the sun. In addition, they examined the infrared spectrum and interference phenomena. After they agreed to go their separate ways on an amicable basis, each tried separately to determine the velocity of the propagation of light., Fizeau was successful with the toothed disk or wheel method in 1849, and Foucault with the rotating mirror method in 1851. Both supplied the proof required to confirm the wave theory, i.e. that light propagates more slowly in water than in air. In 1862 Foucault's final measurements showed the velocity of light to be 298000 km/s. In the production of telescopes in particular, special significance was given to what is known as Foucault's knife edge technique for testing the surface quality of lens elements and mirrors. Foucault

invented it as early as 1856, but did not actually mention it until he published a paper on the construction of telescopes in 1859. This technique was used for over a century for quality testing and quality assurance in the building of astronomical instruments. Today, advanced interferometric measuring techniques are used to measure the quality of all kinds of optics. In 1857 Foucault invented his polarizer; and two years later (1859) his reflector for the great telescope in Paris was completed. Foucault also invented apparatus for the better application of the electric light. He edited the scientific part of the Journal des Débats from 1845, and was elected a foreign member of the Royal Society of London in 1864.American Encyclopedia of Ophthalmology,Vol.7,p.5277. JPW

Foucher, Jean Thimothée Emile (1823-1867) French surgeon and ophthalmologist. He was prosector to the Paris Faculty, and delivered the supplementary courses in ophthalmology.He is said to have written 141 works and articles. His chief ophthalmologic writings are "*Du Glaucome, de sa Nature, de son Traitement*" (Rev.Thér.Médico-Chir.) and *Leçons sur la cataracte* Paris 1868. He also translated Wharton →Jones's "*Diseases of the Eye*" (Paris, 1866).American Encyclopedia of Ophthalmology,Vol.7,5277-5278.

Fouillioy, Louis Mathurin (1791-1848) French naval physician, who paid considerable attention to ophthalmology. Born at Landerneau, he received his medical and surgical degree in 1813, at Brest, in the " Ecole de Santé." He was a very remarkable operator on every portion of the body, and invented a number of amputations and prosthetic apparatuses. In 1843 he settled in Paris as Adjunct General Superintendent of Naval Sanitary Affairs,and two years later became the superintendent in chief. Fouillioy's chief ophthalmologic writing is entitled "*Notice sur un Procédé de Ténotomie Oculaire, Démontré et Pratiqué a l´Hôpital de la Marine de Brest*" (Annal. Marit. et colon, 1841; Gaz. des Hôpit.1841.American Encyclopedia of Ophthalmology, Vol.7, p.5278.

Foulks, Gary N. (1944-) American ophthalmologist, Clinical Scientist and Educator, Professor and Chairman, Department of Ophthalmology, University of Pittsburgh. Born in Salt Lake City, Utah, Foulks is a graduate of West High School and received an A.B. from Columbia College of Columbia University in 1966 and an M.D. from Columbia University College of Physicians and Surgeons in 1970. He was a surgical intern at the University Hospital of San Diego County in 1971. He was a medical officer in the U.S. Public Health Service from 1971 to 1973. He completed his residency in ophthalmology at Duke University in 1976; from 1976-78 he was a fellow in corneal disease at the Massachusetts Eye and Ear Infirmary and the Retina Foundation under Professsor Claes H.→Dohlman. In 1978 Foulks was appointed to the faculty at Duke University initially as an Assistant Professor and Director of the Cornea Service. In 1983 he was appointed Associate Professor and in 1988 was appointed the Professor of Ophthalmology. In 1996 Foulks was appointed the Professor and Chairman of the Department of Ophthalmology at the Eye and Ear Institute of the University of Pittsburgh and still holds this post. He has authored over 70 scientific papers, 17 book chapters and?four books. Some examples of his publications are: "*Factors related to corneal epithelial complications after closed vitrectomy in diabetics*. Arch. Ophthalmol. 97:1076-1078, 1979", "*Glaucoma associated with penetrating keratoplasty*. Ophthalmology 94:871-874, 1987", "*Reduced graft rejection with good HLA-A and -B matching in high-risk corneal transplantation*. N. Eng. J. Med. 315:29-35, 1986", and "*The now and future therapy of the non-Sjogren's dry eye*. Advances in Experimental Medicine & Biology. 438:959-64, 1998." He is a member of the Executive Editorial Board of the Journal Cornea and served on the Editorial Board of the von Graefe Arch. Clin. exp. Ophthalmol.(1992-1994), and as a scientific reviewer for Am. J. Ophthalmol. ,Archiv. Ophthalmol. , Invest. Ophthalmol. Vis. Sci., Cornea, Ophthalmology, Cornea and the CLAO (Contact Lens Association of Ophthalmologists) J. He is the President of the Castroviejo Cornea Society (1997-1999) and served as Executive Secretary-Treasurer of that Society (1990-1995). He has been a member of the CLAO Board of Directors (1994-1999) and is presently Long Range Planning Chairman for CLAO. He is a member of numerous state and national organizations. He has been Visiting Professor at 25 Universities and has delivered two Named Lectures. The 1994 Everett R. Viers Lecture (Clinical Implications of Tear Protein Analysis, Texas A&M University) and the 1998 J. Robert Meyers Lecture (The Now and Future Therapy of Dry Eye, Penn State University). Honors include: AOA(1969), AAO Honor Award (1988), and AAO Senior Honor Award

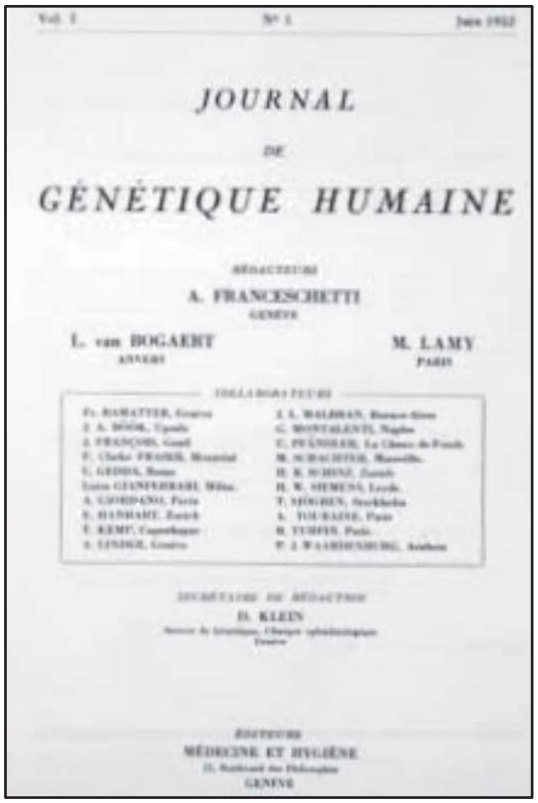
(1997). His research interests include corneal graft rejection, dry eye disease, and ocular surface disease. He enjoys fly-fishing, photography, and his family. (Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA, USA 15213, phone: +1- 412-647-2205, fax: +1- 412- 647- 5119, e-mail: Foulksgn@msx.upmc.edu) (SM)

Fournier de Pescay, François (1771-?) French surgeon, who paid considerable, attention to ophthalmology. Born in Bordeaux, France, the son of a San Domingan planter, he studied medicine in Paris, and became a military surgeon. After a number of years of military service, he settled in Brussels, where he became at the Secondary School professor of pathology and co-founder of the *Societé de la Médicine, Chirurgie et Pharmacie* and sole founder of a journal, "*Nouvel Esprit des Journaux*."He afterwards lived at Paris, Port-au-Prince, and Pau. While his home was at Pau he passed away; the date of his death is, however, uncertain. Fournier de Pescay translated, together with Bégin, Antonio→Scarpa's famous "*Saggio di Osservazioni e d´esperienze sulle principali malattie degli occhi*-Pavia 1801"[GM5835]"; ("*Traité des principales Maladies des Yeux*" 2 vols.,Paris 1821).American Encyclopedia of Ophthalmology,Vol.7,p.5279

Fox L. Webster (1853-1931) American ophthalmologist. Webster Fox was born at Hummelstown,Pa., He graduated from Jefferson Medical College in 1878. After graduate study in Vienna, he served as clinical assistant at the Moorfields Hospital, London; and, on his return to Philadelphia, became clinical assistant in the Jefferson Medical College; and in 1893 professor of ophthalmology in the Medico-Chirurgical College. On the merger of the latter institution with the University of Pennsylvania, he was made professor in the Graduate School of Medicine in the University. In 1886 he assisted George M.→Gould in the preparation of a quiz compend and in 1904, published his *Practical Treatise on Ophthalmology* (other editions in 1910 and 1920). Fox also authored *Diseases of the Eye*, published in London 1907. He was eminent as an operator and clinical teacher. His *Reports of Eye Clinics*, published in five volumes (see AJO v. 12, p. 927; v. 13, p. 1110) included a wide range of interesting cases, reported with sufficient detail to make a valuable work of reference. AJO 1932,15:71 JPW

Francaviglia, F. (1843-1917) Well known Sicilian ophthalmologist AJO,1:293.

Franceschetti, Adolphe (1896-1968) Swiss ophthalmologist specialized in genetics in ophthalmology. He received his MD degree with the thesis *Beitrag zur Kenntniss der Evulsio Nervi Optici*. In 1925, after four years as assistant to Professor Alfred→Vogt in Zürich, he became chief of staff to Professor →Brückner in Basle. It was there that he wrote his important thesis on the intraocular fluids and the hematoocular barrier. From the start of his ophthalmologic studies he was interested in all questions appertaining to ocular genetics, and consequently was the obvious choice to edit the chapter on heredity in ophthalmology in Schieck and Brückner's "*Kurzes Handbuch der Ophthalmologie*" (1930).In 1933, he was appointed to the chair of ophthalmology in the University of Geneva, and there he established a school whose renown extends far beyond the boundaries of Switzerland. An indispensable collaborator in any new treatise, he was asked in 1939 to write the chapter on internal secretions and their relations to ophthalmology in the "*Traité Français d'ophtalmologie*"; in 1948, he wrote the chapters on social problems and heredity in ophthalmology, oculomotor disorders, the pupil and palpebral affections in the Swiss textbook; in 1955, he wrote the chapter on the heredity of ocular affections in the "*Encyclopédie Médico- Chirurgicale*." He was sought after as a speaker at every Congress and was invited to give a report on post-traumatic encephalopathy at the "*Société Suisse de Neurologie*" (1943) ; on tapetoretinal manifestations in heredo-ataxia due to spino-ponto-cerebellar degeneration at the Congress of Oto-neuro-ophthalmology (1948) ; on the clinical and social aspects of genetics in ophthalmology at the International Congress in London (1950) ; on the clinical, anatomical and histoparasitologic diagnosis of toxoplasmosis at the first Latin Congress of Ophthalmology (1953) ; and on the ocular manifestations of primary disorders of lipid metabolism at


JOURNAL
DE
GÉNÉTIQUE HUMAINE
A. FRANCESCHETTI
L. van BOGAERT
M. LAMY
D. KLEIN
MÉDECINE ET HYGIÈNE

Franceschetti´s Journal on Human Genetics

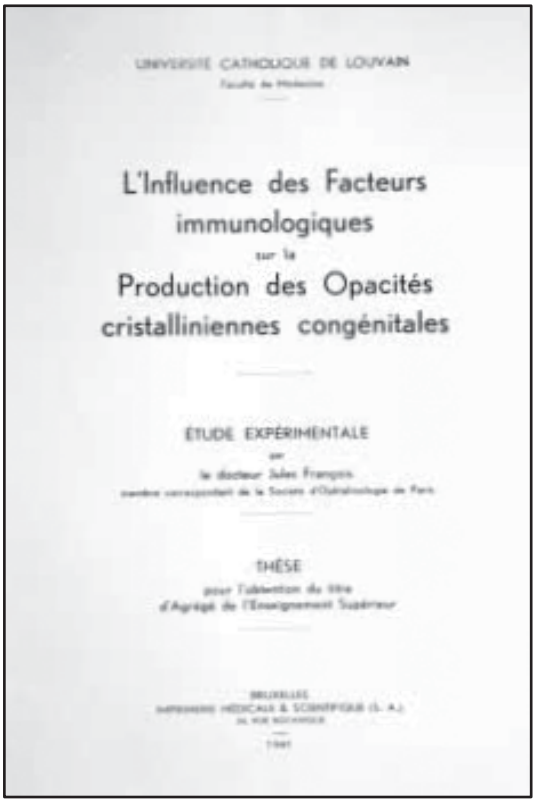
the International Congress of Oto-Neuro-Ophthalmology (1954). In 1951 he who throughout his life had been deeply interested in all problems and all aspects of heredity, after many struggles and false starts reached his goal when he established the Institute of Medical Genetics attached to the Geneva Ophthalmological Clinic. He transformed and expanded the institute to make it one of the finest on the continent. Likewise under his direction, the first French journal on Human Genetics was Published in 1952. He was an honorary or titular member of some 75 societies and academies. He was one of the founders and a president of the "*Académie Suisse des Sciences Médicales*", president of the International Association for the Prevention of Blindness; member of the International Council of Ophthalmology; president of the permanent committee of the International Congresses of Human Genetics. Finally, he was a doctor "honoris causa" of the Universities of Ghent, Toulouse and Heidelberg. The finest evidence of his fame, however, is to be found in his 500 magnificent publications, which bear definifive witness to the fact that no aspect of ophthalmology, medicine or biology left him indifferent. No genetic problem, no rare syndrome, no general disorder with ocular involvement escaped his scientific interest. His special interests were neural and cutaneous diseases, oculomotor disorders, paralytic strabismus, tapetoretinal degenerations, corneal dystrophies and corneal transplantations, for which he designed an ideal trephine, and various other surgical techniques several of which (for example, corepraxy) were of his own creation. He was the first to recognize certain clinical entities, of which mandibulofacial dysostosis (to mention only one) bears his name. Jointly with →Waardenburg and Klein, he wrote a treatise in three volumes on *Genetics and Ophthalmology*. With Jules→François and Babel he was the author of "*Les Hérédo-degénéréscences Choriorétiniennes*"(Paris 1963) the two volumes of which brought the authors the Alfred Vogt Award. With Klein, he wrote the chapter on hereditary malformations and ocular affections in one of the volumes of Becker's treatise on human genetics. Franceschetti also founded, 1952, the *Journal de Génétique Humaine*. AJO 1968,66:134-135.JPW

Franco, Pierre (c.1500-c.1561) French surgeon, pupil of Paré, and, though chiefly a general surgeon,the greatest cataract depressor of the Renaissance, or, rather, post-Renaissance, period. He was born at Turiers, near Sisteron, Provence. He led for many years the life of a wandering cataract-sticker," "hernia-operator," and "cutter-for-stone." At last, however, he settled with some degree of permanence in Lausanne and Bern in Switzerland, and Orange of Provence in France. Concerning the cataract operation(which, in those times, was either depression or suction) he was very enthusiastic. Thus, he says, "*Yes, I do assure you that, if I had to renounce either this cataract operation or all the rest of surgery, I would rather give up all the rest of surgery.*" Various details of his instructions for the cataract operation evidence unmistakably a wide personal experience as well as the very keenest powers of observation. Thus, in telling what to do, in case the cataract appears in the pupil again after it has been depressed, he says that it must, of course, be couched again, but not through the former opening, for it is less painful, he declares (and rightly) to perforate the sclera anew than to pass the instrument in once more by way of the old opening.American Encyclopedia of Ophthalmology,Vol.7,p.5286-5287.

The Jules François Medal

François, Baron Jules (1907-1984). Belgian ophthalmologist, Baron of the Kingdom of Belgium, former director of the Ophthalmology Clinic of the University of Ghent, and emeritus professor of the faculty of medicine. François was born May 24, 1907. He graduated in medicine with distinction from the University of Louvain [or Leuven in Flemish] in 1930. He was initially interested in microbiology but an early study concerning the production of cataract by immunologic methods stimulated his lifelong interest in ophthalmology. His interests were wide ranging and there is scarcely an area in the field about which he has not written. He detailed the anatomy of the central retinal artery of the optic nerve. Together with Guy→Verriest, he designed instruments for tonometry, perimetry, dark adaptation, and electro-oculography. He described a number of syndromes: several corneal dystrophies, vascular pseudopapillitis, facial dysostosis, fundus flavimaculatus (with Franceschetti), dystrophic skinbone-cornea, and many others. He was a prolific writer, speaker, and master of languages. He published over 1,500 scientific papers, authored or edited some 30 books, and wrote many book chapters. His early studies dealt with general ophthalmology, glaucoma. conjunctivitis, fever therapy, cataract, and biochemistry. In recent years, he emphasized genetic studies but continued to have an

interest in ophthalmic surgery, diabetic retinopathy, and general ophthalmology. His books, "*L'Hérédité en Ophtalmologie*, " 1958; "*Les Cataractes Congénitales*, 1959" and "*Les Hérédo-degénéréscences Choriorétiniennes*"1963 (co-authored with →Franceschetti and →Babel), are standard reference works. Other books he authored and co-authored are: *Electrodiagnosis,Toxic Agents and Vision* (with De Rouck), The Hague 1978; *Occupational and Medicative Hazards in Ophthalmology*, Basle 1969; *The Clinical Value of Electroretinography*, Basle 1978; edited by Dan M.Gordon: *Genetic Aspects of Ophthalmology*, 1968; *Oculomycoses*, Springfield 1972; *Symposium on Light-Coagulation, Argon and Xenoin Arc*,1973. François was decorated by the governments of


UNIVERSITE CATHOLIQUE DE LOUVAIN

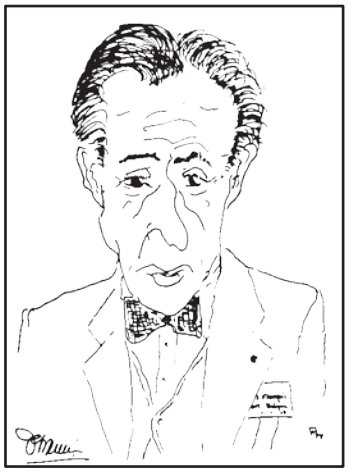
L'Influence des Facteurs immunologiques sur la Production des Opacités cristalliniennes congénitales

ETUDE EXPÉRIMENTALE

THÈSE

Jules François´ Professoral thesis submitted 1941

Caricature showing from left M.-A.Dollfuss, Jules François, Franceschetti and Babel. (Dollfuss apologizes for being late in publishing the two-volumes set of the Report on Chorioretinal Degenerations)



Jules François by Paul Henkind

Belgium, the Vatican, Brazil, Italy, Greece, the Netherlands, Germany, and Japan. He received honorary doctorates from ten universities (Clermont-Ferrand, Toulouse, Geneva. Nancy, Brunn, Budapest. Sassari, Cordoba Nacional, Cordoba Catolica, and Catama). He was a honorary citizen of half a dozen cities. He gave numerous named lectures, including the Jackson Memorial Lecture of the Ophthalmic Publishing Company at the American Academy of Ophthalmology and Otolaryngology in 1959. He was guest of honor at some 80 national, international, and local ophthalmic meetings. He spoke at medical meetings on every continent and was an honorary member of some 60 medical societies. François founded the *Academia Ophthalmologica Internationalis* and in 1979 with J.-P. Wayenborgh created an ophthalmological historical review : *Historia Ophthalmologica Internationalis.* After his death, in his honour, a Jules François Gold Medal was created and still exists.He was president for life of the Academia Internationalis Ophthalmologica. He was named to Chair No. I of this society and in his honor, it will never be reassigned. He served as president of the Royal Academy of Medicine of Belgium. He served on the editorial board of some 25 ophthalmic journals including *Documenta Ophthalmologica, Annales d'Oculistique, Ophthalmologica, Journal de Genetique Humaine, Excerpta Medica, Klinische Monatsblätter für Augenheilkunde* and *Historia Ophthalmologica Internationalis* (which he founded with J.P. Wayenborgh). In 1958 he was general secretary of the XVIII International Congress of Ophthalmology in Brussels. In 1970 he became president of the International Council of ophthalmology and the governing body of the International Federation of Ophthalmological Societies. He held this post until 1982. He received the following Medals: Gonin, Vogt, Axenfeld, Vail, Duke-Elder, Charamis, Helmholtz, Javal, and similar awards from some 35 universities and medical societies. AJO 1984,98:662-667; BJO 1985; 69 :236; JPW; Arch Ophthalmol 1984,102:1555-1556.

Frank, Mortimer (1874-1919) American ophthalmologist and medical historian. He was born at Buffalo, N. Y, received the B. S. at the Boston Institute of Technology and the M. D. at the University of Illinois in 1901. Having practiced general medicine in Chicago for a year, he studied ophthalmology in Philadelphia, New York, Paris and Vienna. Returning, he settled as ophthalmologist in Chicago. He was a Fellow of the American Academy of Ophthalmology and Oto-Laryngology, ophthalmologist to the Michael Reese and other hospitals, secretary of The Chicago Society of Medical History, and editor of the same society's "Bulletin." In medical history the doctor was, in fact, an enthusiast, and his library of old and rare medical books and engravings numbered several thousand items. Among the more important writings of Dr. Frank we may mention "*John Taylor and Sir William Read*" (1905); "*The Resurrectionists*" (1907) ; "*Philip Syng Physick*" (1914); "*Caricature in Medicine*" (1911); "*Biographical Sketch of Some Representative Ophthalmic Surgeons*" (in Wood's "*A System of Ophthalmic Operations*," 1911,I, p.17) ; "*Medicine in English Literature Before the Eighteenth Century*" (1912); "*Medical Instruction in the seventeenth Century*" (1915) ; "*Discovery of the Secretory Glands*" (1916), and an English translation of Choulant's "*History of Anatomical Illustration*". Concerning the last named work, Dr. F. H. Garrison, of Washington, D. C., in a letter to "*The journal of the American Medical Association*," May 24, 1919, p. 1562, says: "*Dr. Frank's interest in the subject of medical illustration led him to undertake, in 1916, the translation of Choulant's 'History of Anatomical Illustration.' This book, published in 1852 is one of the classics of medical literature, a work of unsurpassed thoroughness, a sort of Gradus ad Parnassum for those who would essay the difficult heights which Choulant has scaled, for the earlier history of anatomy, from Leonardo to the time of Bichat, is mainly in the manuscript illustrations and the illustrated text. Choulant is a work of the highest scientific merit, but, in the original German it is not a readable book. Dr. Frank cleverly overcame the almost insurmountable difficulties of rendition by bisecting the long Choulantian sentences or dissecting out their meaning, so that his translation now stands, in clean-cut intelligible English, as something viable and readable for modern students.*" To the original work, long since out of print, the translator added completed biographies and an exhaustive compte-rendu of accumulated research work since the time of Choulant, a man-sized performance in itself. With new illustrations, this modernised Choulant, became a *vade mecum* for the professor of anatomy, the medical librarian and the art school." AJO 1919, 2:704-705

Frankenius, Johann (1590-1661) Swedish physician and physicist, who wrote "*De Oculo*" (1651), a purely philosophical work. He was born in the Province of Westermannland, settled in Upsala, and died in 1661.American Encyclopedia of Ophthalmology,Vol.7,p.5287.

Benjamin Franklin

Franklin, Benjamin (1706-1790) An American genius, called by his enthusiastic compatriots, "*the greatest American*," "*the embodiment of the genius of common sense ... .. the darling of American biography*," "*the greatest American diplomat*," "*the first American scientist*" "*the first ot American journalists*," "*the second Prometheus*," was also-a fact not commonly known-the inventor of bifocal spectacles. He was born in Boston, in the colony of Massachusetts. He was only in school four years. At the age of twelve he was apprenticed to his brother James, a printer, a man with whom he could never agree. In October 1723, he proceeded alone to Philadelphia, whence he was sent by Keith, the governor of Pennsylvania, on some diplomatic errand to England. Three years later, he returned to Philadelphia, where, in 1729, he purchased the "*Pennsylvania Gazette*"-a publication which he proceeded at once to make useful and famous. From that time onward, his success journalistically, scientifically, diplomatically, and politically-was uninterrupted. He invented the musical glasses. He made the first successful stove. He organized the first police force and the first fire company in the colonies. He was really the founder of the University of Pennsylvania, and, admittedly, of the American Philosophical Society.He was, as every schoolboy knows, the first to demonstrate the absolute identity of the natural "*lightning*" with the artificial "*electricity*." This discovery alone would, of course, have entitled him to rank among the immortals. We have no space in a work like this for even the barest list of Franklin's political and diplomatic activities. Franklin´s scientific communications consist of pamphlets,reports and letters published mostly in *Gentleman´s Magazine* and in *Philosophical Transactions of the Royal Society*. His bibliography was published by Leonard W. Labaree: *The papers of Benjamin Franklin*

New Haven 1959 ff. L.W.Labaree, R.L.Ketcham,H.C.Boatfield and H.H.Fineman *The Autobiography of Benjamin Franklin*, New Haven-London 1964; American Encyclopedia of Ophthalmology, Vol.7, p.5287-5289. *DSB* 5:129-139. JPW

Franz, John Charles Angustus (1807-1859?) German physician. He received his medical degree at Leipzig , Germany, practiced for a long time in Brighton,England, and wrote "*The Eye, A Treatise on the Art of Preserving this Organ*" (London, 1839).American Encyclopedia of Ophthalmology,Vol.7,p.5289. Albert

Fraser, Ian Comyn (1902-1990) Scottish ophthalmologist born at Inverness, Scotland. When he was 6 years of age, his family set sail, like many compatriots, for New Zealand. Ian grew up there, revelling in the unfettered colonial life. His lifelong enthusiasm for golf and bridge was kindled there. After Otago Boys' High School he graduated in medicine at Otago University in 1925. The two-year internship was succeeded along a route common amongst New Zealand medical men, travelling as ship's Surgeon to England. Postgraduate study included both ophthalmology at Moorfields Eye Hospital and otolaryngology. Edinburgh became important for him because it was there that he not only passed the Fellowship of the Royal College of Surgeons but met his wife to be, Margaret, sister of Dr. Grant Peterkin, who was later to become an eminent dermatologist. After a brief but fruitless sojourn back in New Zealand he returned to England to marry and settle, his first Consultant post being in the Channel Island of Guernsey. At the outbreak of World War II Fraser and his wife and son were evacuated when Germany invaded the only part of the United Kingdom to be occupied. After enlisting in the Royal Army Medical Corps he experienced the blitzkreig in London and in 1942 was drafted to the Middle East. He rose in rank to Lt. Colonel and became advisor in ophthalmology, second in command to Stewart→Duke-Elder in the Iran-Iraq theatre centered on Baghdad. In 1945, because of his wife's illness, he was returned to the United Kingdom where he became advisor to Scottish Command. After demobilization in 1945, an application was successful for his final Consultant post at the Eye, Ear and Throat Hospital in Shrewsbury, England. His colleague was F. A. →Anderson, then secretary of the Oxford Ophthalmological Congress, and in 1947 Fraser succeeded him in that position. From this point his own commitment to this venerable institution (founded in 1909 by Robert→Doyne) was complete. He had become a member in 1931. During his period as secretary and editor of the Transactions from 1947 until 1964 the Congress flourished. After the tragic and untimely death of his wife in 1957 he immersed himself in the affairs of the Congress and retained that passion till his death. Fraser established lasting association with many congressees from around the world. He was wont to reminisce about the American ophthalmologists among whom were numbered Derrick→Vail and particularly Frank→Newell. His secretary and he went to endless trouble to ensure a warm welcome to the congressees and as much comfort as the essentially spartan Balliol College, Oxford, could furnish. His loyalty and service were crowned in 1965 and 1966 when he became the Congress's Master. Apart from his hospital duties, Fraser was eye surgeon to a number of schools for the blind in Shropshire. (These had been moved away from London at the outbreak of war and remained after the cessation.) His devotion to ophthalmology was extended after his formal retirement in 1967 when he became advisor for the Royal College of Surgeons touring England and beyond. One trip was to his New Zealand homeland with the ophthalmologist Philip Jameson Evans, one of his closest friends. AJO 1990,109:618-619

Fraser, Thomas Richard. A Scots pharmacologist, of some, if slight ophthalmologic importance, because of his "*Physiological Action of the Calabar Bean, Physostigma Venenosum*" (Trans.Roy.Soc.Edinb.Vol.XXIV). Fraser received his medical degree at Edinburgh in 1862, and became F. R. C. P. Edin. in 1869. The exact dates of his birth and death cannot be ascertained. American Encyclopedia of Ophthalmology,Vol.7,p.5289.

Fraunhofer, Joseph von (1787-1826) German optician, the inventor of a machine for polishing mathematically uniform lenses, of the stage-micrometer, of a form of heliometer, of certain kinds of achromatic lenses, and, finally, the first to observe very carefully the dark lines of the solar spectrum, which lines, in consequence, are called to this day by his name. He was born at Straubing, Bavaria. His father was very poor, and, till his 14th year, the subject of this sketch could neither read nor write. Having become apprentice to a lens and looking-glass maker, he studied at night the more scientific aspects of his occupation.

By teaching himself mathematics and physics, Joseph von Fraunhofer became the most important optician in the first quarter of the 19th century. Thanks to his manual skills and scientific genius, he mastered the art of producing instruments with unvarying properties. With the aid of the lines in the solar spectrum that now bear his name, he created the principles for the correct computation of achromatic lenses. From the diffraction of spectral colors using self-made diffraction gratings, he calculated the exact wavelengths of light in the various regions of the spectrum. The quality of the optics he produced led to pioneering discoveries in astronomy. In 1806 he became optician in the Mathematical Institute at Munich. In 1809, with three of his friends, he established an optical institute at Benedictheuern, Bavaria. In 1814-15 he published in the "*Denkschriften der Münchener Akademie*" a series of articles in which "*he laid the foundation of solar and stellar chemistry*." He became Conservator of the Physical Cabinet at Munich in 1823. Today, due to his activities as an entrepreneur, Joseph von Fraunhofer is seen as the founder of the German optical Industry. On his monument appear these words: "*Approximavit Sideral*" American Encyclopedia of Ophthalmology,Vol.7, p.5290. DSB 5:142-144; Siegmund Merz: *Fraunhofer´s Leben und Wirken*, Landshut 1865; Eugen C.J.Lommel, ed.: *Joseph von Fraunhofer´s gesammelte Schriften*, Munich 1888; Myles W. Jackson: *Spectrum in Belief-Joseph von Fraunhofer and the Craft of Precision Optics MIT Press*, Cambridge (MA); 2000. JPW

Frébault, J.F. French physician and ophthalmologist. The dates of his birth and death cannot be ascertained. He received his medical degree, however, at Paris in 1806, presenting as dissertation "*Sur les Hernies Abdominales.*" His only ophthalmologic, writing is entitled "*Observation sur un Cristallin qui a passé par la Pupille dans la Chambre Antérieure de I'Oeil Droit,a la Suite de Cephalalgies Violentes et Chroniques, etc.*" (Journ.Génér.de Méd.,1817).American Encyclopedia of Ophthalmology,Vol.7,p.5290.

Freddo, Thomas F. (1949-) American optometrist and ophthalmic pathologist. Freddo was born in Hartford, CT and received his bachelor of arts degree from the University of Connecticut in 1971. He then assisted the ocular geneticist Dr. Louis Pierro who stimulated his interest in the eye. In 1976, he completed a Doctor of Optometry degree at The Massachusetts College of Optometry during which time he worked on the inherited tumor retinoblastoma with Dr. Noritsugu Mukai at the Retina Foundation, today's Schepen's Eye Research Institute. Upon completion of his clinical training, Dr Freddo enrolled in the graduate program at The Boston University School of Medicine where his mentor was Dr. Giussepina Raviola. With Raviola, Freddo worked on the anatomy and physiology of the blood-ocular barriers and on the problem of providing structural correlates for physiological parameters of aqueous outflow. At the end of his graduate studies, Freddo was presented with an opportunity to complete a Fellowship in ophthalmic pathology at the Mallory Institute of Pathology in Boston. The following year he was appointed Assistant Professor of Ophthalmology and Pathology at Boston University School of Medicine where he joined the staff of the Eye Pathology Service, becoming Director of the Eye Pathology Laboratory in 1986. Throughout his career, Freddo has practiced optometry on the staff of Boston Medical Center Hospital. In his experimental work, Freddo took up the question of detailing the pathobiology of blood-aqueous barrier breakdown and reassembly in anterior uveitis, focussing on the processes of tight junction compromise and reassembly and its possible role in clinical recurrences of anterior uveitis. He continued his interest in glaucoma through collaborative studies on the effects of sulfhydryl agents on aqueous outflow with Dr. David Epstein at the Howe Laboratory of Ophthalmology. Working with a collaborative group including Drs. Roger Kamm and Mark Johnson at MIT and Dr. Stephen Bartels of the Retina Foundation, Freddo began to examine the kinetics of blood-aqueous barrier compromise in uveitis. Along the way, results from control animals pointed to the possibility that plasma-derived protein entry into the aqueous humor was not as described in classical texts. Over the next few years, using an array of methods, including MRI studies of animals with Dr. Nancy Kolodny and in human volunteers with Dr. Robert Bert, a new pathway for protein entry into the aqueous humor was documented which changed present day understanding of the blood-aqueous barrier. This new pathway raised the possibility that protein could be added to aqueous humor just as it enters the outflow pathways and might play a role in normal outflow resistance. For these studies, Freddo was presented with the *Glenn A. Fry Award*

for research excellence in 1992. Freddo currently serves as Professor of Ophthalmology, Pathology and Anatomy at The Boston University School of Medicine where he is Senior Consultant in Ophthalmic Pathology and Associate Director of The Massachusetts Lions Eye Research Laboratory. He serves on the adjunct faculty of The New England College of Optometry where he was awarded the 1997 Foster Namias Award for excellence in teaching. In 1996, Freddo served with Dr. Yoshi Kitazawa as Co-Chair of the Aqueous Humor Dynamics and Glaucoma Section for the XI Int'l Congress for Eye Res, also serving on ISER's Long Range Planning Committee. In 1996 Freddo became Treasurer of The International Society for Eye Research and headed up formation of the organization's finance committee. Freddo was the first optometrist to serve as a regular member of the Visual Sciences-A study section at NIH. He also served on the 5 member Glaucoma Panel for the 1997 National Eye Institute 5-yr plan. Within Academic Optometry, Freddo has Chaired the Vision Science Section of The American Academy of Optometry and Chaired both the Academy's Research Committee and its Awards Committee. He has served on the Editorial Board of Optometry and Vision Science, the journal of The American Academy of Optometry. He also served as the first Chair of the Human Biology Examination Committee of The National Board of Examiners in Optometry and in 1998 was selected as a Distinguished Practitioner in Optometry by The National Academies of Practice. With a longstanding interest in teaching and in fostering the development of young scientists, Dr. Freddo has served as Chair of the Student Travel Awards Programs of both The International Society for Eye Research and The American Academy of Optometry.?Some examples of his many publications are "Barsotti, M.F., Bartels, S.P., Freddo, T.F. and Kamm, R.D.: *The source of?protein in the aqueous humor of the normal monkey eye*. Invest. Ophthalmol.Vis. Sci. 33:581-595, 1992", "Freddo, T.: *Aqueous humor proteins: A key for unlocking glaucoma?* The 1992?Glenn Fry Award Lecture. Optom. and Vis. Sci. 70:263-270, 1993", "Johnson, M., Gong, H., Freddo, T.F. ,Ritter, N. and Kamm, R.D.: *Serum?proteins and aqueous outflow resistance in bovine eyes*. Invest. Ophthalmol.?Vis. Sci. 34:3549, 1993", "Kolodny, N., Freddo, T., Lawrence, B., Suarez, C., and Bartels, S.P.:?*Contrast-enhanced MRI confirmation of an anterior protein pathway in the normal rabbit eye*. Invest. Ophthalmol. Vis. Sci. 37:1602-1607, 1996" and "Sit, A.J., Gong, H., Ritter, N., Freddo, T.F., Kamm, R.D. and Johnson, M.:*The role of soluble proteins in generating aqueous outflow resistance in?the bovine and human eye.* Exp. Eye Res. 64:813-821, 1997".(Departments of Ophthalmology and Pathology, Boston University School of Medicine, 715 Albany Street, L-905 Boston, Massachusetts, USA 02118. phone:+1-617-638-4537, Fax: +1-617-638-5337, e-mail: tfreddo@bu.edu)(JPW)

Frédéricq, Léon (1851-1935) Belgian physiologist. He was born in Ghent and served in his youth as an observer for the experiences of the blind scientist Joseph→Plateau on the *persistance of the visual impressions*. He wrote some papers of ophthalmic interest as on *chromatic function in the poulp* (1878), *prevention of eye lesions in the child* (1885) and the *reasons why the X rays are not visible* (1896).

Freiberg, Theodoric (Dietrich) of (14th century).German. Theodoric explains the rainbow as a consequence of refraction and internal reflection within individual raindrops. He accounts for the appearance of a primary and secondary bow but, following earlier notions, he considers colour to arise from a combination of darkness and brightness in different proportions.(JPW)

French, Hays Clifton (1840-1901) American homeopathic ophthalmologist. He was born in England of Irish extraction. In very early youth he removed with his father's family to America.His general education was received at the Western Reserve University, Cleveland, Ohio, and he was also graduated at the New York Ophthalmic Hospital in 1878. In 1879 he formed a partnership with Dr.A..C. Peterson, of San Francisco, widely known in homeopathic circles and a man of great ability. To Dr. Peterson, in fact, Dr. French was wont to ascribe an influence to which a large proportion of his own success was due. Dr. French was one of the founders of the Hahnemann Hospital College, at San Francisco, and ably filled the chair of ophthalmology in that institution until failing health compelled him to resign the position as well as to relinquish a large and lucrative practice. American Encyclopedia of Ophthalmology,Vol.7,p.5290-5291.

Frère Côme. A celebrated 18th century lithotomist and oculist. See Baseilhac, Jean.

Fresenius, Johann Baptist Georg Wolfgang (1808-1866). German botanist and physician, of some importance in ophthalmology. Born at Frankfurt, he studied medicine at Heidelberg and Giessen, at the latter institution receiving his degree in 1829. Immediately thereafter he settled at Frankfort, and two years later became instructor in botany at the Senckenberg Medical Institute. Thirty-two years later his title was changed to "professor." Fresenius wrote a great deal on botany, but his only ophthalmologic writing was "*Ueber die Traumatische Amblyopie und Amaurose.*"American Encyclopedia of Ophthalmology,Vol.7,p.5291-5292.

Augustin Fresnel

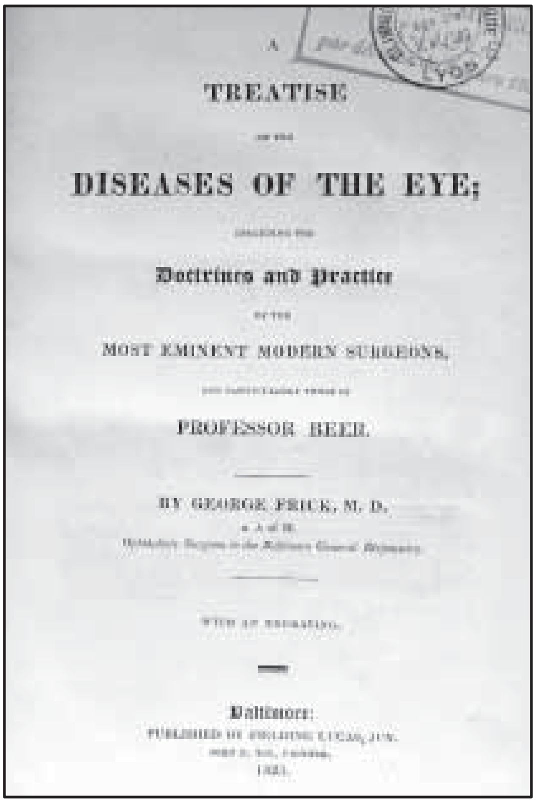
Fresnel, Jean Augustin (1788-1827) A celebrated French military engineer and physicist, who established finally and absolutely the truth of the undulatory theory of light. He also very much enlarged our knowledge of diffraction and of the interference of light-both of which phenomena had been discovered by Grimaldi. He was born at Broglie, Department of Eure, Normandy, France. He studied at the Central School at Caen, at the Polytechnic School, and at the Ecole des Ponts-et-Chausées. He became successively Engineer in the Department of Vendée and Drôme, Engineer in Paris, Examiner at the Polytechnic School, and Fellow of the Academy. He received the Rumford Medal of the Royal Society in 1827, and shortly afterward died at Ville d'Avray, near Paris.American Encyclopedia of Ophthalmology,Vol.7,p.5292.

Frey, Jr., Walter Guernsey (1896-1965) American ophthalmologist. Frey was graduated from Columbia University in 1916 and from the College of Physicians and Surgeons in 1919. He interned first at the Methodist Episcopal Hospital in Brooklyn and then at the Manhattan Eye, Ear and Throat Hospital in New York. With this latter institution he maintained a close affiliation until the age of 65 years when he relinquished the position of surgeon director. He was professor of ophthalmology at New York University and director of the Eye Service at St. Luke's Hospital, New York, and Queens General Hospital, Jamaica. He served as chairman of the Section of Ophthalmology of the New York Academy of Medicine in 1948. Frey, like many of his generation, was primarily interested in clinical ophthalmology. He was a keen observer and was possessed of an acute and logical mind. AJO 1965,60:1138-1139

Freytag, Johann Conrad (?-1738) Swiss surgeon, of considerable importance in ophthalmology, being generally called the discoverer of membranous cataract. The, date of his birth is unknown; the place, however, was Höngg, a village near Zürich. Before 1699 he was well established in Zürich, and was widely known as an operator, especially on the eye. Freytag left no ophthalmologic writing, but his son, Johann Heinrich →Freytag described his father's cataract procedures in a work entitled "*De Cataracta*" (Strasburg, 1721). According to this work, the elder Freytag "extracted" a cataract on three occasions. The "cataract," however, in each instance, was only a membranous cataract, and it was removed by means of a small hook, passed through a tiny incision. The first extraction in the modern sense was performed by →Daviel in 1748.American Encyclopedia of Ophthalmology,Vol.7,p.5292.

Freytag, Johann Heinrich (?-?) Swiss surgeon, who paid considerable attention to ophthalmology. He was the son of the Zürich surgeon, J. C. Freitag (or Freytag), received his medical degree at Strasburg, wrote "*De Cataracta*" (in which he described the cataract operation of his father) and died in 1725-thirteen years before his father. Freytag was one of the less important opponents of the new doctrine concerning the nature and location of cataract. Throughout antiquity, the middle ages, and well on into the modern period, it was firmly believed that a cataract is a deposit of corrupt and inspissated "humor" in a (wholly imaginary) space between the pupil and the lens. Quarré, about 1643, first theoretically taught the true doctrine, and a German, Rolfinck, in 1656, confirmed his theory by anatomical dissection. The matter seemed soon after, to have sunk into oblivion, until, in fact, →Brisseau and Maître→Jan, just after the beginning of the 18th century, re-discovered this most important truth, and compelled the scientific world to grant it recognition. Before, however, the recognition was accorded, a bitter contest arose concerning the question. The opposition to the new theory was led by Thomas →Woolhouse, an English oculist resident in Paris. Among his followers was Freytag, the subject of this sketch.American Encyclopedia of Ophthalmology,Vol.7,p.5292-5293.

Frick, George (1793-1870) American ophthalmologist. The first American to publish a book on ophthalmology, and perhaps the first to restrict his practice to diseases of the eye: on these grounds often called "*The Father of American Ophthalmology*." He was born in Baltimore, Md.,. After an excellent education in the liberal arts and sciences, he entered the Medical Department of the University of Pennsylvania, receiving his degree in 1815. In 1817 he was admitted to practice by becoming a licentiate of The Medical and Chirurgical Faculty of Maryland. For a number of years he studied abroad, paying considerable attention to ophthalmology. In Vienna he became acquainted with the great →Beer, by whom he seems to have been profoundly influenced throughout the remainder of his life. In 1819 he returned to Baltimore, began to practice ophthalmology, and seems to have had extraordinary success. Some years later, however, he became very deaf, and, in 1840, abandoned his practice entirely, and removed to Europe, returning to America from time to time for the purpose of visiting relatives and friends. He died in Dresden, Germany. His most important journal articles are as follows: "*On the Meloe Vesicatorium*" (1815); "*Observations on Cataract and the Various Modes of Operating for its Cure*" (Am.med.Recorder,Phila.,1820-21); "*Observations of the Various Forms of Conjunctivitis*" (Ibidem 1821); "*Observations on Artificial Pupil and the Modes of Operating for its Cure*" (1823). The only book he ever wrote was-that above referred to, entitled "*A Treatise on the Diseases of the Eye; Including the Doctrines and Practice of the Most Eminent Modern Surgeons and Particularly those of Prof.Beer*" (Baltimore, 1823; 2d ed., with notes by Richard Welbank, London, 1826). Though based on the books of Beer, this *first American work on ophthalmology* contained a great deal of original matter and was written in a clear, forceful, even, beautiful style. On the whole, it was an appropriate beginning for American ophthalmography. American Encyclopedia of Ophthalmology,Vol.7,p.5293-5294.Albert


A
TREATISE
DISEASES OF THE EYE;
Doctrines and Practice
MOST EMINENT MODERN SURGEONS,
PROFESSOR BEER.
BY GEORGE FRICK, M. D.
Baltimore:

The first American Textbook of Ophthalmology.

Fricke, Johann Karl Georg (1790-1841) German military surgeon of slight ophthalmologic importance. Born at Braunschweig the son of a physician and professor of chemistry and physics, he studied medicine both at Braunschweig and at Giessen, at the latter institution receiving his degree in 1810. He then proceeded to Berlin, and completed his surgical training under Carl Ferdinand→Graefe. He practised mostly at Hamburg, but was often engaged in military service in connection with various expeditions. Together with →Dieffenbach and Oppenheim he published the "*Zeitschrift f. d. Gesamte Medicin*." He died at Naples, whither he had gone in search of health. His only ophthalmologic writing was "*Die Bildung Neuer Augenlider (Blepharoplastik) nach Störungen,*" etc.(Hamburg 1829,4 plates).American Encyclopedia of Ophthalmology,Vol.7,p.5293. Albert

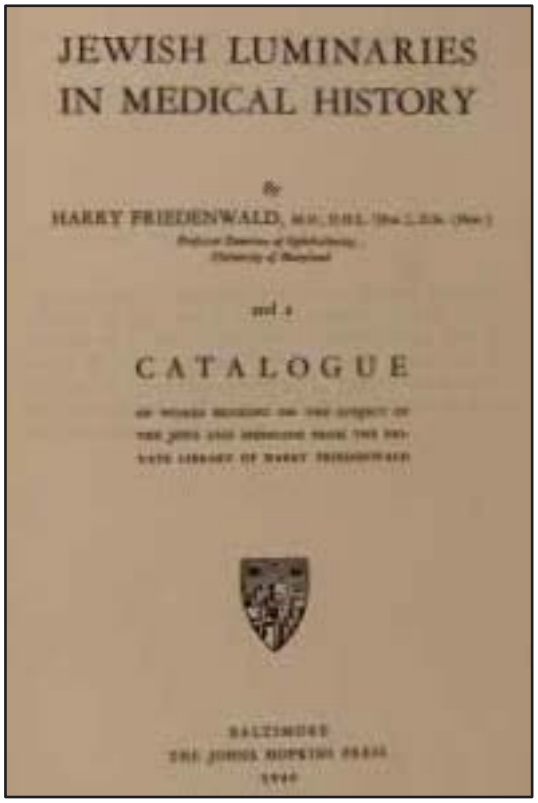
Fridenberg, Percy H. (1868-1960) American ophthalmologist. He received his B.A. degree from Columbia University in 1886 and, two years after graduation, while a student of medicine, he wrote the Alma Mater official song, Sans Souci.He was graduated in medicine in 1891 from the then German Kaiser Wilhelm University at Strassbourg. Under the influence of a professor of ophthalmology, Laqueur, he early developed an interest in the eye, and his inaugural dissertation was on the subject, "*Ueber die Stern Figur der Krystall Linse*." After settling in New York, he interned at Mt. Sinai Hospital, and at the time of his death was the oldest alumnus of Mount Sinai Hospital. He joined the staff of the New York Eye and Ear Infirmary, and most of his early contributions to ophthalmology appeared in the New York Eye and Ear Reports. Later his papers appeared in the *Archiv fuer Augenheilkunde, Transactions of the American Ophthalmological Society*, *Journal of the American Medical Association*, *Archives of Ophthalmology*, *Transactions of the American Academy of Ophthalmology and Otolaryngology*, *Transactions of the American. Otological Society*, *New York Medical Journal* and *Long Island Medical Journal*. (In his early years he was a triologist, that is , an eye, car, nose and throat practitioner and a member of the American Otological Society.) In the 1920s he became interested in endocrinology in relation to the eye, and contributed the chapter on

"*Disorders of metabolism and internal secretions in relation to the eye*" to Lewellys Barker's *System* (1923). In the 30s his interest centered on injuries of the eye. He was professor of traumatic ophthalmology at the New York Post-Graduate Medical School and Hospital and illustrated his lectures with his own drawings of fundi. He was a water-colorist and was an active member of the New York Physicians Art Club. Another one of his hobbies was the history of the City of New York and he lectured on the subject frequently at educational institutions and clubs. Later he developed an interest in philology to which he brought not only a mastery of English literature but of French and German as well. Some of his papers were written in German. This led him to a study of the history of human speech and he worked on a book under the intriguing title, *From Hand to Mouth*. His preparation for this task was a life-long interest in neurology, psychology, and philosophy, as is evidenced by a paper written by him about 1905 on *Teleology and interpretation of nystagmus and vertigo*. He was certificated by the American Board of Ophthalmology in 1919. He was a vice president of the American Academy of Ophthalmology and Otolaryngology and a member of the American Ophthalmological So- ciety. He was also one of the founders and a past president of the New York Society for Clinical Ophthalmology. He had built up a fine ophthalmic library which he distributed in his later years to libraries and friends.

Friebis, George (1847-1912) American ophthalmologist of German origins. Born at Edelsheim, Germany, he removed with his father to France in 1848, and, a few years later, to America. His general education was received in the Philadelphia public schools, his medical training from the Jefferson Medical College, where he received his degree in 1879. He at once became assistant to Prof. Wm. Pancoast, then Professor of Anatomy at Jefferson. Later he became successively Demonstrator of Anatomy, Lecturer on Diseases of the Skin, and assistant to Dr. Lawrence Turnbull, then Professor of Otology and Rhino-Laryngology in the Jefferson school. In 1884, deciding to devote himself exclusively to ophthalmology, he became assistant to the famous professor of ophthalmology at Jefferson, William →Thomson. In this position he served for eleven years, during the last six of which he was Clinical Chief and Lecturer on Diseases of the Eye. In his private practice he confined his work almost exclusively to errors of refraction. For many years he was assistant editor of "*The Medical Bulletin*," and to this and certain other journals he contributed a number of ophthalmologic articles.

Friedenwald, Aaron (1836-1902) American ophthalmologist and medico-economist, father of Harry F. He was born at Baltimore, Maryland. His early education was received at the school maintained by the Baltimore Hebrew Congregation. At the age of about fifteen, however, he had to relinquish his studies in order to accept a situation as bookkeeper in a clothing store. Finding the position uncongenial, he decided, when twenty-one years of age, to study medicine. For a while he studied, after the custom of the day, with a preceptor, Dr.N.R.Smith. Entering, just a little later, the University of Maryland, he received from that institution his professional degree in 1860. He then went to Europe, where he studied ophthalmology, as well as general medicine, in Berlin, Prague, Vienna, Paris and London. While abroad he was chiefly influenced by →Arlt and von →Graefe, hence, for the remainder of his life, though he never wholly gave up general medicine, his heart was mostly in his work as an ophthalmologist. For a long time he was the only ophthalmologist in Baltimore. In 1873 he was made professor of diseases of the eye and ear in the College of Physicians and Surgeons at Baltimore. In this capacity he labored with conspicuous success for twenty-nine years. In 1889 he was elected president of the Medical and Chirurgical Faculty of Maryland. He was also the first president of the Maryland Ophthalmological Society. Always interested in medical economics especially in the part thereof relating to the communal life of physicians, he it was who, to all intents and purposes, created, in 1890, the Association of American Medical Colleges. "It was on his motion, as a representative of the College of Physicians and Surgeons, that the Association of Baltimore Medical Colleges...became a national organization at Nashville."(Annals of Ophthalmology, October, 1902.) American Encyclopedia of Ophthalmology,Vol.7,p.5296-5303[with a list of 55 articles published between1861 and 1902]

Friedenwald, Harry (1865-1950) American ophthalmologist, son of Aaron and Bertha Stein →Friedenwald, born in Baltimore where he resided until his death. He received his



A.B. from the johns Hopkins University in 1884 and his M.D. degree from the College of Physicians and Surgeons, Baltimore, in 1886. After postgraduate work in Berlin and Vienna, he returned to Baltimore and entered the practice of ophthalmology and otology. He became associated with the College of Physicians and Surgeons where he became the head of the department of ophthalmology in 1902. He continued as head of the department of ophthalmology after the college merged with the University of Maryland until 1929 when he was made emeritus professor. Friedenwald was a member of the American Ophthalmological Society of which he was president in 1937 and chairman of the Section of Ophthalmology of the American Medical Association in 1931. He was a member of the Ophthalmological Society of the United Kingdom and many other local and national societies. He was a visiting surgeon to many of the Baltimore hospitals but his chief interest was in the Baltimore Eye and Ear Hospital where he was an active member of the staff and board until his death. In 1930, he gave the Doyne lecture at the Oxford Ophthalmological Congress and, in 1941, the deSchweinitz lecture in Philadelphia. Friedenwald made many contributions to ophthalmic and otological literature. The total number of papers relating to ophthalmology was about 115. There were 20 on otological subjects. He also wrote about 50 articles dealing with historical and religious subjects. Notable among his articles upon ophthalmic subjects were those relating to retinal changes, especially those caused by diabetes and vascular lesions. In addition to his professional interests, he was active in the Zionist movement and was the author of "*The Jews in Medicine*"2 vols. 1944-46, 2nded. 3vols.NY 1967 [GM 6501.1] and "*Jewish Luminarite in Medical History*."Baltimore 1946, reprinted 1967 & 1999. He also wrote: *Life,Letters and Addresses of Aaron Friedenwald*, Baltimore 1906. AJO 1950,33:1304-1305. See also his biography by Alexandra Lee Levin:*Vision; a Biography of Harry Friedenwald*, (with a preface by Simon E. Sobeloff) Philadelphia 1964. JPW

Friedenwald, Jonas Stein (1897-1955) American ophthalmologist. The name of Friedenwald has long been associated with ophthalmic progress. Harry Friedenwald had created for himself an authoritative position in medical ophthalmology; in 1930 he gave the Doyne Memorial Lecture on Pathological Changes in the Retinal Blood Vessels in Arteriosclerosis and Hypertension. His son, Jonas, attained greater fame in many branches of ophthalmology, excelling both as a clinician and as a pathologist, but much more so in the basic sciences of physiology and biochemistry on which ophthalmology is founded. In these fields he was unique in the United States and had for many years occupied an unchallenged position in that country as the greatest authority on the scientific aspects of ophthalmology, particularly the mechanism of the formation and the dynamics of the intra-ocular fluid. In his wide scientific interests, his experimental ability, and his mature judgement, he had few equals in any country in the world. Friedenwald entered Johns Hopkins University, where he took his B.A. degree in 1916, and graduated in medicine in 1920. Thereafter he went to Harvard University where he graduated M.A. in 1922. He returned to Johns Hopkins Hospital, and in 1923 at a surprisingly young age became instructor in ophthalmic pathology in its medical school. When the Wilmer Institute of Ophthalmology was opened in 1926 he was one of the first of its staff. In 1931 he was made Associate Professor of Ophthalmology at Johns Hopkins Medical School where he laboured unceasingly and enthusiastically in both the wards and the laboratories until his death. During his working life he wrote tirelessly and was the author of more than 140 scientific papers as well as his *Pathology of the Eye* (1929) . Many honours came his way. In the United States, he won the Research Medal of the American Medical Association (1935), the first Proctor Medal (1949), and the Howe Medal of the American Ophthalmological Society (1951). In 1952 he was presented with the Donders Medal in Holland, and he was to have been given the Doyne Medal at the 1956 meeting of the Oxford Ophthalmological Congress. Although he lived for ophthalmology in its widest aspects, Friedenwald had many other interests. A lover of literature, painting, and music, he was the worthy custodian of the magnificent collection of rare medical books and manuscripts which he inherited from his father. Equally aware of the world of affairs, he took an

intense interest in education and all aspects of social progress and in his later years he spent much care in the academic development of Israel. BJO 1955,39:768

Friedlaender, Ludwig Hermann (1790-1851) German military surgeon of a little ophthalmologic importance because of his "*De Medicina Oculorum apud Celsum Commentatio*" (1817). He was born at Königsberg, Prussia, studied both there and at Berlin, settled in Halle, there became privat-docent in medicine, in 1819 extraordinarius and in 1823 ordinarius of theoretic medicine.

Friemann, Werner (1911-) German ophthalmologist. MD Münster 1936. University lecturer at Hamburg University 1950 under →Marchesani , 1953 director of the Bremen Eye Clinic, professor 1956. Employed Barraquer Eye Institute at Barcelona. Director city clinic Hamburg. Wrote: "*Beiträge zur Ätiologie d.zentr. Netzhauterkrankungen*" (in *Sammlung zwangl. Abh.a.d.Geb.d.Augen-heilkunde.* 1953. Many articles in *Archiv für Gewerbehygiene und Gewerbepathologie*. Kürschners Gelehrten- Kalender 1966,p.603 . F. Hollwich Ophthalmologenverzeichniss 1964,p.116-117(extensive).

Fritschi. An almost wholly unknown privat docent at Freiburg, who wrote: 1. *Die Bösartigen Schwammgeschwülste des Auges und seiner Nächsten Umgebung.* Freiburg, 1843.) 2. *Uber die Wirksamkeit einiger Arzneimittel gegen Augenleiden, Besonders gegen Gewisse Formen der Augen-Entzündung.* in:Jour.d.Chir.u.A., vol.36,pp.62-150 and 223-273, 1847.)

Fronmüller, Georg Tobias Christoph (1809-1889) German physician and ophthalmologist, inventor of the trial-case,-i.e., the case of trial lenses, frames, etc., substantially as used today (1915). The dates and the place, or places, of his birth and death cannot be ascertained. He was the son of a physician, and he practiced at Fürth. For the earliest accounts of his excellent and memorable invention, see *Jour.d.Chir.u. Augenheilk*., Vol. 32,p.174-187,1843, and *Annales d'Oculist* Vol.x, p.283, 1843. He wrote: *Die Konvexgläserkur zur Heilung gewisser Formen des schwarzen Staares* Nürnberg 1857. American Encyclopedia, Albert.

Froriep, Robert (1807-1861) German pathologist, of a slight ophthalmologic importance because of his "*De Corneitide Scrofulosa*"(1830). He was born at Weimar and received his medical degree at Bonn in 1828, studied also in Paris, and in 1830 made his home in Jena. He later resided in Berlin and Weimar. At the latter place he died, June 14, 1861.

Frost, Albert D. (1989-1945) American ophthalmologist, born in Pittsburgh, Pennsylvania. He received his preparatory education in the Pittsburgh schools, and in 1912 was graduated from the University of Pittsburgh with the B.S. degree. He then worked in the steel mills for three years before he decided to enter medical school. Twice he enlisted in the Army and was twice sent back to medical school, and was graduated with the M.D. degree from the Western Pennsylvania Medical College in 1919. Following interneship at Bellevue Hospital, Cornell Division, New York City, he spent a year and a half as resident in the New York Eye, Ear, Nose, and Throat Infirmary. He became associated with the University of Pittsburgh and practiced ophthalmology in his home city until he moved to Columbus in 1924, to become an associate of Hugh Beatty. Frost was a serious thinker. He possessed a keen clinical sense and a dexterous hand to execute his plans. He was a resourceful and adroit surgeon. His memberships included the International College of Surgeons, the American Academy of Ophthalmology and Otolaryngology. He served 10 years as a director of the Ohio Commission for the Blind, the last as its president. In his last years he was mainly interested scientifically in the study of papilledema and he made several contributions on this subject. His published papers were not numerous, but of the highest quality and influence. AJO 29,1945:358-359

Frost, William Adams (1853-1935) British ophthalmologist. Frost was born the son of Charles Maynard Frost, a surgeon in practice in Ladbroke Square, London. He was educated at the Kensington Grammar School and entered St. George's Hospital in 1870. As a student he had a successful career and was a prizeman of the school in 1874, in which year he took his qualification and was house surgeon to the hospital, his colleague in office being the Sir Williarn Bennett. After his term as house surgeon was over he became a clinical assistant at the Central London Ophthalmic Hospital, and having taken his F.R.C.S.Eng. in 1878, he succeeded McHardy as Ophthalmic Registrar at St. George's. At

this time Brudenell→Carter had been in sole charge of the ophthalmic department for some years, and in 1881 Frost was elected Assistant Ophthalmic Surgeon to St. George's. In 1883, he joined the staff of the Royal Westminster Ophthalmic Hospital, and he was also for some years ophthalmic surgeon to the Victoria Hospital for Children. He won the Middlemore Prize of the British Medical Association in 1882 and again in 1886. On Carter's resignation of the Senior post in 1892, Frost naturally succeeded to the vacancy. He had served as junior for eleven years, and though Carter may not have been an easy person to work with at all times the pair got on capitally. Frost himself recorded his gratitude to Carter in his obituary notice of his old chief. The two were very different. Carter, with his incisive tongue and brilliant literary qualities, did not suffer fools gladly and in his teaching, was, as Frost said, apt to assume a knowledge of the subject on the cart of his audience, which was seldom as great as he seemed to imagine. Frost on the other hand, was an excellent teacher of elementary matters, best in the wards and outpatient department, where an occasional humorous sally would enliven the discourse; but as a lecturer his rapid delivery made his remarks less stimulating. Frost retired from practice in 1906 and went to live at Forest Row in Sussex; but he served during the latter part of the war as visiting ophthalmic surgeon to the London County War Hospital at Epsom. Frost´s *The fundus oculi, with an ophthalmoscopic atlas* published in 1896, 2nd ed.1901, was for years the best atlas on the market and it has been used for teaching all over the world. In the preparation of this work he had the assistance of A.W. Head and the plates, reproduced by colour lithography, are still, in the opinion of many, the finest plates of the fundus that have ever been produced. With Brudenell Carter he wrote a small handbook of ophthalmic surgery which was published in Cassell's Clinical Manuals series: *Ophthalmic Surgery* London 1887, American edition Philadelphia 1888 and he contributed a chapter to his brother-in-law, H. E. Juler's *A Handbook of Ophthalmic Science and Practice* London 1884. He also authored The Jenner Centenary an Inaugural Addree at St.Georges Hospital, London 1896 and *An Artificial Eye, with some Practical Suggestions as to its Use* (no date) . Frost's ophthalmoscope is a beautiful instrument. It is rather more complicated in structure than that designed by Morton, having two wheels set close together by which the batteries of + and - lenses are moved to the sight hole. Early in 1918 Frost had the misfortune to lose an eye from secondary glaucoma; later the remaining eye was affected with primary glaucoma, which, in spite of treatment, left him very gravely handicapped. He was a pathetic figure at Hospital gatherings, at which he was a very regular attendant. BJO 1935,19:697-699.Albert.Lancet 1935,2:1096; Brit med J. 1935,2:928.JPW

Frothingham, George Edward (1836-1900) American. Born at Boston, Mass., he received his liberal education at Phillips Academy,Andover. For a time he taught school. Then he began to study medicine with Dr. W. W. Greene, Professor of Surgery in the Medical Department of Bowdoin College. Later, he proceeded to Ann Arbor, Mich., where he received the degree of M.D. in 1864. Returning to Massachusetts, he practiced for three years at North Becket. Then he returned to Ann Arbor, in order to accept the demonstratorship of anatomy and the prosectorship of surgery in his alma mater. Deciding to devote himself to ophthalmology and oto-laryngology exclusively, he studied for a time in the ophthalmic and aural hospitals of New York. Then, returning to Ann Arbor, he was appointed full professor to the chairs of ophthalmology and otology, then just created. As a matter of convenience to the faculty, he taught, at times, in addition to his own branches, anatomy, materia medica, and therapeutics. He was a genial man and much beloved by his confreres and he was for many years, in close touch with the large student body. He was a member of numerous medical societies. In 1874 he was President of the Washtenaw County Medical Society, in 1889 President of the Michigan State Medical Society. He also held a number of appointments as ophthalmologist and otologist to various hospitals in Ann Arbor and Detroit; and, from 1869 to 1871, was an editor of the Michigan University Medical Journal. In 1860 he married Lucy E. Barbour. Of the union were born four children, of whom one, George Edward,Jr., is (1915) a well-known ophthalmologist, being ophthalmic surgeon to the Harper Hospital, Detroit, and Clinical Professor of Ophthalmology in the Detroit College of Medicine.American Encyclopedia of Ophthalmology,Vol.7,p.5307-5308.

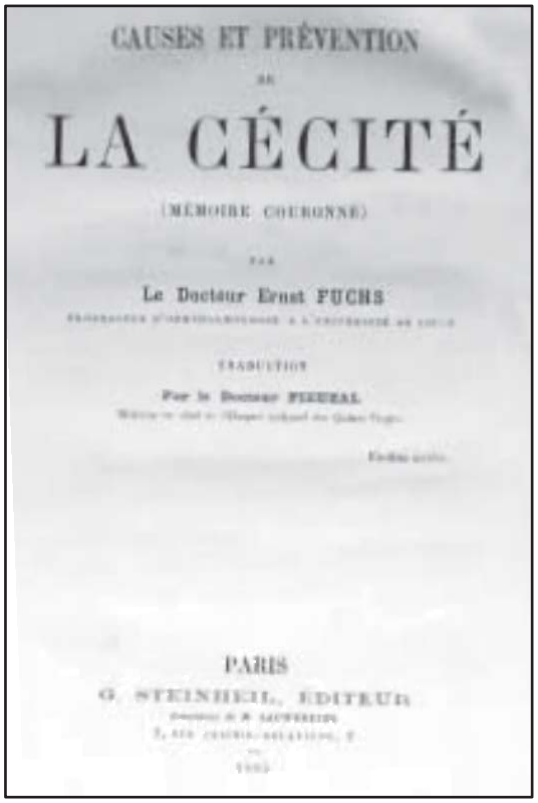
Fryer, Blencowe E (1837-1911) American ophthalmologist of the middle west. He was born in Somerset Co., England, the son of an English army officer. He lost his father at a very early age, and, when only seven years old, removed with his widowed mother and

five brothers and sisters to America. Here the family settled in Philadelphia, and, in 1859,at the University of Pennsylvania, young Fryer received the degree of Doctor in Medicine. Until the civil war broke out he served as interne in a Philadelphia hospital. On May 28, 1861, he was appointed Assistant Surgeon in the Union Army, and, from that date till 1887, he was engaged in active U. S. army service. In May, 1887, however, he was ordered before the appropriate board in San Francisco, and was there retired from active service on account of disability. Doctor Fryer then removed to Kansas City, Mo.,where he practiced ophthalmology and oto-laryngology exclusively, until about a week before his death. At the time of his death he was Professor of Diseases of the Eye and Ear in the Kansas City Post-Graduate Medical College. He had also held the chair of the same subjects in the old Kansas City Medical College, the University Medical College, and the Medico-Chirurgical College. For more than eight years Dr. Fryer had charge of the Department of French Literature in the well-known journal, *Ophthalmology*.American Encyclopedia of Ophthalmology,Vol.7,p.5308-5309.

Fuchs, Adalbert (1887- ?) Austrian ophthalmologist, son of Ernst Fuchs. He was born in Vienna, receiving his MD in 1919. He became lecturer at the Vienna University in 1922 (His thesis was *Zur Pathogenese und Anatomie der Netzhautzysten*). Fuchs worked first in the Institute for pathological anatomy under Paltauf, later in the surgical clinic under von Eiselsberg to become assistant of von Hess in Munich in 1914. He was named Professor of ophthalmology in 1929. Fuchs wrote about 130 papers, and following books: *Atlas der Histopathologie des Auges* (2 vols.) Vienna 1923-27 (also an English edition); the 16th,17 and 18th edition of his father´s *Lehrbuch der Augenheilkunde* (1939,1944 & 1945); *Die Erkrankungen des Augenhintergrundes* (1943); *Wie ein Augenarzt die Welt sah* (1946) (a Biography of his father); *Diseases of the Fundus Oculi*, 1949; with B.Samuels: *Clinical Pathology of the Eyes* 1952 and *Geography of Eye Diseases* 1962. JPW

Ernst Fuchs shortly after leaving Liège for Vienna

Fuchs, Ernst (1851-1930) Austrian ophthalmologist of Vienna, father of Adalbert Fuchs. He received his M.D. there in 1874, having studied under Billroth. He was assistant to ArIt from 1876 to 1880. The great Ernst Fuchs has been, in the beginning of his carreer and on recommendation of his master von →Arlt, professor of ophthalmology and of sensory physiology at the Liège University from 1881 to 1885. He spoke very easily foreign languages (also english) and was also in Liège, much appreciated for his knowledge, his kindness and his surgical skill. He had for his in-patients 10 beds in the old Bavière (Bavaria) hospital. He installed under the roof two small laboratories wherein he spent much time for histological studies. He published during his Liège period on much subjects including the *Purkinje entoptic phenomenon*, *corneal cauterisation*, *corneal edema in glaucoma*, *optic nerve anomalies*, *uveal sarcoma*, *normal ocular anatomy*, *optic atrophy*, *causes of blindness and neonatal ophthalmia* (in german and in french). He refused to be appointed in Prague, but could only accept to succeed to Jäger in his native town Vienna. He wrote in his memories: "*Ich ging schweren Herzens von Lüttich weg, wo ich mich sehr glücklich gefühlt hatte: welch schöne Stadt und Umgebung, gute Freunde und reichliche Zeit zu wissenschaftlichen Arbeit*!". In 1885, he succeeded Jaeger as professor of ophthalmology and director of the eye clinic at the University of Vienna, retiring in 1915. Among his many contributions to the pathology of


CAUSES ET PRÉVENTION

DE

LA CÉCITÉ

(MÉMOIRE COURONNÉ)

PAR

Le Docteur Ernst FUCHS

TRADUCTION

Par le Docteur FIEUREAL

PARIS

G. STEINHEIL, ÉDITEUR

Fuchs´ book on Cause and Prevention of Blindness written during his stay in Liège (Belgium)

the eye were those in his monographs on sarcoma of the uveal tract (1882), blindness (1885), and the histopathology of sympathetic ophthalmia (1905); his improvements to jaeger's test-types; and his great *Lehrbuch der Augenheilkunde* (1889), which passed through many editions and translations. *Das Sarcom des Uvealtractus*. Wien 1882. *Die Ursachen und die Verhütung der Blindheit. Gekrônte Preisschrift*. Wiesbaden 1885. *Causes et prévention de la cécité* Paris 1885. French edition of previous entry, published the same year. *The causes and the prevention of blindness*. London 1885. English edition of *Die Ursachen und die Verhütung Lehrbuch der Augenheilkunde*. Leipzig und Wien 1889. It went through eighteen German editions between 1889 and 1945, and ten British and American editions between 1892 and 1933; it was also translated into French, Japanese, Spanish and Chinese. *Manuel d'ophtalmologie* ... Paris 1892. First French edition of previous entry. *Text-book of ophthalmology*. New York 1892. First English translation of the *Lehrbuch* . Albert. Verriest 41. Klin Monatsbl f.Augenheilk. 1930,85:830.AJO 1931,14:138.JPW

Fuchs, Leonhart (1501-1566) One of the greatest botanists and general practitioners of medicine of the Renaissance period. He was born at Membdingen, Bavaria. In 1519 he entered the University of Ingolstadt, at which institution, after an extremely brilliant career,he received the degree of Master of Arts in 1521. He then pursued the study of medicine in the same institution, and received his professional degree in 1524. For the two years following, he practiced medicine in Munich, the next two he passed as Professor of Medicine in Ingolstadt, and then became physician-in-ordinary to the Markgrave George of Brandenburg in Anspach. This position he held for five years. He was ennobled by the Emperor Charles V. His literary activities began in 1529. Among his numerous writings, we can mention: " *Errata Recentiorum medicorum LX numero, Adjectis eorun conputationibus* " (Hagenau, 1530). "*Cornarius Furens*" (Basel, 1533); "*Hippocratis Epidemion Liber,Sextus Latinitate Donatus et Luculentissima Commentatione Illustratus*" (Basel, 1537). "*Claudii Galeni Aliquot Opera*" (3 vols.,Paris, 1549-54).*De Historia Stirpium Commentarii*. Basel 1542 [GM1808]. In 1538 he published an ophthalmologic work, entitled, "*Tabula Oculorum Morbos Comprehendens*," which seems to be no longer extant and *Ein newes hochnutzlichs Büchlin von erkantnus der Kranckheyten der Augen* Strassburg 1538. In his "*Institutiones Medicae*," first published in 1556, he exhibits a chapter entitled "*Vitiorum Oculi Succincta Explicatio*." A work in German, entitled "*Alle Krankheiten der Augen durch den Hochgelehrten Doctor Leonhart Fuchsen*" (Strassburg, 1539) is, declared by J.→Hirschberg to be nothing but a badly garbled translation of the above-mentioned chapter from the "*Intitutiones*", issued by a trio of quacks-"Herrn Jürgen Vogtherren, Canonicus und Pfarrherren zu Feuchtwangen, und Conradi und Bartholomei Vogtherren " who had, in fact, altered Fuchs's work to suit their own purposes. Fuchs himself was a man of high ideals and spotless character. American Encyclopedia of Ophthalmology, Vol.7, p.5310. Albert

Fujikado, Takashi (1954-) Japanese Ophthalmologist, Professor of the Department of Applied Medical Engineering, Osaka University, Graduate School of Medicine. He received his MS in applied physics from Tokyo University in 1978, and MD degree from Osaka University in 1982. He carried out basic research on eye movement in connection with the central nervous system as a research associate at Indiana University, USA (1983-1984) and worked with NODA Hiroharu (Saccadic eye movement evoked by microstimulation of lobule VII of the cerebellar vermis of macaque monkeys. J Physiol 394: 573-594, 1987). He studied Ophthalmology at the Osaka University under Prof. MANABE Reizo: he received his Doctor of Medical Sciences in 1988.(thesis: *The role of cerebellum for the regulation of saccadic eye movement*). He has been in the present position since 1998. His specialty in Ophthalmology is Pediatric Ophthalmology, Ophthalmic Optics and Neuro-Ophthalmology, and he has many publications: some examples are (Visual function after foveal translocation with scleral shortening in patients with myopic neovascular maculopathy. Am. J. Ophthtalmol. 125 : 647-656, 1998, and The

effect of nitric oxide synthase inhibitor on form deprivation myopia. Curr Eye Res 16: 993-996, 1997). His professional activities are extensive and he is a member of many National and International Societies. He is a member of ARVO (Association for Research in Vision and Ophthalmology) and the International Strabismological Association. He is on the Board of Trustees of the Japanese Ophthalmological Society (JOS) (1998-), Japanese Society of Strabismus and Amblyopia (1998-), Japanese Society of Ophthalmic Optics (1998-) and many other Ophthalmological Societies. The Japanese Society of Strabismus and Amblyopia granted him the Yuge Award (1996) for the excellence of his work. (Department Applied Medical Engineering, Osaka University Graduate School of Medicine, room G4, 2-2 Yamadaoka, Suita, Osaka, 565-0871, Japan. Phone: +81-6-6879-3941 Fax +81-6879-3948, E-mail: fujikado@ophthal.med.osaka-u.ac.jp)

Fujinaga, Yutaka (1923-) Japanese Ophthalmologist, Professor Emeritus of Tottori University. He graduated from Kyushu University in 1947, studied Ophthalmology at the Department of Ophthalmology of Matsue Red Cross Hospital, and worked as the Head of the Eye Clinic of Shimane Central Hospital until the end of 1949. He then became the Assistant to Prof.→KANDORI at Tottori University and was promoted to the Lecturer in 1953 and to the Assistant Professor in 1956. He submitted his thesis to Kyushu University (thesis: *Experimental studies of the effects of pituitary and thyroid hormones on blood glutathione*. No. 1: J. Jpn. Ophthalmol. Soc. 56: 1151, 1952; No. 2. ibid. 56: 1174, 1952; No. 3. ibid. 56: 1178, 1952, No. 4. ibid. 56: 1338, 1952), and received his Doctor of Medical Sciences in 1953. He extended his studies as a visiting Fellow at Chicago University Hospital (1956). He was appointed the Professor and Chairman of the Department of Ophthalmology in 1970 and served until retirement in 1989. During his tenure, he served as the Director of the University Hospital (1980-1984).?His research interest covered a wide area, e.g. Cataract, Glaucoma, Retinal Pigmentary Degeneration, Diabetes, Radiation injuries etc. He wrote 14 books and 262 original articles: some examples are in the followings: "*Clinical application of gonioscopic findings to evaluation of glaucoma operation*, Am. J. Ophthalmol.50: 631, 1960", "*Quantitative evaluation of the oscillatory potential in diabetic retinopathy*. Yonago Acta Medica 16:83, 1972", "*Electron microscopic studies on the anterior chamber angles of normal and glaucomatous eyes*. Yonago Acta Medica 19:181,1975", "*Early receptor potential in primary retinitis pigmentosa*. Conc. Ophthalmol. XIII, 1978". He is the Founding member of the Japan Society of Cataract Research and has been on the Executive Board of Trustees since 1975. He also served as the Executive Board of Trustees of the Japan Eye Bank Association since 1971. In recognition of his meritorious service, the Government of Japan conferred on him the Third Order of the Rising Sun in 1999.(SM)

Hidetaro Fujita

Fujita, Hidetaro (1875-1960) Japanese Ophthalmologist. He graduated from Tokyo University in 1902 and studied Ophthalmology under Prof. J. Komoto. He was then appointed the Professor of Ophthalmology of Taipei Medical School (now National Taiwan University in Taipei). During his tenure, he studied Ophthalmology in Wuerzburg University during 1909-1911. On his return to Taipei, he submitted a thesis on the retinal pigment epithelium to Tokyo University and was granted Doctor of Medical Science. In 1917 he was appointed the Professor and Chairman of the Department of Ophthalmology of Okayama University. In 1922 he was promoted to the Dean of the Faculty of Medicine; he served as the President of the 29th Congress of the Japanese Ophthalmological Society held in Okayama in 1925. He then retired from the University and practiced in the city of Okayama. (SM)

Kenzo Fujiwara

Fujiwara, Kenzo (1885-1962) Japanese Ophthalmologist, son-in-law of Tetsutaro. He graduated from Kyoto University in 1911, and studied Ophthalmology under Prof.→ASAYAMA Ikujiro. In 1917, he was appointed the Professor of Taipei Medical School as the successor of FUJITA Hidetaro, until 1926 when he was invited to Kyoto Prefectural Medical University as the Professor and Chairman of the Department of Ophthalmology. In the same year he submitted a thesis to Kyoto University and received his Doctor of Medical Science. He served as the Chairman of the Department for 22 years and trained many brilliant Ophthalmologists. He delivered a special lecture on "*Chronic Dacryocystitis*" at the 51st Congress of the Japanese Ophthalmological Society in 1947. (SM)

Fujiwara, Takaaki (1937-) Japanese Ophthalmologist, Professor of Ophthalmology of Kyorin University. He graduated from Keio University in 1962 and studied Ophthalmology under Prof.→KUWAHARA Yasuji and Prof. →UEMURA Yasuo: he received his Doctor of Medical Sciences from the University in 1970 (thesis: *Studies of glutathione in the lens*. J. Jpn. Ophthalmol. 72: 1744, 1968; ibid. 74: 113, 1970). He is the Professor and Chairman of the Department of Ophthalmology of Kyorin University since 1986. His research interest is in the crystalline lens and cataract with emphasis on biochemistry, image analysis and epidemiology. His many publications include "*Epidemiology of cataract: Clinical evaluation with retro-illumination and photography*. Dev. Ophthalmol. 15:16, 1987" and "*Acute loss of vision in a juvenile diabetic cataract*. Current Aspects in Ophthalmol. 11:454, 1992. He is currently the Chief Editor of the Journal of the Japanese Society of Cataract Research. (Department of Ophthalmology, Kyorin University School of Medicine, 6-20-2, Shinkawa, Mitaka,Tokyo 181-0004, Japan. phone: 81-42-247-5511, fax: 81-42-246-9309) (SM)

Tetsutaro Fujiwara

Fujiwara, Tetsutaro (1869-1954). Japanese Ophthalmologist. He graduated from Okayama Medical School (now Okayama University) in 1889 and studied Ophthalmology with Prof. Y. OHNISHI and Prof. K. OGAWA. For 3 years from 1899 to 1902, he studied in Freiburg and received Doktor Medicine, his the dissertation entitled " *Gibt es eine endogene toxische Wundentzündung am Auge*?". Klin. Mbl. Augenheilkd: 40:229,1902. On return to Okayama, he served as the Professor of Ophthalmology at Okayama University for 3 years. He then moved to Takamatsu Red Cross Hospital as the first Head of the Eye Clinic. In 1907 he founded the Eye Hospital in Okayama, and served the Medical Association of Okayama as the President from 1915 to 1940. (SM)

Hidetoshi Fujiyama

Fujiyama, Hidetoshi (1903-1977). Japanese Ophthalmologist. He graduated from Hokkaido University in 1931, studied Ophthalmology under Prof. S. OCHI. He was appointed the Professor and Chairman of the Department of Ophthalmology of Hokkaido University in 1946, the position he held until retirement in 1966. He was then given the title Professor Emeritus of Hokkaido University. He published pioneering works of successive cultures of trachoma pathogens in chick embryo: he delivered a special lecture "*Studies of trachoma virus*" at the 70th Congress of the Japanese Ophthalmological Society. He was also a pioneer in electron microscopic studies and reported "*Electron microscopic studies of ocular tissues*" at the 65th Congress of the Japanese Ophthalmological Society in 1961. He served the Society as a Council Member and an Executive Council Member for many years. (SM)

Fukada, Yoshitaka (1955-) Japanese Biochemist working on the eye, Professor at the Department of Biophysics and Biochemistry, Graduate School of Science, The University of Tokyo. He graduated from Tokyo University Faculty of Science in 1978, and received Ph.D. Degree in Biophysics in 1983. He is in the present position as above since 1995. His research interest has been in biochemistry and molecular biology of visual transduction, and has published many papers that include "*Farnesylated gamma-subunit of photoreceptor G-protein indispensable for the GTP-binding*. Nature 346:658, 1990", and "*Primary structure of chicken cone visual pigments; Vertebrate rhodopsins have evolved out of cone visual pigments*. Proc. Natl. Acad. Sci. USA. 89:5932, 1992". He received the *Yoshida Memorial Award* from the Japanese Society for Comparative Physiology and Biochemistry (1992) and the Biochemistry Award from the Japanese Biochemical Society (1992). He serves as a member of the Committee of the Biophysical Society of Japan since 1998, Council of the Japanese Biochemical Society since 1997 and also he served as a Council Member for the Japanese Society for Comparative Physiology and Biochemistry (1992-1995). (Department of Biophysics and Biochemistry, Graduate School of Science, The University of Tokyo, 7, Hongo, Bunkyo-ku , Tokyo, 113-8655, Japan; phone: & fax: 81-3-5802-8871, e-mail: sfukada@mail.ecc.u-tokyo.ac.jp) (SM)

Fukado, Yoshinao (1926-) Japanese Ophthalmologist, Professor Emeritus of Showa University. He graduated from Tokyo University in 1949, studied Ophthalmology at the University Hospital under Prof.→HAGIWARA Hogara and received his Doctor of Medical Sciences in 1959 (thesis: *Studies of phosphate metabolism of the cornea using P32*. No. 1: J. Jpn. Ophthalmol. Soc. 59: 1319, 1955, No.2: ibid. 60: 617, 1956, No. 3: ibid. 62: 2338, 1958, No.4: ibid. 63: 4375, 1959). He worked as the Chief of the Department of

Ophthalmology of Kanto Rosai Hospital (1959-1978) and was appointed the Professor and Chairman of the Department of Ophthalmology of Showa University in 1978: he served in this position until retirement in 1992. He is a leading specialist in ocular traumatology and developed a surgical method of treatment for optic canal fracture (Pathogenesis and treatment of optic canal fracture. Special report to the 71st Congress of the Jpn Soc. Ophthalmol. J. Jpn. Ophthalmol. Soc. 71: 1909, 1967; Diagnosis and Surgical Correction of Optic Canal Fracture after Head Injury, Ophthalmologica Vol. 158 (Suppl), p.307-314, 1969). He wrote "*Ophthalmic Trauma*" Kanehara Publ. Co. Tokyo, 1978. He also played a key role in introducing Intraocular Lens Implantation in Japan: he served as the Secretary of the Japanese Society of Cataract and Refractive Surgery. He served as a Councillor to the Japanese Ophthalmological Society (JOS) (1975-1994) and is Honorary Member of the JOS, Japanese Society of Traumatology and Occupational Medicine and Japanese Society of Ophthalmic Surgeons. He is a member of American Society of Cataract and Refractive Surgery. (SM)

Fukala, Vincenz (1847-1911) Austrian ophthalmologist. Originator of an operation for high myopia which was first reported and published in 1891. Born in Zholkva, Ukraine, he received his M.D. in 1871 at the University of Vienna and settled in that city as ophthalmologist, working first as assistant to ArIt. Fukala devised several new surgical procedures, including "Fukala's operation," the removal of the lens for relief of severe myopia; an operation for ulcus: *Heilung Höchstgradiger Kurzsichtiglieit nebst Angabe einer leichtfasslichen Methode zur schnellen Berechnung der Axenlänge, optischen Constanten des Auges* Leipzig 1896. Albert, The Ophthalmoscope, 1911,p.878.

Fukuda, Masatoshi (1925-) Japanese Ophthalmologist, Professor Emeritus of Ryukyu University. He was born in Tokyo as a son of practicing Ophthalmologist, and graduated from Tokyo University in 1949, studied Ophthalmology at the University under Prof.→HAGIWARA Hogara. He submitted his thesis (*Studies on the ganglion cells in the root of the IIIrd, IVth and VIth cranial nerves*. J. Jpn. Ophthalmol. Soc. 59: 958, 1955; ibid. 60: 318, 1956; ibid. 61: 51, 1957; ibid. 61: 283, 1957; ibid.61: 775, 1957) to Tokyo University and received his Doctor of Medical Sciences in 1957. He was promoted to the Lecturer in 1959, and to the Assistant Professor in 1964. In 1981, he was invited to be the Professor and Chairman of the Department of Ophthalmology of Ryukyu University and worked until retirement in 1991. During his tenure, he served as the Director of the University Hospital (1987-1991). He is the leading specialist in Japan of diabetic retinopathy and he has published 20 papers on this subject in National and International Journals: some examples are "*Blood fibrinolytic activity and fibrinogen concentration in diabetic retinopathy*. Eye, Ear Nose and Throat for Ophthalmologist. 51: 266, 1972", "*Diabetic retinopathy with juvenile onset diabetes*. J. Jpn. Diabetes Soc.18: 656, 1975", "*Diabetic retinopathy in Japan*. Proc. First Inter. Symp. Metabolic Eye Diseases. ed. H. Haddad, p. 327, 1974", "*Natural history of diabetic retinopathy and its treatment in Japan*. Proc. Second Meeting of Diabetes Mellitus in Asia, ed. S. Baba et al., p. 225, 1975", "*Blood coagulation in proliferative diabetic retinopathy*. Conc. Ophthalmol. 23, p. 880, Excerpta Medica, 1978" and "*A new classification of diabetic retinopathy in Diabetic Microangiopathy*: Proc. Internatl. Symp. of Diabetic Microangiopathy, Japan Medical Research Foundation Publication No.2: p.39, 1983". His classification of stages of diabetic retinopathy has been widely accepted and is most commonly used in practice. He delivered the Japanese Ophthalmological Society (JOS) Award lecture at the 93rd Congress (Clinical management of diabetic retinopathy. J. Jpn. Ophthalmol. Soc. 93: 873, 1989), and also a special lecture at the 40th Congress of the Japanese Society of Clinical Ophthalmology in 1986 (Indicated stages of photocoagulation and vitrectomy for proliferative diabetic retinopathy. Jpn. J. Clin. Ophthalmol. 40: 575, 1989). For excellence of his research, the Japanese Society of Diabetology granted him the Sakaguchi Prize in 1995. He is Honorary Member of the JOS and the Japanese Diabetes Society.(SM)

Fukuda, Yutaka (1943-) Japanese Neurophysiologist, Professor of Physiology, Department of Physiology and Biosignaling, Graduate School of Medicine, Osaka University. He graduated from Osaka University Medical School in 1967, studied at the Department of Neurophysiology in the Graduate School of Medicine under the supervision of Professor Kitsuya Iwama and received his Doctor of Medical Sciences in 1973 (thesis: *Differentiation of principal cells of the rat lateral geniculate body into two*

groups; fast and slow cells). He was appointed the Professor of Physiology of Osaka University Medical School in 1990 and due to change of the University System, he is in the present position as above since 1997. He has published more than 150 original articles and has written 6 books: some examples are "*Retinal distribution and central projections of Y- and X- and W-cells of the cat's retina*. J. Neurophysiol. 37: 749, 1974" and "*Naso-temporal overlap of crossed and uncrossed retinal ganglion cell projections in the Japanese monkey (Macaca fuscata)*. J. Neurosci. 9: 2353, 1989". He was invited to deliver a special report to the Centennial Congress of the Japanese Ophthalmological Society in 1996 (*Optic nerve regeneration by nerve transplantation*. J. Jpn. Ophthalmol. Soc. 100: 956, 1996). He holds key positions in many professional Societies, and they are Standing Secretary of the Physiological Society of Japan, Councillor of Japan Neuroscience Society, Director of Neuro-ophthalmology Japan and Advisory Committee for Programming and Management of the National Institute for Physiological Sciences. He has many editorial assignments and they are, Vision Research Neurobiology Section editor (1992-1998), Restorative Neurology and Neuroscience (1989-1994) and the Japanese Journal of Ophthalmology (1997-). Since 1997, he has served as the Supervisor of the Project "*Studies on factors controlling regeneration of retinal circuitry and optic nerve*" supported by Strategic Promotion System for Brain Science from Science and Technology Agency of Japan. He is a member of the Society for Neuroscience and the Association for Research in Vision and Ophthalmology. (Department of Physiology and Biosignaling, Graduate School of Medicine, Osaka University, 2-2 Yamadaoka, Suita, Osaka, 565-0871,Japan. phone: +81-6-6879-3610, fax: +81-6-6879-3617, e-mail: yfukuda@phys2.med.osaka-u.ac.jp) (SM)

Giichi Fukushima

Fukushima, Giichi (1910-1997) Japanese Ophthalmologist. He graduated from Osaka University in 1935, studied Ophthalmology under Prof. B. Nakamura. He was granted Doctor of Medical Science from Osaka University in 1940. In 1944, he was appointed Professor of Ophthalmology of Tokushima University: he retired from this position in 1949 and practiced in the city of Tokushima. He served as the President of Tokushima Ophthalmologists Association, of Tokushima Eye Bank and many other organizations. His outstanding contribution to Ophthalmology is represented by many publications of the History of Ophthalmology in Japan. The last and most significant book is "*Ko Ryosai and his era*"(a famous Ophthalmologist in the early 19th Century) where the process of the introduction of modern Ophthalmology in Japan is described in detail. At the 80th Anniversary of the Japanese Ophthalmological Society, he gave a special lecture " *Nagasaki in the History of Ophthalmology in Japan, in particular attention to Philipp Franz von Siebold*". Due to his contribution, he was named Emeritus Member of the Japanese Ophthalmological Society and Japanese Society of Medical History. (SM)

Funahashi, Tomoya (1916-) Japanese Ophthalmologist, Professor Emeritus of Jikei Medical College. He graduated from Jikei Medical College in 1942 and studied Ophthalmology at Kanazawa University under Prof. →KURACHI Yoshi and also at the Department of Pathology under Prof. →WATANABE Shiro. He submitted his thesis in 1948 (*Experimental studies on regeneration of stromal collagen of the cornea*. J. Jpn. Ophthalmol. Soc. 52?78, 1948) and received his Doctor of Medical Sciences. He served as the Assistant Professor of the University (1948-1949) and moved to the Head of the Ophthalmology Department of Tosei Hospital of Seto City (1949-1960). He then worked as a Research Fellow at the State University of New York with R. Troutman (1960-1967). He was appointed the Professor of Ophthalmology of Jikei Medical Collage in 1965 and was promoted to the Chairman of the Department of Ophthalmology in 1971 and served in this position until retirement in 1984, whereupon he was invited to be the Director of Tokyu Hospital and served until 1991. He has served as the Councillor to the Japanese Ophthalmological Society (JOS), and was the Treasurer and Chairman of the Finance Committee for the 23rd International Congress in Kyoto (1978).?His research interest covers a wide area including ophthalmic pathology, surgery, cataract, corneal diseases, and he delivered the JOS Award Lecture at the 84th Congress of JOS in 1980 "*Studies of vital staining of the eye*. J. Jpn. Ophthalmol. Soc. 84: 1826, 1980".?He has been the editor of the Journal "Ganka – Ophthalmology" over 10 years. He also served various Government Committees, e.g. Council for Medical Treatment of Patients afflicted by the Atomic Bomb. He is Honorary Member of JOS and of Korean Ophthalmological Society.(SM)

Shinichi Funaishi

Funaishi, Shinichi (1887-1966) Japanese ophthalmologist. He graduated from Kyoto University in 1912 and studied Ophthalmology under Prof. ASAYAMA Ikujiro, and was invited to Akita Red Cross Hospital as the first Head of the Eye Clinic in 1914. After 5-years working in Akita, he was promoted to Professor of Ophthalmology of Manshu Medical College (now China Medical University, Shenyan, People's Republic of China). He went to Berlin University in 1924 and studied under Prof. Hoffmann, and he published 2 papers in the German Language: *Ueber das Zentrum der Sehrichtungen*. v. Graefe Arch. Ophthalmol. 116:126, 1925, and 117:296, 1926. He submitted the thesis to Kyoto University and received his Doctor of Medical Science. He retired from the University in 1943 due to illness. He trained many Chinese Ophthalmologists and they played leading roles in the Northeastern District of China.(SM)

Funder, Wolfgang (1918-) Austrian ophthalmologist.MD 1943 in Vienna. 1946-49: from 1946-55 : 2nd University clinic Vienna under →Lindner. University lecturer at Graz 1959 under Hruby. About 31 articles of which 5 relating to the history of ophthalmology in *Klinische Monatsblätter f. Augenheilkunde* 1950-63. Editor of *Sitzungsberichte der Österreichische Ophthalmologische Gesellschaft.* 10 scientific movies between 1955 and 1964. .Kürschners Gelehrten- Kalender 1966,p.624 & 1987,p.1198 ; F. Hollwich Ophthalmologenverzeichniss 1964,p.119-20.

Furnari, Salvatore (1808 –1866) Born in Sicily, he received his medical degree at Palermo, and, in 1834, was licensed to practice in France. In 1841 he was sent by the French Government to Algiers on some political mission, during which he made many ophthalmic observations of the native tribes, including the absence of myopia among the Kabyles. In 1848 he returned to Palermo in order to accept the professorship of ophthalmology-a position which he held till his death in 1866. His only important ophthalmologic writing is "*Essai sur les Causes, la Nature et le Traitement des 0phtalmies en Afrique*" (Paris, 1841) Other books he authored are : <u>*Essai sur une nouvelle méthode d'opérer la cataracte*</u>. Paris 1839 ; <u>*Traité pratique des maladies des yeux*</u> Paris 1841 ; <u>*Voyage médical dans l'Afrique septentrionale*</u> etc.. Paris 1845 ; <u>*Practical observations on cataract and closed pupil*</u> London 1815. American Encyclopedia of Ophthalmology,Vol.7, p.5320. Albert


VOYAGE MÉDICAL

L'AFRIQUE SEPTENTRIONALE

DE L'OPHTHALMOLOGIE

PAR LE DOCTEUR S. FURNARI,

Furnari´s book on Africa and Ophthalmology

Fyodorov, Svyatoslav N. (1927-2000) Russian ophthalmologist, businessman, and politician. As a child, Fyodorov dreamed of becoming a pilot, but at age 18 he lost a foot in an accident. This event changed his goals, and Fyodorov decided to devote his life to medicine. He graduated from the medical institute in Rostov-on-Don in southern Russia, and started his career in ophthalmology, which was, in his opinion, the best medical specialty. For several years, he worked in hospitals in provincial Russian towns improving his ophthalmo-surgical skills. His inquisitive mind and aspiration to be an innovator in ophthalmology led him to search for new surgical techniques. In 1960, Fyodorov implanted an artificial crystalline lens for the first time in the Soviet Union. This was the start of his multifaceted career. His innovations in cataract surgery, operations for the treatment of glaucoma, and development and adoption of microsurgery methods established him as a leader in ophthalmology in his country. However, his rise was not an easy one because the medical establishment was not always in agreement with him on the accuracy of his methods and procedures. His methods of myopia surgery (keratotomia) brought him gratitude from his patients, but these techniques were not always approved by his colleagues. Fyodorov eventually proved that he was right in working with this particular technique. Fyodorov was not only an eye surgery pioneer, but also an outstanding organizer and businessman, which was very unusual in the Soviet Union. He managed to create in Moscow the Research Institute of Eye Microsurgery, which includes a hospital, research laboratories, and places for die manufacture of artificial crystalline lens and special instruments for microsurgery. Moreover, he established many eye microsurgery clinics and hospitals in different Russian towns and cities, as well as in Italy, Poland, Germany, Spain, Yemen, and the United Arab Emirates. He equipped a special ship as an ophthalmologic clinic that cruised the Mediterranean and Indian Oceans.

Fyodorov was a practicing capitalist, accepted former Soviet president Mikhail Gorbachevs "*Perestroika*," was known as a politician, created his own political party, and in 1996, ran for president of Russia. He was an outstanding Russian figure of the 20th century. Arch Ophthal 2000,118:1594

G

Gaal, Gustav (1818/19?-1870) Hungarian Physician, who devoted considerable attention to the eye and ear. Born at Eisenstadt, Hungary, he received his medical degree and practised for a time in that city. In 1848, because of political troubles, he fled from Vienna, where he happened to be at the time, to Hungary. Afterwards he lived in Turkey, where he turned Mohammedan and became a Turkish military surgeon under the name of Veli-Bey. For a time he resided at Saraievo, Bosnia. Among Gaal's writings the only one of ophthalmologic interest is "*Physikalische Diagnostik und derer Anwendung in der Medicin, Chirurgie, Oculistik, etc.*" (Vienna, 1848). American Encyclopedia of Ophthalmology,Vol.7,p.5326

Gailey, Watson (1882-1959) American ophthalmologist. Gailey was born at Ashland, Illinois, the son of Watson and Elizabeth Sinclair Gailey. After graduating from the College of Physicians and Surgeons of the University of Illinois he served at Cook County Hospital in 1904-1905 and at the Illinois Eye and Ear Infirmary and for the Illinois Steel Company in 1906-1907 and began practice in Bloomington in 1908. In 1912-1913 and again in 1924 under A.→Pillat he furthered his studies at the University of Vienna. Later, in 1931, he went to India in the company of Joseph Hompes of Lincoln, Nebraska, where in the blistering heat of Baluchistan and Afghanistan the two of them sweated it out removing myriads of cataracts. He had served as a captain in the Army Medical Corps during World War I and it was at the invitation of the British Army that he went to India. In 1946 Dr. Gailey flew to Guatemala as consultant for an expedition of doctors and entomologists for the Pan-American Sanitary Bureau to study onchocerciasis, a common cause of blindness among the coffee workers. Gailey lectured at many medical meetings, taking part in the American Academy Instruction Course, the Mid-Winter Course in Los Angeles, and many others. He wrote a major contribution being the *Eye Digest* published by the Watson Gailey Eye Foundation. Meanwhile as his volume of work and staff grew at the clinic, the Watson Gailey Eye Foundation was granted a charter of incorporation by the State of Illinois and his clinic was approved for eye residency by the American Board of Ophthalmology. In addition the Foundation pays the fees of two Illinois normal students preparing to teach persons who are visually handicapped. It also established an eye-bank at Mennonite Hospital, working in co-operation with other eye-banks in the country. Gailey brought great credit to himself, his relatively small community, and to ophthalmology, as a specialist and as a humanitarian. Gailey was a mason, shriner, American legionnaire, and a member of A.0.A., and Phi Rho Sigma. AJO 1959, 47:599-600

Gaillard, François Lucien (1805-1869) A distinguished French surgeon, inventor of the eyelid-suture -which bears his name and which is often used today(1915). Born in Poitiers, France, he received his professional degree at Paris in 1829, presenting as thesis, "*Considérations sur l´Utilité et l´Abus des Théories en Médecine, Suivies de Propositions Chirurgicales.*". Resettled for practice in Poitiers and became a distinguished surgeon. He wrote a large number of works of a general, but none of an ophthalmologic character.American Encyclopedia of Ophthalmology,Vol.7,p.5326.

Galand, Albert (b. 1938-) Belgian ophthalmologist. Galand obtained his M.D. degree in 1964 in Liège and specialized in ophthalmology in the same city under Roger→Weekers. He remained half-time consultant in the public hospitals. He is a well known specialist in anterior segment surgery and more particularly in *intraocular lens implantation into the capsular bag (Galand-lens)*, treatment of *after-cataracts via pars plana approach, keratoplasty for the treatment of corneal perforation* etc. He organized courses of ocular surgery. (Verriest)

Gale, James (1833-1907) English inventor and electrician, born near Plymouth; he lost his sight at seventeen, but was very successful as a medical electrician and inventor. He was founder of the South Devon and Cornwall Institution for the Blind. He became Fellow of the Chemical Society and of Geological Society in 1866. The following year he became the degree of Doctor of Philosophy at the University of Rostock. Gale received probably the largest fee ever known to be paid for medical electrical attendance-viz., $250,000. See

J. Plummer's *The Story of a Blind Inventor* (1868). American Encyclopedia of Ophthalmology,Vol.7,p.5327. The Ophthalmoscope 1907,p.180-181

Woodcut from Galen´s Anatomy printed in Lyon 1588

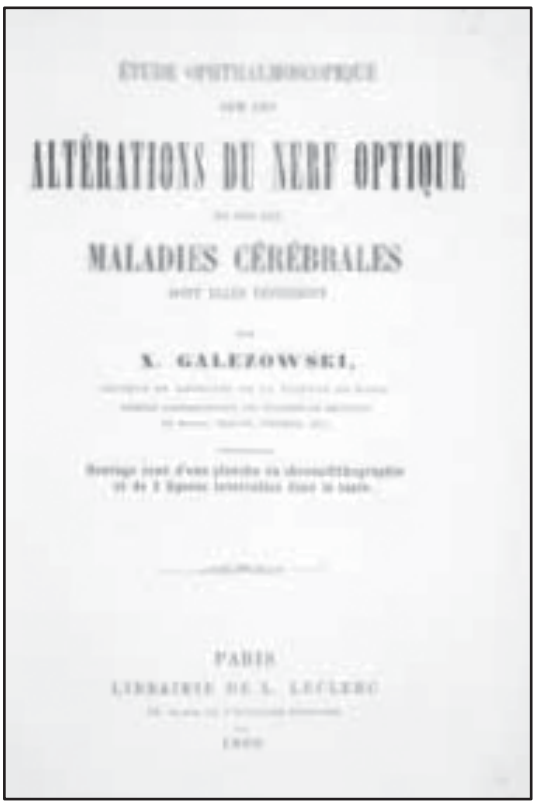
Galen, Claudius (AD 130-200) The greatest physician of all time, except Hippocrates, and the idol of the medical world for more than a thousand years.Galen was born at Pergamos, in Alysia. His father, Nicon, was an architect. Of him the subject of this sketch speaks with the greatest affection and admiration, but his mother he calls a virago. His father, he says, "*Was of surpassing skill in Geometry, architecture, astronomy, arithmetic and logic; but was even better known for his justice, modesty and goodness.*" Because of a dream, the father decided to dedicate his son to medicine.Galen received his education not only in his native town but also in many other cities-Smyrna, Corinth, a place or two in Palestine,and, of course, in Alexandria. In the school at the last named place he saw a human skeleton, an experience that seems to have made a great impression on him. In 159, he returned to his native city of Pergamos, and became a gladiatorial physician. Six years later he went to Rome. In Rome he met with an accident, almost upon arriving. Going to a wrestling school, or else a school for gladiators, he indulged in a wrestle, and, being heavily thrown, received a dislocation of the shoulder. The bone was set, as it seems, by one who happened to be standing near, under, of course, the instructions of the learned patient himself. Galen,in Rome, soon became the greatest physician,of the known world, although engaged in constant controversy with other members of his profession. He fought especially the sect of the Methodists. Owing to the rancor engendered by his continual professional disputes, he quitted Rome when 37 years of age, went again upon scientific travels, and, finally (as it must have appeared to him) settled in his native Pergamos. It was not quite "finally," however, for, in a very short time, he was summoned back to Rome by the Emperor,Marcus Aurelius, for the purpose of accompanying that philosopher-warrior on a military expedition into Germany. The great physician,however, very conveniently had a dream, which rendered his trip to Germany inauspicious. Later, he was appointed body physician to the Emperor Commodus.Here ends our knowledge of the external life of the great physician, Galen.American Encyclopedia of Ophthalmology,Vol.7,p.5327-5336.

Galezowski, Jean (1877-1936) French ophthalmologist, born in Paris, son of Xavier Galezowski. His father was his first teacher in ophthalmology. He was also a pupil of Morax and Lapersonne. His doctoral thesis *Le Fond de l´Oeil dans les Affections du Système Nerveux* (1904) represents an important link between Charcot's work and to-days realisations in neuro-surgery. Among his publications we have to note *Hétérochromie de l´Iris*; *Cataracte et Troubles du Sympathique*; *Atrophie Optique Tabétique et Scotome Central*. During the first World War , he organized an ophthalmic service in Le Havre(1915) where he had to help many wounded Belgium solders, then , in 1916, he became Chief Physician at the Red Cross in Deauville. After the war, he became ophthalmologist at the Clinic of the Pont-Neuf. JPW

Xavier Galezowski

Galezowski, Xavier (1832-1907) French ophthalmologist, father of Jean Galezowski. He was born at Lipowice, Poland, the nephew of a distinguished general surgeon, Severin Galezowski. He began the study of medicine at St. Petersburg, where he received his degree in 1858. He then proceeded to Paris, where, in 1865, he received the *ad eundem* degree. He studied for a time with Trousseau, and was for a brief period Chef-de-Clinique to →Desmarres. During the course of a long and active professional life he invented a number of instruments and devised many operations that still bear his name.He founded the *Recueil d'Ophtalmologie*, and was for a long time its editor. His clinic for many years attracted hundreds of students and was attended by many thousands of devoted and enthusiastic patients. He wrote a large number of articles, which appeared in his own journal as well as in the "*Archives Générales de Médecine," Gazette des Hôpitaux, Le Mouvement Médical, Union Médicale, Revue d´Hygiène,* and the *Annales d'Oculistique*. He wrote several ophthalmic treatises among which the most important are: *Observations cliniques sur les maladies des yeux* Paris 1862 ; *Recherches ophthalmoscopiques sur les maladies de la rétine et du nerf optique*. Paris 1863; *Etude Ophthalmoscopique sur les Altérations du Nerf Optique et sur les Maladies Cérébrales,* Paris 1866; *Du Diagnostic des Maladies des Yeux par la Chromatoscopie Rétinienne,*Paris 1868; *Traité des Maladies des Yeux.* (2 vols.) Paris 1870-1872; *Traité Iconographique d´Ophthalmoscopie comprenant la Description des différents Ophthalmoscopes.* Paris 1876. *Échelles optométriques et chromatiques pour mesurer l'acuité de la vision* Paris 1883. He wrote with A.Kopff:

Hygiène de la vue Paris 1888 and *Échelles portatives des caractères et des couleurs pour mesurer l'acuité visuelle* 2d. ed. Paris 1890 and with V. Daguenet: *Diagnostic et traitement des affections oculaires*. Paris 1886. He also authored *Lecons Cliniques d´Ophtalmologie* Paris 1902 and *Le Fond de l´Oeil dans les Affections du Systeme Nerveux*, Paris 1904. He had a son , Jean G. who also became ophthalmologist. The Ophthalmoscope, London 1907,p.288. Albert.American Encyclopedia of Ophthalmology, Vol.7, p.5336. JPW

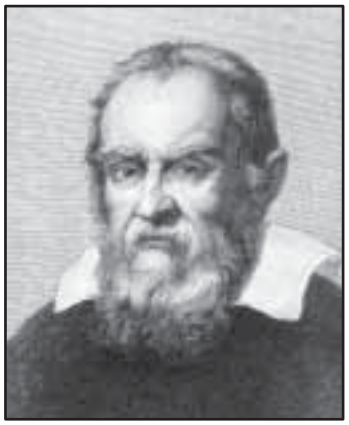

ÉTUDE OPHTALMOSCOPIQUE

ALTÉRATIONS DU NERF OPTIQUE

MALADIES CÉRÉBRALES

X. GALEZOWSKI,

PARIS

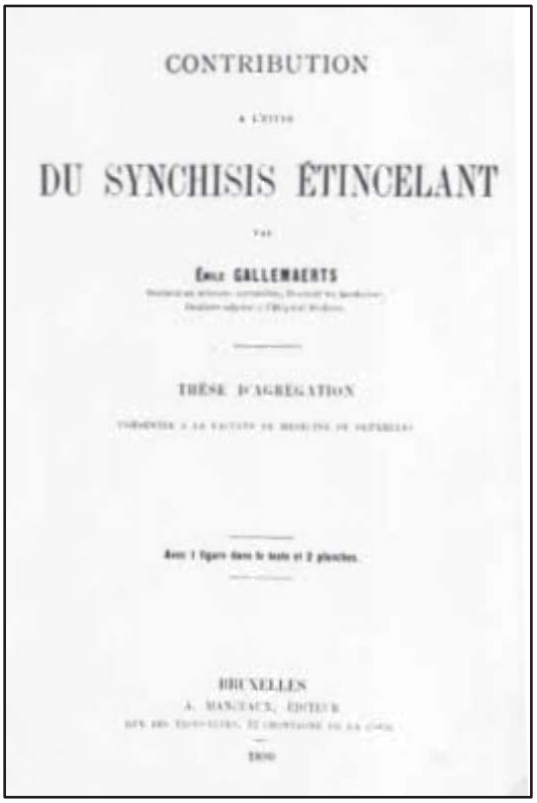

Galilei

Galilei (1564-1642) one of the fathers of experimental science, was born at Pisa, Italy. Entering the University of Pisa in 1581, he was two years later struck with the fact that the oscillations of a pendulum, no matter what their range, seemed to be accomplished in equal times. About this time he invented a hydrostatic balance and wrote a treatise on the specific gravity of solid bodies. These achievements secured him the appointment of professor of mathematics in the University of Pisa, where he propounded the novel theorem, that all falling bodies, great or small,descend at equal velocity, and proved its correctness by several experiments made from the summit of the leaning tower of Pisa. This provoked the enmity of the Aristotelians, and Galileo resigned his chair at Pisa and retired to Florence in 1591. In the following year he was nominated to the chair of mathematics in the University of Padua, where his lectures attracted crowds of pupils from all parts of Europe. Here he taught and worked for eighteen years, from 1592 to 1610. Galileo now began a series of astronomical investigations, all of which tended to convince him still more of the correctness of the Copernican heliocentric theory of the heavens. He concluded that the moon, instead of being a self-luminous and perfectly smooth sphere, owed her illumination to reflection, and that she presented an unequal surface, diversified by valleys and mountains. The milky-way,he pronounced a track of countless separate stars. Still more important, however, was the series of observations which led to the discovery of the four satellites of Jupiter on the night of January 7,1610. He also first noticed movable spots on the disc of the sun, from which he inferred the rotation of that orb. In this year he was recalled to Florence by the Grand Duke of Tuscany, who nominated him his philosopher and mathematician extraordinary. At Florence, continuing his astronomical observations, he discovered the triple form of Saturn and the phases of Venus and of Mars. In 1611 Galileo visited Rome and was received with great distinction, being enrolled a member of the Lincei Academy. Yet the publication, two years later, of his Dissertation, on the Solar Spots, in which he openly and boldly professed his adhesion to the Copernican view, provoked against him the censure and warning of the ecclesiastical authorities. Galileo, however, promised (Feb. 26, 1616) to obey Pope Paul V´s injunction, thenceforward not to "hold, teach or defend" the condemned doctrines. But in 1632, ignoring his pledge, he published the "*Dialogo sopra i due massimi Sistemi del Mondo*".Pope Urban VIII was led to believe that Galileo had satirized him in this work. In spite of his seventy years and heavy infirmities, Galileo was summoned before the Inquisition, and after a wearisome trial and incarceration, was condemned to abjure by oath on his knees the truths of his scientific creed. Since the year 1761 a legend has been current to the effect that on concluding his recantation he exclaimed, sotto voce "Epur si muove" (Nevertheless it does move). In his retreat at Arcetri, near Florence, he continued with unflagging ardor his learned researches even when hearing grew enfeebled and sight was extinguished. Just before he became totally

blind, in 1637, he made yet another astronomical discovery, that of the moon's monthly and annual librations.American Encyclopedia of Ophthalmology,Vol.7,p.5337. DSB 2, 237-249

Emile Gallemaerts

Gallemaerts, Emile (1860-1935) Belgian ophthalmologist. Gallemaerts obtained at the Brussels University a Ph.D. in 1883 and his M.D. in 1886. He specialized in ophthalmology under Jean-Baptiste Coppez. In 1890 he obtained the special doctorate with a thesis on *synchisis scintillans* and was attached at the Department of histology (until 1905). From 1890 he practiced ophthalmology in a non-universitary clinic, but in 1905 he succeeded to Coppez as head of the University department of ophthalmology. He did clinical work in the morning and laboratory work afternoon. He reached the age limit 1925. His scientifical output can be subdivided in fundamental histopathological work and in clinical work. In the first category we find papers about anatomical matters as the *sphenoidal cleft* (1897), the *accessory ophthalmic ganglions* (1899), on *Tenon's capsule* (1899), the *structure of the chiasma* (1900) and even the visual centers after removal of one eye. He wrote histological reports on *xanthelasma*, *intraocular chloroma*, *congenital anophthalmia* and *intraocular cysticercosis*. His clinical work covers all parts of ophthalmology (including carbon disulfide intoxication in 1890 and treatment of corneal ulcer by abrasion and iodine cauterisation in 1894), but the most important subjects are the detection of magnetic intra-ocular bodies with a magnetometer designed by Léon Gérard (1890) and the introduction in Western Europe of ocular slitlamp biomicroscopy (with an extensive report for the French Ophthalmological Society in 1925). He wrote (with Kleefeld) *Etude Microscopique de l´Oeil vivant* (Paris 1920).He tried intracapsular cataract extraction. He was a member of the Belgian Academy of Medicine and its president in 1925. At the beginning of his carrier he has been secretary of the Belgian Society of Microscopy (1886-1890) and of the Royal Society of Natural and Medical Sciences (1890-1904). He was a founder member - in fact the real founder - of the *Belgian Ophthalmological Society* in 1896. (Verriest) JPW



CONTRIBUTION

DU SYNCHISIS ÉTINCELANT

EMILE GALLEMAERTS

THÈSE D'AGRÉGATION

BRUXELLES

Gallemaerts professoral thesis

Gallereux, Ambroise Martin (c.1780-?) French ophthalmologist, born at Chichée, France. He received his medical degree at Paris, and settled at Tonnerre, where he seems to have lived until his death. His exact life dates are not procurable. He wrote: 1. *Mém. sur les Soins A Donner aux Personnes qui ont été 0pérées de la Cataracte* (Paris, 1816) ; 2.*Avis au Peuple sur la Cataracte*(Paris, 1826);3.*Observations Rélatives A Deux Modes d'Altération du Nerf Optique, etc.* (in Sédillot's Rec.Périod.de la Soc.de Méd. de Paris);4. *Sur l´Application Topique des Dissolutions d'Opium dans les Ophthalmies*.American Encyclopedia of Ophthalmology,Vol.7,p.5339.

Galvani, Luigi (1737-98) Italian anatomist born at Bologna, where he studied theology and, subsequently, medicine at the University there and in 1762 was elected professor of anatomy. Galvani owes the wide celebrity attached to his name to his discoveries in animal electricity; and there is evidence that his views were based on experiments patiently conducted for many years before the publication of his *De viribus Electricitatis in Motu Musculari Commentarius*(1791)[GM 593]. He died in Bologna, where his statue was erected in 1879. Most of his writings were published in a quarto edition in 1841-42 by the

Academy of Sciences of his native city; but several manuscript treatises by him were discovered there in April, 1889.American Encyclopedia of Ophthalmology,Vol.7,p.5341.

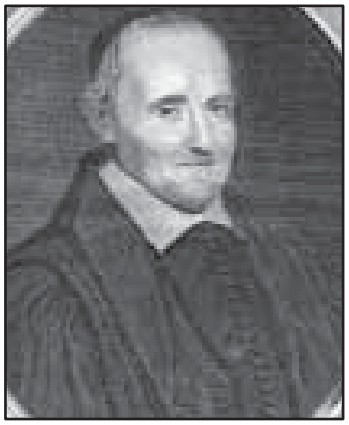
Gardner, Mark Clayson (? – 1949) Australian ophthalmologist. Having graduated M.B. at Melbourne in 1908, he subsequently became M.D., and also acquired the D.O., as well as the Fellowship of the Australasian College of Surgeons. He served in the 1912 Balkan war, during which he was working for many months with Sir Max Page, D.S.O., a distinguished surgeon of St. Thomas's Hospital. From 1914 to 1919 Mark Gardner performed varied and valuable tasks with the R.A.M.C., and he received the Military Cross in 1917. Then in 1919 he became House Surgeon at Moorfields Eye Hospital, as the immediate junior of William Simpson, who practised in Wellington, New Zealand. After returning to his home city, Mark rapidly gained a prominent position in ophthalmology. He was elected to the staff of the Victorian Eye and Ear Hospital, the Children's Hospital, and other institutions. In 1935 he presided over the Victorian Medico-Legal Society, which he had himself founded four years previously. He also became a member of the Council of Trinity College, Melbourne, and was chosen Honorary Treasurer of the Melbourne Medical Association. Throughout the second world war he did excellent work as Consultant Ophthalmologist at the Heidelberg Military Hospital, Victoria. BJO 1950,34:127

Garengot, R.J. Croissant de (1688-1759) French general surgeon of Paris, who wrote a "*Traité des Opérations de Chirurgie*" (1731)[GM3577] and a "*Treatise on Instruments*" (1723), both of which were much read for many years.He was one of the first to extract a cataract, having performed this operation soon after its invention by →Daviel. His writings, however, possess almost no ophthalmologic importance.American Encyclopedia of Ophthalmology, Vol.7,p.5344

Garrow, Alexander (1876-1966) Scottish ophthalmologist. Garrow worked at his profession for 67 years for he graduated at Glasgow University in 1898 at the age of almost 22 and he saw his last patient a few weeks before he died. As a very young graduate he went off to the South African War with a medical unit led by the late Colonel Donald MacIntosh, Medical Superintendent of the Western Infirmary. He so liked the country that he returned there later with his wife and practised in Steyperville, Eastern Province. His two sons were born in South Africa. When the Great War of 1914 broke out, Dr. Garrow made efforts to come home to Scotland to join up, but, finding this impossible joined the South African Medical Corps and served in South Africa. Soon after the Armistice he came home to Glasgow and here he spent the rest of his life. His main hospital was the Ophthalmic Institution, but he was also ophthalmologist to the Royal Hospital for Sick Children and the Ear, Nose and Throat Hospital.Brit.J.Ophthal.1966,50:503-504

Gärtner, Jürgen (1921-) German ophthalmologist.University lecturer Heidelberg 1962, professor in Mainz 1969.He wrote: *Periphere Zystoide Degeneration der menschlichen Netzhaut*, 1974 , contribution in *Organpathologie*,vol.III: (The Eye) 1974.More than 100 articles in ophthalmic journals. Kürschners Gelehrten- Kalender 1966,p.632 & 1987,p.1213. F. Hollwich Ophthalmologenverzeichniss 1964,121.

Gass, J. Donald M. (1928-) American ophthalmologist. Donald Gass' contributions to ophthalmology have been vast. He received his medical degree from Vanderbilt University and completed residencies in ophthalmology at the Wilmer Eye Institute, Johns Hopkins Hospital. Much of his work was done in Miami, where Gass combined his interest in pathology with new techniques for viewing the retina, which is located at the back of the eye. He is well known for his research on diseases that affect different parts of the eye, such as the retina, macula and uvea. Gass continues to practice and is professor of ophthalmology at both the University of Miami School of Medicine and Vanderbilt University in Nashville.



Pierre Gassendi

Gassendi, Pierre (1592-1655) French philosopher and scientist. He was one of the first, but not the very first, to declare the true location of cataract. Concerning this matter, he says, in his "*System of Physic*" (8,II,p.371)"*To show that the visual power does not go out from the lens requires no other proof, since that distinguished Parisian surgeon has shown that an animal can see without a lens. He has found, that is to say, that a cataract does not consist of a little membrane between the lens and the uvea, which is torn with the*

needle and sunken into the deeps of the eye; but that the crystalline body itself, which is shriveled up, is, torn from the ciliary processes and sunken into the depths." The very first to teach the true doctrine of the nature and location of cataract was →Quarré(1643-1650?); the first to confirm that doctrine by actual dissection was →Rolfinck, in 1656.American Encyclopedia of Ophthalmology,Vol.7,p.5345-5346. DSB 5, 284-290

Gasteiger, Hugo (1899- ?) Austrian ophthalmologist.MD 1923 Innsbruck, university lecturer Innsbruck 1929 and Frankfurt 1935, professor (without chair) 1936, director Dresdner City Eye Clinic 38. Professor and chair Humboldt University Berlin 1951, Freie Universität Berlin 1957. Specialities: Allergy of the eyes and operative problems.More than 125 articles in different ophthalmic journals. Co-editor of Klinische Monatsblätter f.Augenheilkunde since 1955.Kürschners Gelehrten- Kalender 1966, p.642; F. Hollwich Ophthalmologenverzeichniss 1964, p.123.

Gataker, Thomas (1715?-1769) English surgeon, of some importance in ophthalmology. The place and date (about 1715) of his birth are not definitely known. He practised in London, was surgeon to St. George's Hospital and to the King of England. Gataker wrote, in addition to works of a general character, "*An Account of the Structure of the Eye; with, Occasional Remarks on Some Disorders of that Organ*" (London, 1761).American Encyclopedia of Ophthalmology,Vol.7,p.5346.Albert

Carl Friedrich Gauss painted by Christian A. Jensen (1792-1870)

Gauss, Carl Friedrich (1777-1855) German mathematician born Brunswick in Germany. Gauss was educated at the Brunswick Collegium Carolinum (1792-1795) and the University of Göttingen (1795-1798). At the age of twenty-four he became famous in scientific circles on the publication of his Disquisitiones arithmeticae, a landmark work in number theory, and his calculation of the orbit of the newly discovered planet Ceres. He was director of the observatory at Göttingen from 1807 until his death. With his numerous contributions to pure and applied mathematics, Carl Friedrich Gauss was a true pioneer. From the many unpublished works left in his estate it is clear that he was also well ahead of his time. Some of his most important works are on the number theory, infinite series, numerical mathematics and algebra. His new methods of calculation formed the basis of the precise determination of planetary orbits. Together with the physicist Wilhelm E. Weber, he developed a theory of geomagnetism. His work in the field of optics set pioneering new trends. Today, his calculations in physics, astronomy and the geosciences, in statistical investigations and in the software algorithms of modern computer technology are still of paramount importance. In 1821 he invented the heliotrope, a device for measuring distances by means of reflected sunlight. Among his numerous writings, he authored: *Dioptrische Untersuchungen*. Göttingen 1841; *Werke* Leipzig 1863-1933. Albert.DSB 2, 298-315.JPW

Gavarrett, Jules (?-1890) French physicist and physician, of some importance in ophthalmology. The date and place of his birth are unknown. He became a physician at Paris in 1843, and was Inspector General for Medicine, and Professor of Medical Physics in the same city. Among his writings the following are of interest to ophthalmologists: 1) *Des Images par Réflexion et par Réfraction* (Revue des Cours Scientif., 1866.) 2. *De l´Astigmatisme* (in collaboration with →Javal, Paris, 1867).American Encyclopedia of Ophthalmology,Vol.7,p.5346-5347.

Gayet, Charles Alphonse (1832-1904) French ophthalmologist.He occupied the chair of ophthalmology at Lyons from its foundation in 1872 until his death. He wrote no books (here the American Encyclopedia was wrong: Gayet wrote *Elements d´Ophtalmologie*, Paris 1893), but contributed many articles to the *Archives d'Ophtalmologie*, invented a corneal microscope and devised a number of operative measures that bear his name. He was a member of the Académie de Médecine, Officier de la Légion d'Honneur. American Encyclopedia of Ophthalmology,Vol.7,p.5347. JPW

Gazépy, Georges (also Gazépis) (1860-1929) Greek ophthalmologist born in Chalcis, Greece, who received his medical education in Athens and in Paris, where he worked under Photinos→Panas. In 1899 he became professor of ophthalmology and director of the eye clinic at the University of Athens. He devised a new method for canthoplasty and published reading tests in Greek, Arabian,Turkish, Serb, Roumanian, Bulgarian, Armenian,Russian, Italian and French: *Echelle opsiométrique en dix langues*

Geach, Francis (1724-1798) English surgeon of some importance in ophthalmology. He became physician-in-chief to the Plymouth Hospital, and Fellow of the Royal Society. Among his writings the following is of ophthalmologic interest: "*Medical and Chirurgical Observations on Inflammatiom of the Eyes*," etc. (London, 1766-68).American Encyclopedia of Ophthalmology,Vol.7,p.5347.

Gendron, Louis Florent Deshais *see* **DESHAIS-GENDRON, Louis Florentin**.

Gensoul, Joseph (1797-?) French surgeon,inventor of cauterization of the cornea. Born at Lyons, he studied at Lyons and Paris, at the latter institution receiving his degree in 1824. Returning to Lyons he became a famous surgeon. According to E.J.Gurlt(1827-1899) he was a brilliant operator and inventor, having improved the technique of rhinoplasty, cleft-palate, catheterization of the nasal canal,cauterization of varices, etc. Two of his most important writings are the following. 1. *Lettre Chirurgicale sur quelques Maladies Graves du Sinus Maxillaires et de I'Os Maxillaire Inférieur* (with folio atlas; Lyons, 1833..) 2. *Sur le Mecanisme de la Vision* (Paris, 1851).American Encyclopedia of Ophthalmology,Vol.7,p.5357

Genth, Carl (1844-1904) German physician, who, in conjunction with →Pagenstecher, wrote the "*Atlas der Pathologischen Anatomie des Augapfels.*" The text of this book was translated into English in 1875 by Sir William →Gowers. American Encyclopedia of Ophthalmology,Vol.7,p.5357.

Gepner, Boleslaw (1837-1913) Polish ophthalmologist from Warsaw. Pupil of A.v.→Graefe and translator into Polish of F.C. →Donders famous "*On the Anomalies of Accommodation and Refraction of the Eye*" London 1864. The Ophthalmoscope, London 1913, p.382.

Gerardus Cremonensis (1114-1180 A. D.) An esteemed translator into Latin of-Avicenna's "*Canon,*" as well as of numerous other Arabian writings; also of the works of Galen and Hippocrates. He invented the word *orbita*, whence, of course, has been derived the English "*orbit.*" It should be recalled, in this connection, that Latin- medical terms were first employed, at least to an great extent, in the medieval Latin versions of Arabian medical authors. The Arabs themselves, as well as the Romans before them, resorted to the ancient Greek for medical technicalities.American Encyclopedia of Ophthalmology,Vol.7,p.5368

Gerdy, Pierre Nicolas (1797-1856) French surgeon, inventor of lachrymal rhinotomy. Born at Loches, the son of a peasant, he studied at Paris under great difficulties.In 1825, however, he was appointed hospital surgeon, in 1833 professor of external pathology, and, in 1837, of clinical surgery.He wrote on numerous subjects: anatomy, physiology, ophthalmology, philosophy, painting and sculpture.His ophthalmologic writings are as follows:l.*Expériences sur la Vision* (1840).2.*Recherches sur I'Unité de la Perception Visuelle* (1840).3.*Historique sur les Travaux sur la Vision* (Bulletin de l´Acad. de Méd., 1840). 4. *Remarques sur la Vision des Somnambules*.1841;(German trans., Quedlinburg, 1842). 5.*Sur la Formation d´un Canal Artificiel dans les Cas d'Obliteration du Canal Nasal* (Jour.des Connais. Méd.-Chir.1848).American Encyclopedia of Ophthalmology,Vol.7,p.5368-5369.

Gerold, Jacob Hugo (1814-1898) German ophthalmologist. The surname is also written "*Gerson*". A well-known ophthalmologist of Aken-on-the-Elbe. He was born at Aken and twenty-one years thereafter received his professional degree at Berlin. For fourteen years he practised in Agen, then removed to Delitsch, in order to accept an appointment as County Physician. Three years later, however, he returned to Aken, where he continued to reside and to practise until his death.Among his more important writings are the following: 1. *De Chymificatione artificiosa* (Graduation thesis, 1835). 2.*Über Periphakitis* (Casper's Wochenschrift, 1845).3. *Die Lehre vom Schwarzen Staar und dessen Heilung* (Magdeburg, 1846).4.*Be- oder Empfohlener Studien-plan für Mediciner* (Magdeburg, 1846).5. *Grundlinien zu einem Lichtmesser behufs der Nachbehandlung des Grauen Staares*,etc.(Magdeburg, 1848).6. *Die Nervöse Augenschwäche und ihre Behandlung* (Halle 1860).7. *Ophthalmologische Studien. Der Lichtmesser für Augenkrankenzimmer*,etc. (Quedlinburg, 1862). 8.*Ophthalmologisch-klinische Studien.Neue Folge. Zur*

Therapeutischen Würdigung Farbiger Diopter (Giessen, 1867). 9. *Die Ophthalmologische Physik und ihre Anwendung auf der Praxis* (Vienna 1869-1870). American Encyclopedia of Ophthalmology,Vol.7,p.5369-5370.Albert.

Gerson, Georg Hartog (1788-1843) German surgeon of some importance in ophthalmology. Born at Hamburg, son of the famous obstetrician, Joseph Gerson, and brother of two physicians, he studied medicine at Berlin and Göttingen, at the latter institution receiving the medical degree in 1810. His dissertation on this occasion was entitled "*De Forma Corneae Oculi Humani deque Singularis Visus Phenomeno*," one of the earliest accounts of astigmatism.(See Thomas→Young, in this work.) For a time he served as surgeon in the German army, and was present at Waterloo. In 1816 he settled in Hamburg, and was soon a successful practitioner.He founded in 1819 the "*Hamburg'sches Magazin für die Ausländische Literatur der Gesammten Heilkunde*," on which he was a collaborator till 1835. In 1833 he was made Professor of Anatomy at the newly constituted Anatomico-Surgical College in Hamburg. After the death of his wife he suffered severely from angina pectoris, and, Dec. 3, 1843, died suddenly of this disease, immediately after he had finished the performance of an enterotomy.American Encyclopedia of Ophthalmology,Vol.7,p.5370.

Gerson, Jacob Hugo see **Gerold**.

Gescheidt, Anton. German ophthalmologist. He received his medical degree at Leipzig in 1831, presenting as thesis "*De Colobomate Iridis*." His most important writings are: 1. *Die Entozoen des Auges. Eine Naturhistorisch-ophthalmo-nosologische Skizze* (von Ammon's Zeitschrift für Ophthalmologie, 1833). 2. *Die Irideremie, das, Iridoschisma und die Corectopie, die drei Wesentlichen Bildungsfehler der Iris* (von Graefe und von Walther's Journ.1835).3.*Beiträge zur Pathologie und Therapie der Epidemischen Cholera* (Dresden, 1842).American Encyclopedia of Ophthalmology,Vol.7,p.5370-5371.

Gettes, Bernard C. (1912-1973) American ophthalmologist. He obtained his B.S. in 1932 and his M.D. in 1936 from Temple University. He interned at Saint Joseph's Hospital, Philadelphia, and received graduate ophthalmic training at the Massachusetts Eye and Ear Infirmary. He served his ophthalmic residency at the Boston City Hospital, 1938-1940. He served during World War II as Lieutenant in the United States Navy. He was chief ophthalmologist at various times at Saint Joseph's Hospital, the Stetson Hospital and Philadelphia General Hospital. He served as chief of refraction of Wills Eye Hospital from 1946 through 1955, he started in 1940 as a clinical assistant and became attending surgeon in 1967 and president of the medical staff in 1971.Gettes was nationally recognized for his textbook on refraction (1957 and 1965) and for the volume on refraction he edited for The International Ophthalmologic Clinics in 1965. AJO 1973,76:401

Gibril al-Kahhal (9th Century AD). Oculist to the Caliph, Al-Mamun. The following story concerning Gibril is from Usaibia, as repeated by J.→Hirschberg:" Jusuf b. Ibrahim said: Mamun found the hand of the oculist Gibril especially light; never had anyone observed a gentler hand for the eye. He prepared instruments for rubbing up and rubbing in the collyria and collyrium grinders and presented them to the Caliph. Gibril was the first who came to him after he had said the early prayer and washed his lids and anointed his eyes. This he did again as soon as Mamun had finished his midday sleep. For this he received 1000 drachma monthly. Later he fell into disfavor. I asked him on what ground. Then he related to me that the chamberlain Husain had become sick and that Jasir his brother, could not visit him, because of being occupied with his own duties about Mamun´s door. Directly Gibril stepped out. Then Jasir asked me concerning the condition of Mamun; I answered that the Caliph slept. Then Jasir seized upon the opportunity and visited his brother. But, before his return, Mamun was awake, and asked for the ground of his absence. Then said Jasir, it was told to me that the Ruler of the Faithful was sleeping. Who told thee that? "Gibril." Then Mamun sent for me and said: 0 Gibril! Have I appointed thee to be mine oculist or to be the publisher of news concerning me? Then I reminded him of my services.He, however, said: Verily, he has services. Therefore I shall continue for him his monthly stipend,limited to 150 dirhem. But to the court he will no more be admitted. And no more did Gibril serve Mamun until his death.American Encyclopedia of Ophthalmology,Vol.7,p.5377-5378.

Gibril b. Ubaid-Allah (AD 920-1006) A little known physician of Schiraz and Bagdad, body physician to the Sultan, Professor of Therapeutics and Natural Sciences, in the New Bagdad Hospital, and author of numerous works on general medicine. His only ophthalmic writing was "*A Circular Letter concerning the Nerves of the Eye*".American Encyclopedia of Ophthalmology,Vol.7,p.5378.

Gibson, Benjamin (1774-1812) English ophthalmologist born in Newcastleupon-Tyne, who studied medicine in London and in Edinburgh. From 1799 he practiced in Manchester as surgeon, ophthalmologist, and lecturer on anatomy. He wrote: *Practical observations on the formation of an artificial pupil* London 1811.Albert

Gibson, John Lockhart (1860-1944) Australian ophthalmologist, born at Ipswich, Queensland, Australia. His education was at the Ipswich Grammar School and his medical training was from Edinburgh, Scotland. He had a brilliant academic career in Edinburgh and deputised for Professor Rutherford in giving the lectures in physiology when the latter was taken ill. He put in post-graduate classes in London, Berlin and Vienna before returning home. He was offered a post as physiologist in one of the London medical schools, but preferred to return to the land of his birth. He began in general practice in Brisbane. He was on the staff of the hospital for sick children but a breakdown in health put him but of service for a year and a half and he decided to give up general practice and confined himself to ophthalmology. Here he at once made his mark and his work with Dr. Jefferis Turner on ocular plumbism was of the greatest importance. In 1915 he was in charge of the ophthalmological department at Mudros and to the end of his life was active in the interests of repatriated soldiers. For many years also he was a member of the Australasian Medical Publishing Co. He was the author of numerous papers on ophthalmology as well as some earlier ones in anatomy and physiology. He wrote on ocular plumbism in children in the Brit J.Ophthal in 1931. Gibson died while president of the Ophthalmological Society of Australia. BJO 1945,39:219-220.

Gibson, John Mason (?-?) American surgeon and early ophthalmologist. His life-dates are unknown.He became a member of the "Faculty" of Maryland in 1825, and published, in 1832, a book entitled "*Condensation of Matter upon the Anatomy, Surgical Operations and Treatment of Diseases of the Eye*" Baltimore 1832. This was declared by the author himself to be only a compilation. It was, however, written in a dry and obscure style, which rendered almost valueless its ill-selected and ill-assorted matter. It was, however, the second American work on ophthalmology, and therefore deserves to be mentioned.American Encyclopedia of Ophthalmology,Vol.7,p.5378. Albert

Gibson, William (1788-1868) American surgeon. He was not only the *first* in history to tie the common iliac artery in the living human subject,but he is also of special interest in ophthalmology, both because of his ability as an operator on the eye and also because of the claim which has frequently been made for him that he was the first to perform an operation for strabismus. Born in Baltimore, he received the degree of A.B. at Princeton College in 1806. Deciding to study medicine, he read for a time with Dr. John Owen, of Baltimore, and in 1806 attended certain lectures at the University of Pennsylvania. For the next three years he studied in Edinburgh, where he received the medical degree in 1809. Proceeding to London, he studied with Astley Cooper, who was very fond of him. Entering the English army in 1808, he participated in some of the hardest fighting of the Peninsular War, being present, in fact, at the battle of La Coruna, where his friend, Sir John Moore, was killed. He was present at the Battle of Waterloo, in which he was slightly wounded. In 1810 he sailed for America. Settling in his old home, Baltimore, he assisted, in 1811, in founding the Medical Department of the University of Maryland. He himself was professor of surgery in the new school, though only twenty-three years of age. The following year he tied the common iliac artery- the greatest achievement of his life. He resigned his chair at the Baltimore School in 1819, and shortly afterward moved to Philadelphia, where, after the retirement of Philip Syng Physick, he was appointed to the chair of surgery in the University of Pennsylvania. Here for nearly thirty years he taught and practised with great success. In 1855 he retired from his teaching position. Gibson is often declared to have preceded even Dieffenbach in the performance of the cross-eye operation. Thus,→Hubbell, in his *Ophthalmology in America*., p. 58, says: "*He was the first surgeon to perform the operation for convergent strabismus, which was afterward*

made so popular by Dieffenbach. Unfortunately, he did not record his operation in time to receive due credit for priority." Still further, in the same work, i. e., at p. 110, Hubbell continues:"*In times past, as well as today, there have been many evidences of great surgical originality and insight on the part of Americans. In some instances they have been shown by suggestions, in others by demonstrating important procedures and devices. When Dieffenbach's operation, for example, had been made public, it was found that the same operation had long before been suggested and even performed in this country. The great misfortune was that the genius of our American surgeons had not always been put more fully into light and recorded*".American Encyclopedia of Ophthalmology,Vol.7,p.5378-5384.

Gierl, Matthias (?-?) German surgeon and ophthalmologist, whose life-dates are unknown. He received, however, his medical degree at Landshut in 1817, and afterwards practised at Augsburg and Lindau. He wrote "*Das Hypopion oder Eiterauge und seine Behandlung*" (Augsburg, 1825; Ital. transl. by Schönberg at Naples, 1826) and "*Über die Resorption der Cataractösen Linse in der Vorderen Augenkammer*" (Bayerische Annalen,vol.1).American Encyclopedia of Ophthalmology,Vol.7,p.5384.

Gifford, Sanford Robinson (1892-1944) American ophthalmologist, son of Harald Gifford, also an well known ophthalmologist. He served as first-lieutenant in the first World War and then returned to Omaha where he joined his father in practice. In 1929 he became Professor and Chairman of the Department of Ophthalmology at Northwestern University Medical School. Gifford was a prolific writer and was associate editor of the *Archives of Ophthalmology*. He wrote "*Handbook of Ocular Therapeutics*" which became an authorative treatise on the treatment of eye diseases, and *Textbook of Ophthalmology*, 1938, 6th ed. 1957 One of his principal interests was the role of fungi and higher bacteria in the production of eye disease. He elucidated with J.M.Patton the probable cause of agricultural conjunctivitis. The following are examples of the papers he published: *Biochemistry of the lens.* (with Drs. J. E. Lebensohn and I. S. Puntenney) : Arch. of Ophthal, 1932, 8:414 and Am. J. Ophthal 1933:16,1050; *Visual sensation produced by roentgen and radium rays.* (with E.E. Barth): Arch. of .Ophthal 1934, 11:81. 554; *Reaction of buffer solutions and of ophthalmic drugs*. Arch of Ophthal, 1935,13:78; *Filtration experiments with the virus of inclusion blennorrhea*. (with E. B. Tilden): Arch of Ophthal, 1936,16:51; *Tendon transplantation for paralysis of the external rectus muscle* Arch of Ophthal, 1940, 24; *Central angiospastic retinopathy*. Arch of Ophthal, 1939,21. BJO 1944; 28:315-316. JPW

Gillet de Grandmont, Pierre Anatole (1834-1894) French ophthalmologist. Born in Paris, he received his professional degree at the university of that city in 1864. He was ophthalmologist to the Educational Institute of the Legion of Honor, and General Secretary of the Society of Practical Physicians. His most important writings are as follows: 1. *Cure Radicale des Tumeurs et Fistules Lacrymales* (Paris, 1860). 2. *De l´Examen Ophthalmoscopique pour le Diagnostic des Tumeurs de l´Encéphale* (Paris 1861). 3. *Pilocarpine dans les Affections Oculaires* (Paris, 1878).4. *Détermination de la Sensibilité de la Rétine aux Impressions Lamineuses Coloriées* (Paris, 1881).5.*Des Courants Electriques Continus Appliqués au Voisinage de l´Oeil* (Paris, 1883). 6. *Deux Formes Nouvelles de Kératite* (Paris, 1888). 7. *Perioptométrie et Chromotopsie* (Paris, 1888). American Encyclopedia of Ophthalmology,Vol.7,p.5384

Gillot, Joseph François de Paule (1792-1868) French military surgeon, of some slight ophthalmologic importance because of his " *Sur les Aveugles et les Sourds-muets de la Ville de Metz*. ". Born at Robécourt, he became a military surgeon in 1809, was engaged in military service for several years, and received his medical degree in 1817. He practiced successively at Medonville, Neufchâteau and Metz. American Encyclopedia of Ophthalmology,Vol.7,p.5384

Gilmore, Arnold Plummer (1851-1906) American ophthalmologist of Chicago, Illinois, during the period 1880 till 1905. He was a native of Pennsylvania, born near Philadelphia. He attended preparatory school at an institution near Pittsburgh and went,thence to Trinity College ,Hartford, Conn. While in his junior year,. during a vacation, he was accidentally shot when hunting and lay for many months in slow recovery. During that trying period he decided to adopt the profession he later followed and honored. He matriculated at

Jefferson Medical College, and after graduation there practiced for a short time in Philadelphia, but feeling the need of a wider knowledge, went to Germany and studied for two years. He came to Chicago in the early eighties and soon took a prominent place in the professional and social life of that city. American Encyclopedia of Ophthalmology,Vol.7,p.5384

Gimbernat, Don Antonio (1734-?) Spanish surgeon, who discovered the so-called "*Gimbernat's ligament*" (which forms the inner boundary of the upper opening of the crural canal), who invented the treatment of aneurysm by graduated compression, and who was little interested in ophthalmology. Born at Gambrils, Tarragona, Spain, he studied at Cadiz, became professor of surgery at Barcelona, and finally removed to Madrid. Here he became body-surgeon to the King, Charles III. In 1787 he founded the College of Surgeons at San Carlos, and was for many years its director. His most important writing is "*Nuevo Metodo de Operar en la Hernia Crural*" (Madrid, 1793)[GM 3579]. In this work it was that he *first* described the ligament with which his name is still associated. According to →Hirschberg, he read at Paris in 1800 a paper on corneal ulcers. These affections he divided into two kinds: A superficial, which is secretory, and a deep, which is foul. The former he treated chiefly with an aluni wash; the latter, with a solution of potassium carbonate. According to the same authority, Gimbernat, when 78 years of age, was successfully operated on for double-sided cataract by Don José Rives, of the College of San Carlos; but, the very night that followed the operation, the impatient patient, removing his bandages, put his eyes to first one test and then another, with the result that one of the eyes was blinded completely and the other to a great extent. American Encyclopedia of Ophthalmology,Vol.7, p.5386

Gimblett, Charles Leonard (1890-1957) British ophthalmologist. Gimblett was born the only son of Robert Wheddon Gimblett of Somerset, and was educated at Clifton College and at Gonville and Caius College, Cambridge, where he took the Natural Sciences Tripos. He obtained his clinical training at St. Thomas's Hospital, qualifying in 1914. He graduated M.B., B.Ch., the following year and entered the Royal Navy, where he subsequently had charge of the eye departments of the Royal Naval Hospitals at Portland and Chatham. He graduated M.D. in 1918, and became M.R.C.P. in 1919, and F.R.C.S. in 1922. He returned to St. Thomas's Hospital when the war ended and held an impressive series of house appointments including senior house surgeon in the Eye Department, where he came under the influence of Fisher and Hudson. He was appointed honorary ophthalmic surgeon to the Royal Northern Hospital and honorary assistant surgeon at the Royal Westminster Ophthalmic Hospital in 1923; 5 years later he was appointed full surgeon at the latter and gave up his appointment at the Royal Northern. He became senior surgeon at the Royal Westminster Ophthalmic Hospital in 1947 just before the amalgamation with Moorfields and the Central London Hospital. He was also elected Vice-President of the Ophthalmic Section of the Royal Society of Medicine. In his earlier years he worked as chief clinical assistant at Moorfields where he came in contact with Claud→Worth, whose teaching on squint impressed him deeply and led to a permanent interest in orthoptics and the treatment of squint. The outcome was the establishment of the Orthoptic Department at the Royal Westminster Ophthalmic Hospital in 1930 with Miss Maddox as orthoptist and himself as surgeon-in-charge. A training school for orthoptists was started and Gimblett realized the necessity of placing the training on a sound footing. He was instrumental in obtaining recognition for orthoptists as Medical Auxiliaries, and became the first chairman of the British Orthoptic Board, which was formed in 1934 to control the standard of training, hold examinations, and grant diplomas. BJO 1957,41:257

Gimelle, Pierre Louis (1790-1865) French military surgeon, who devoted considerable attention to diseases of the eye. Born at Saint Bonnet Alvert (Corrèze), he became a military surgeon in 1808, was engaged in military service for several years, was present at the battle of Waterloo, received the Doctor's degree at Paris in 1818. His only ophthalmologic writing was "*Notice sur la Nature et la Traitement de l´Iritis.*" American Encyclopedia of Ophthalmology,Vol.7,p.5386

Gioppi, Giannantonio (?-1872) Italian ophthalmologist, the date of whose birth is not known, but who practised at Padua. Gioppi's writings are: 1. *Storia di un Amaurosi*

(Padua, 1853). 2. *Resoconto ed Osservazioni Pratiche Raccolte nella Clinica Oculistica, dell' I.R. Università di Padova* (Padua, 1858).3. *Cenni Nosologico-Terapeutici sulle Congiuntiviti Contagiose* (Padua, 1856). American Encyclopedia of Ophthalmology,Vol.7,p.5386-5387.

Giorgi, Giuseppe de (1781-1837) Italian surgeon, who seems to have devoted considerable attention to ophthalmology. He was professor of surgery at Imola. His only ophthalmologic writing was entitled *Mem. sopra un Nuovo Istromento per Operare le Cattaratte e per Formare la Pupilla Artificiale* (Imola 1822). American Encyclopedia of Ophthalmology,Vol.7,p.5387.Albert.Hirsch.

Gipson, Ilene K. (1944-) American female cell biologist, a leading researcher in ocular surface biology. She graduated from Drury College Springfield, MO with B.A. in Biology, then studied at the Graduate School of the University of Arkansas with Ph.D. granted in 1973. She served as Assistant Professor at the Department of Ophthalmology, University of Oregon Health Sciences Center (1976-1979), then Assistant Professor of Ophthalmology (1979-1985), as Associate Professor (1985-1997) and Professor of Ophthalmology (Cell Biology) (1997-) of Harvard Medical School. She holds joint appointment as the Senior Scientist, Schepens Eye Research Institute since 1983. She serves as a contributing reviewer to many scientific journals, e.g. Invest. Dermatol. Invest. Ophthalmol Vis. Sci. exp. Eye Res. Arch. Ophthalmol., Cell Tissue Res. Proc. Natnl. Acad. Sci. J. histochem. Cytochem. and J. Cell Biol. She has been Invited Lecturer and Named Lecturer to many Universities in the U.S. and abroad, and keynote speakers at many International Conferences. Her early work focused on corneal epithelial wound healing, then centered on anchorage of the epithelium to the stroma. Her work contributed to the understanding of the basic cell biology of anchoring cell junctions. In the late 1980s, her work expanded to include studies of the molecular structure and function of mucins of the ocular surface and their role in tear film stability and dry eye syndrome. Some examples of her many original publications embrace "*Alteration of mucin in human conjunctival epithelia in dry eye*. Invest. Ophthalmol. Vis. Sci. 39: 2602, 1998", "*Matrix metalloproteinases (MMPs) in epithelia from human recurrent corneal erosion.* Invest. Opthalmol. Vis. Sci. 49: 1266, 1999" and "*Developmental expression of mucin genes ASGP(rMuc4) and rMuc5AC by the rat ocular surface epithelium*. Invest. Ophthalmol. Vis. Sci. 40: 1944, 1999". She also has written many educational review articles on her areas of research. She holds patent of Monoclonal Antibody (H185) to Ocular and Vaginal Surface Epithelium. For the excellence of research, she received a Research Career Development Award from the National Eye Institute in 1978, an Alcon award in 1984, the MERIT Award from the National Eye Institute in 1989, and an honorary doctoral degree from her alma mater, Drury College, in 1999. In addition to research activities, she teaches medical students at Harvard Medical School and has been active in training research fellows. Dr.Gipson served as head of the Cornea Ocular Surface group at Schepens Eye Research Institute from 1985-1997 and has been actively involved in ARVO and ISER. In addition to her interests in science, she is an avid hiker, birdwatcher and gourmet cook.(Schepens Eye Research Institute, 20 Staniford Street, Boston, MA 02114, U. S. A. phone:+1-617-912-0210; fax:+1-617-912-0126; e-mail: gipson@vision.eri.harvard.edu)

Marc Antoine Louis Félix Giraud-Teulon

Giraldès, Joachim Albin Cardozo Cazado (1808-1875) French anatomist and surgeon,of Portuguese descent and birth, who paid considerable attention to diseases of the eye. Born at Porto, he received his early education in Madeira, his medical training, however, at Paris, where he graduated in 1836. He died in Paris, Nov. 27, 1875. His ophthalmologic writings are as follows: 1. *Etudes Anatomiques, ou Recherches sur l´Organisation de l´Oeil, Considerée chez l´Homme et dans quelques Animaux* Paris 1836 (Graduation Thesis; 7 Plates).2. *Rech.sur la Disposition Croisée des Fibres de la Rétine chez les Cephalopodes* (Bull.de la Soc. Philos., 1845). 3. *De la Fève de Calabar* (Paris 1863).4. *Sur un Cas de Cataracte Double chez une Jeune Fille de 15 Ans* (Paris 1865) 5. *Notice sur la vie de Sir Benjamin C. Brodie* Paris 1863.American Encyclopedia of Ophthalmology, Vol.7,p.5387. Albert. Hirsch 2, 560-562

Giraud-Teulon, Marc Antoine Louis Félix (1816-1887) born in La Rochelle, France. He first studied in polytechnical schools of Paris and Metz, later studying medicine receiving his M.D. in 1848 at Paris where he practiced ophthalmology. He became famous because

of his invention of a binocular ophthalmoscope (by attaching a Brewster prism stereoscope behind the hole of a concave mirror).He wrote mainly on the physiology and pathology of vision: *Physiologie et pathologie fonctionnelle de la vision binoculaire* Paris 1861; *Lecons sur le strabisme et la diplopie* 1863; *De l'oeil; notions élémentaires sur la fonction de la vue* Paris 1867; *Instruction pour l'emploi de l'échelle régulièrement progressive destinée a servir a la mesure exacte des différents degrés de netteté et d'étendue de la vue distincte* Paris (not dated) *Des troubles fonctionnels de la vision dans leurs rapports avec le service militaire* Paris 1875 ; *La vision et ses anomalies; cours théorique et pratique sur la physiologie* Paris 1881. *An elementary treatise on the function of Vision and its anomalies* London 1880. American Encyclopedia of Ophthalmology, Vol.7,p.5387. Albert

Girault, Jean. German dentist and ophthalmologist of the early 19th century. He invented an instrument for the introduction of a thread into the lachrymo-nasal canal in the course of the operation for lachrymal fistula. American Encyclopedia of Ophthalmology, Vol.7,p.5387

Glees, Matthias (1907-) German ophthalmologist. MD 1932 Cologne, University lecturer at Cologne University 1942 under →Engelking and →Meissner later vom →Hofe. Professor 1956. Articles in *Klinische Monatsblätter f. Augenheilkunde* and *Graefe´s Archiv f. Ophthalmologie.* Kürschners Gelehrten- Kalender 1966,p.681; F. Hollwich Ophthalmologenverzeichniss 1964,p.131.

Gleize, Jean François (Flourished 1763-1811) French surgeon and ophthalmologist of the later 18th century. He was born at Montpellier, became master of surgery, ophthalmologist to the Royal College of Surgery at Orléans, and oculist to the Duke of Orleans and Count of Artois. He was a great braggart, making use of the public journals for the purpose of exploiting his achievements. He wrote: 1. *Nouvelles Observations Pratiques sur les Maladies de I'Oeil et leur Traitement.* (Paris, 1786; 0rléans, 1811.) 2. *Règlement de Vie, ou comment doivent se Gouverner ceux qui sont Affligés de Faiblesse de la Vue.* (0rléans, 1787.) 3. *Mémoire sur I'Ophthalmostate de M. Demours. (Jour. de Méd., Chirurg. et Pharm.,* 1788.) 4. *Mémoire sur les Avantages du Seciton à la Nuque dans les Ophthalmies Humides on Invetérées. (Op. cit.,* 1789.) 5. *Des Staphylomes. (Op. cit.,* 1789.)American Encyclopedia of Ophthalmology,Vol.7,p.5579. Albert.

Goar, Everett Logan (1886-1971) American ophthalmologist, born in Clinton County, Indiana. Goar graduated from Kirklin, Indiana, high school in 1903 and from Indiana University, Bloomington, in 1907. After graduation from Rush Medical College, Chicago, Illinois, in 1909, he served his internship at Chicago's Cook County Hospital from 1909-11. During World War I, Goar became a Major in the Medical Corps. He studied ophthalmology at the New York Eye and Ear Infirmary in 1920 and at the University of Colorado in 1922, and was awarded Doctor of Ophthalmology degree from Colorado University in 1925. Goar gave generously of his time and efforts to each of the many organizations to which he belonged. He served as president of the Harris County Medical Society, of the Houston Academy of Medicine, and of the Texas Society of Ophthalmology and Otolaryngology, and of the American Ophthalmological Society, 1954-55. He served as Vice President of the American Academy of ophthalmology and Otolaryngology. He was Chairman of Section on Ophthalmology of the American Medical Association. He was a member of American Board of Ophthalmology for nine years and Chairman of the Board, 1947-48. He was Director of the National Society for Prevention of Blindness, 1952-1960, and Chairman of the Professional Committee of the Texas Society for Prevention of Blindness. For his role in organizing the Texas Society, he received the Dana Gold Medal award in 1962. Goar was one of the men instrumental in the moving of Baylor University College of Medicine from Dallas to Houston, Texas, in 1943. He was Professor of Ophthalmology and Head of the Department from 1943 to 1957, as a teacher, for many years he helped give courses at the Academy on slit-lamp examinations and wrote many articles on various subjects in this field, including his "*Handbook of Ophthalmology*" (Mosby 1948) for medical students. AJO 1971,72:214-215.JPW

Gobee, Carolus (1804-1875) German physician born in Bruchsal, Germany. He studied medicine at Heidelberg, Bonn (M.D., 1831), and Leiden (M.D., 1832). He was a medical officer in the Dutch military service until 1859, when he retired he started a private practice in Amsterdam; his last years were spent in Arnheim. Gobée was editor of two

Dutch journals of clinical medicine and wrote in ophthalmology: *Die Sogenannte ägyptisch-contagiöse Augenentzündung* Leipzig 1841.Albert

Godman, John D. (1794-1830) American surgeon, who *first* reported a case of so-called "*inverted vision*." Born at Annapolis, MD., Dec.30, 1794, he lost his mother when he was only two years old, and his father in less than three years later. In 1815 he began to live and study with a Doctor Luckey, of Elizabethtown, Pa., but, five months later, moved to Baltimore, where he lived and studied with Dr. Davidge, of the University of Maryland. In 1818, at this institution, he received his medical degree. He practiced for a time in New Holland, but soon moved to Philadelphia. In 1821, on the invitation of Dr. Daniel Drake, he moved to Cincinnati in order to accept the chair of surgery in the Medical College of Ohio. After a single lecture there occurred a quarrel in the faculty, and he resigned. He established then *The Western Quarterly Reporter*, which lived for a year and a half. In 1822 he returned to Philadelphia, and, taking rooms, began to deliver a course of private lectures on anatomy. In a very short time his reputation was established. He also wrote a number of brilliant books and articles on subjects connected with natural history, of which the most important is *American Natural History* (3 vols., 1826). He was one of the editors of *The American Journal of the Medical Sciences* from 1824 until his death. Godman's most important ophthalmologic article is entitled "*Note of an Interesting Fact Connected with the Physiology of Vision*," from which I copy the following passage, from Hubbell's "*Ophthalmology in America*" (p. 123): "*The following instance communicated to me by Reuben Peale, Esq., the uncle of the young man, is the only one with which we are at present acquainted, where the inversion of objects on the retina was productive of inaccuracy of judgment as to position notwithstanding all the other senses were in their ordinary condition, and the individual had arrived at the age of 7 years. "When his father, who was a distinguished artist, began to give him lessons in drawing, he was very much surprised to find that whatever object he attempted to delineate, he uniformly inverted. If ordered to make a drawing of a candle and candlestick set before him, he invariably drew it with the base represented in the air and the flame downwards. If it was a, chair or a table he was set to copy, the same result was the consequence; the feet were represented in the air, and the upper part of the object, whatever it might be, was turned to the ground. His father, perplexed at what he considered the perverseness of the boy, threatened, and even did punish him for his supposed folly. When questioned on the subject the youth stated that he drew the objects exactly as he saw them, and as his drawings were in other respects quite accurate, there was no reason to doubt his statement. Whenever an object was inverted previous to his drawing it, the drawing was made to represent it in its proper position, showing that the sensations he received from the eye, were exactly correspondent with the inverted pictures formed on the retina. This condition of his vision was observed to continue for more than a year, when his case gradually ceased to attract attention-which was when he was about 8 years old. Since that time he has imperceptibly acquired the habit of seeing things in their actual position.*" Godman married, in October, 1821, a daughter of Peale, the artist. He died only 36 years of age. American Encyclopedia of Ophthalmology, Vol.7,p.5597-5599

Johann Wolfgang von Goethe

Goethe, Johann Wolfgang (1749-1832) German poet, statesman and scientist, born in Frankfurt am Main. His "*Zur Farbenlehre*" Tübingen 1810, 2vols.+ atlas and his *Beyträge zur Optik*, Weimar 1791-92 (2 parts in one volume) makes him interesting for ophthalmologists and opticians. Goethe studied at the universities of Leipzig and Strasbourg and became famous aged twenty-five when his Leiden des Jungen Werthers appeared. American Encyclopedia of Ophthalmology,Vol.7,p.5599-5601. Albert.

Goh, Jon (1960-) Singapore ophthalmologist, practicing as Consultant at the Singapore National Eye Centre. He graduated from the National University of Singapore in Medicine and Surgery in 1984 and trained in Ophthalmology in Singapore under Prof Arthur Lim before obtaining his Fellowships in Ophthalmology from the Royal College of Surgeons in Edinburgh (1990), and the Royal College of Ophthalmologists in the United Kingdom (1990). His initial interest in small incision cataract surgery saw him pioneering phacoemulsification techniques and the use of topical anaesthesia with combination minims amethocaine and endocapsular non-preserved lignocaine. His other efforts include the early use of foldable multifocal implants and the introduction of the endocapsular tension ring in the region. He has presented several scientific papers in this field at

international meetings and recently participated in the '99 International Medical Panel for Cataract Treatment. He is active in promoting the benefits of topical anaesthesia for phacoemulsification and in the teaching of Residents and Fellows in phacoemulsification and foldable lens implantation. Recently, his interest has extended into the field of Refractive Surgery, having trained under Prof Ioannis Pallikans in Greece for his Certification in Refractive Surgery from the European Society of Cataract and Refractive Surgeons (1998). He is a life member of the Singapore Association of the Visually Handicapped and a Fellow of the Academy of Medicine, Singapore. He continues to actively explore new vistas in clinical practice and research in Cataract and Refractive Surgery. (Dr Jon Goh, MBBS (S'pore), FRCS(Ed), FRCOphth (UK), FAMS, Consultant Ophthalmologist, Singapore National Eye Centre, 11 Third Hospital Avenue Singapore 168751. Phone: 65-2277255; Fax: 65-2277290; e-mail: jon_goh@pacific.net.sg) (SM)

Goldberg, Morton F. (1937-) American ophthalmologist, with University education at Harvard College (magna cum laude; Phi Beta Kappa) and medical education at Harvard Medical School (cum laude; alpha omega alpha), graduating in 1962. During this time, he worked as a medical student in the laboratory of Professor David Cogan. Following a medical internship at the Peter Bent Brigham Hospital in Boston, Goldberg became a resident at the Wilmer Eye Institute at Johns Hopkins University School of Medicine in Baltimore under the direction of Professor A. Edward Maumenee and Professor Frank Walsh. He completed residency, including the Wilmer Chief Residency, in 1967 and spent 2 years thereafter as an ophthalmic consultant in the United States Public Health Service. He then completed a 6-month fellowship in medical genetics under the direction of Professor Victor A. McKusick. At the age of 32, he became Professor and Head of the Department of Ophthalmology at the University of Illinois College of Medicine in Chicago, a position he held for almost 20 years. In 1989, he returned to the Wilmer Eye Institute as its fifth Director and the William Holland Wilmer Professor of Ophthalmology and Ophthalmologist-in-Chief at Johns Hopkins Hospital. Goldberg received an honorary fellowship in the Royal Australian College of Ophthalmologists in 1982 and the Doctoris Honoris Causa degree from the University of Coimbra in Portugal in 1995. He also received the inaugural Professor Ida Mann Medal from the University of Oxford in 1980 and the Arnall Patz Medal from the Macula Society in 1999. He also received the Honor Award and Senior Honor Award from the American Academy of Ophthalmology, the President's University Scholar Award from the University of Illinois, the Alcon Research Institute Award, the Derrick Vail Award from the Chicago Ophthalmological Society, and the Mildred Weisenfeld Award from the Association for Research in Vision and Ophthalmology (ARVO). He was elected to the Membership of the Institute of Medicine of the National Academy of Sciences of the United States in 1998. Goldberg served as President of the ARVO, the Association of University Professors of Ophthalmology, the Macula Society, and the Chicago Ophthalmological Society. He also has served as Chairman of the Alcon Research Institute Award's Committee and the Thesis Committee of the American Ophthalmological Society. He became a member of the American Ophthalmological Society in 1978 with his thesis entitled, *The Diagnosis and Treatment of Sickled Erythrocytes in Human Hyphemas*. Trans. Am. Ophthalmol. Soc. 76: 481, 1978. He has given over 20 visiting professorships and over 32 memorial or named lectureships, including the 54th Edward Jackson Memorial Lecture of the American Academy of Ophthalmology in 1997 (Persistent fetal vasculature (PFV): an integrated interpretation of signs and symptoms associated with persistent hyperplastic primary vitreous (PHPV). Am. J. Ophthalmol. 124: 587, 1997) , the inaugural Professor Eugene Chan Lecture in Hong Kong in 1995 and the inaugural Professor Ida Mann Lecture in Oxford in 1980 (Disease affecting the inner blood-retinal barrier in Gunha-Vaz, J.G. (ed.) The Blood-Retinal Barriers. p. 309-363, Plenum Press, New York, 1980). Goldberg has also served on several editorial boards, including the Editor-in-Chief of *Archives of Ophthalmology* (1984 through 1994). He has also been a member of the editorial boards of the Journal of the American Medical Association, Investigative Ophthalmology and Visual Sciences, Ophthalmic Surgery, Survey of Ophthalmology, Diabetes, Ophthalmic Pediatrics & Genetics, The Wilmer Retinal Update, and Retina, and has served as a member of the International Review Committee of the Japanese Journal of Ophthalmology. Goldberg's major research and clinical interests have included the following: ocular trauma, inherited and metabolic eye diseases, sickle cell eye disease, diabetic retinopathy, and laser

photocoagulation. He has published approximately 400 original articles, 60 chapters, and 24 editorials on these and related subjects. He also wrote *Genetic and Metabolic Eye Disease* (1974) (Director, The Wilmer Ophthalmological Institute, the Johns Hopkins University School of Medicine, 727 Maumenee Building 600 North Wolfe Street, Baltimore, MD 21287-9278, U. S. A. phone: +1-410-955-6846; fax: +1-410-955-0675, e-mail: mgoldbrg@jhmi.edu) (SM)

Goldhand *see* **Abu Ruh. Bin Mansur bin Abi Abdallah bin Mansur alyamani**.

Hans Goldmann

Goldmann, Hans (1899-1991) Swiss ophthalmologist who was born in the Austro-Hungarian Empire (later Czechoslovakia) in the town of Komotau. He attended a local Catholic school, which engaged a Jewish scholar to instruct Goldmann in religion. Goldmann demonstrated great skill in mathematics and science early in life, and he decided to become an astronomer. His father urged him, however, to "do something practical." Accordingly, Goldmann went to Prague and studied medicine at the German Charles University, obtaining his degree in 1923. From 1919 to 1924 Goldmann was assistant to Professor →Tschermak von Seyseneck in the Physiologic Institute. His first task was to reassemble a Hering calorimeter. This task stimulated a lifelong interest in optics, physics, and instruments, as well as confirming Goldmann's suspicion that he was an anomalous trichromat. In 1924, Goldmann became an assistant at the University Eye Clinic in Bern under the direction of Professor August→Siegrist. In 1927 he was appointed Oberarzt and in 1930 Privatdozent at the clinic. Upon the retirement of Siegrist in 1935, Goldmann became professor of ophthalmology and director of the University Eye Clinic. Many years later Goldmann was appointed chancellor of Bern University. He published papers on cataract, retrobulbar neuritis, uveitis, retinopathy of prematurity, aqueous humor dynamics, nyctalopia, dark adaptation, glaucoma, accommodation, perimetry, and diabetic retinopathy. Students and colleagues from many countries went to Bern and were stimulated by the keen intellectual atmosphere that permeated Goldmann's clinic. Goldmann's major contribution to ophthalmology was in the development and refinement of instruments, including the slit lamp, colorimeter, bowl perimeter, applanation tonometer, gonioprisms, dark adaptometer, and fluorophotometer. Because of these contributions, Goldmann was one of the foremost ophthalmologists of the 20th Century. In accepting the Proctor Medal from the Association for Research in Ophthalmology in 1959, Goldmann quoted Herodotus that the task of every scholar is "*to take and transmit the torch.*" Every patient and every ophthalmologist benefitted from his contributions. He wrote: *Zwei Vorlesungen über Biomikroskopie des Auges*, Bern 1954; *Dante Alighieri 1265-1321.Vorträge an der Universität Bern*, Bern 1966; *Vom Geist der Medizin. Universität Bern Dies Academicus 28 Nov 1964*, Bern 1964.AJO 1992,113:479-480; BJO 1992,p.384; JPW

Goldsmith, Allen (Sir Allen) John Bridson (1909-1976) Scottish ophthalmologist. Allen John Bridson Goldsmith was born in Edinburgh, the son of an Edinburgh physician. He was educated at King William's College, Isle of Man, and the Middlesex Hospital. He qualified with the Conjoint Diploma in 1931 and took the MB,BS with distinction in medicine and pathology. He held posts at the Middlesex Hospital and was appointed senior Broderip Scholar and awarded the Lyell Gold Medal. In 1933 he passed the FRCS examination, but as he was under twenty-five he had to wait a year before receiving the diploma. In 1935 he was appointed house surgeon at Moorfields Eye Hospital. Two years later he became surgeon and pathologist to the Central London Eye Hospital, holding the appointment until 1948 when he became surgeon at Moorfields. He also served the Middlesex as ophthalmic surgeon. Other hospitals at which he was ophthalmologist were Paddington Green Children's Hospital, the Royal National Orthopaedic Hospital, and the King Edward VII Hospital for Officers. He was lecturer in ophthalmology at London University and examiner in ophthalmology to the Royal Colleges. A joint editor of Recent advances in ophthalmology, he also published papers in specialist and medical journals. He was honorary secretary and member of the Council of the Ophthalmic Section of the Royal Society of Medicine; honorary secretary, member of Council and Vice-President of the Ophthalmological Society of the United Kingdom; VicePresident of the Medical Defence Union; and a member of the editorial committee of the British journal of ophthalmology. From 1952 to 1965 he was Surgeon Oculist to the Royal Household and then became Surgeon Oculist to the Queen, retiring from the appointment in 1974. He was

created CVO in 1962 and KCVO in 1970. He received following titles: CVO 1962; KCVO 1970; MRCS 1931; FRCS 1934; MB,BS London 1931; LRCP 1931.The Times 14 December 1976; Brit. med. J. 1976, 2, 1566 and 1977, 1, 175; Lancet, 1977, 1,53. LFRCSE.

Goldsmith, George Harvey (1868-1940) British ophthalmologist of Bedford.He was the son of Dr. G. P. Goldsmith, of Bedford, who came of an old Suffolk family. Goldsmith was educated at Bedford School (1878-1886) and at Cambridge University, whence he took his B.A. in the Natural Sciences Tripos in 1889. He joined the medical School of St. George's Hospital, qualified at "the Colleges"in 1892, and proceeded to M.B.Cantab. in 1893. His M.D. dated from 1902. At St. George's he was house surgeon, house physician and ophthalmic assistant. His ophthalmological training was continued at the Royal Westminster Ophthalmic Hospital where he was house surgeon and, later, clinical assistant. Goldsmith joined his brother in practice in Bedford and was for a time M.O. to one of the houses of his old school, but his ophthalmological reputation increased so rapidly that he soon confined himself entirely to it. For many years he had an extensive practice in Bedford and its surroundings. At the time of his death he held the post of consulting ophthalmic surgeon to the Bedford County Hospital. He joined the Ophthalmological Society in 1899. To its Transactions he was an occasional contributor, mainly of case reports. Apart from his professional work Goldsmith was an ex-president of the Bedford Historical Society. He was widely read both in archaeology and in general literature and was a good Greek scholar. Later in life he took up the study of Hebrew to enable him to read the Bible in the original. BJO 24,371,1940

Goldzieher, Vilmos (1849-1916) Hungrian Ophthalmologist. Vilmos Goldzieher was born at Kapcseny in Hungary. He was a gifted clinical observer and was probably the *first* to describe the affections known as "*Parinaud´s conjunctivitis*"; *Retinitis Circinata*" and "*Hippel´s disease*". He studied medicine in Vienna and in Heidelberg. After taking his doctor's degree, he worked for two years as assistant of Professor Becker. Then he continued his studies in Ophthalmology on a Hungarian fellowship in Berlin, Prague and Leipzig. In 1875 he returned to Budapest and became a practicing ophthalmologist. In 1878 he was appointed Privatdocent to teach the pathology of the eye and in 1895 was awarded associate professor. He received a post in the Red Cross Hospital of Budapest in 1883. In 1895 he was appointed head of the eye Department of the St. John's Hospital, and in 1901, to the St. Rochus' Hospital, where he remained until his death. His international reputation was founded on his merits, and on the fact that he had made good contacts with many specialists in Europe and most of his papers were published abroad. He was also a corresponding member of several West-European Societies of Ophthalmology. The number of his publications is about 120. His chief work was a textbook, entitled '*Die Therapie der Augenkrankheiten*' which was published in Stuttgart, in 1881. The same book ran the second German edition in Leipzig, 1900 and in 1903 it appeared for the first time in Hungarian translation in Budapest. His second significant book was the '*Handbook of ophthalmology*' ('*Szemeszet kezikonyve*') published in Budapest in 1890. He also contributed several chapters to the '*Szemeszet Kezikonyve*' ('Handbook of ophthalmology') edited by E. Grosz and K. Hoor (1909). In 1902 he became the Editor of the second Hungarian Journal of Ophthalmology, called '*Szemeszeti Lapok*' ('Ophthalmological Journal'). He also worked as Ophthalmologist in the Hungarian Institute for the Blind and was deeply interested in the welfare of persons with defective eyesight. He was among the first in Hungary to fight for the foundation of a special school for the blind. In recognition of his services, he was awarded the title of Royal Court Councillor in 1908. Magda Radnòt: Famous Hungarian Ophthalmologists (Budapest 1970) AJO,1:294; B.J.O.1:654

Golovin, S. S. (1866-1931) Russian professor of ophthalmology from Moscow. He was, in his time, the dean of Russian oculists and for years an outstanding figure in international ophthalmology. Golovin's name is probably best known to the American reader in connection with his *combined exenteration of the orbit and accessory nasal sinuses* (Exenteratio orbitosinualis) in the treatment of orbital malignancy, a method described in detail in Wood's "*System of Qphthalmic Operations*" and in the American Encyclopedia of Ophthalmology. This procedure is only one of the many important contributions which link Golovin's name with the progress of orbital surgery in the first thirty years of the 20th century. He originated the method of litigating the orbital veins in pulsating exophthalmos.

He introduced the optico-ciliary neurectomy in absolute Glaucoma. His simple and osseous orbitotomies were still used by many orbital surgeons in the first half of the last century. In the difficult field of plastic restoration of the orbit following its exenteration, Golovin proposed a new method, both simple and effective. His interest in the orbit was not limited to surgery. In a large monograph devoted to optic nerve tumors, he displayed the qualities of an acute clinical observer and of an accomplished pathologist. His report on intradural tumors of the optic nerve presented to the International Congress in 1913 was a turning point in the general conception of this type of orbital neoplasm. He described an hitherto unknown orbital disease which he named "*sclerosis orbitae*". The creative genius of Golovin has manifested itself not only in clinical, but in experimental ophthalmology as well. In 1904 he offered, as the result of ingenious experiments, a new "cytotoxic" theory of sympathetic ophthalmia. With this the foundation was laid for the future anaphylactic interpretation of this disease. His experiments on the sub-vital processes in the isolated eye, performed in the twenties of the nineteenth century, were an interesting attempt to penetrate the mysteries of fundamental "life" processes in the visual organ. To enumerate all the new ideas which were given by Golovin to ophthalmology, would mean to review most of his ninety-five scientific publications. How highly he was esteemed by his European colleagues can be seen from the fact that in 1929, the Russian Ophthalmologic journal celebrated the forty years of his ophthalmologic activities by issuing a special "Golovin" number of the journal. So many ophthalmologists paid their respects to him by sending their contributions that a volume of two hundred and sixty, pages had to be published and still a part of the material had to be-transferred to the succeeding issues of the journal. The names of Axenfeld, Morax, Elschnig, Rollet, Terrien, Krückman, Wagenmann, Szily and others who participated in this volume, prove that Golovin's jubileum was an event in European Ophthalmology. In his own country Golovin was more than a research worker of great ability. He was an inspiring teacher, and many of his pupils head the ophthalmic departments in the Medical Schools of his country. For years he was editor of the "Vestnik Oftalmologii", at that time the only ophthalmologic periodical in the Russian language. His textbook on "*The Methods of Examination and Symptomatology of Ocular Diseases*", a volume of nine hundred and sixty pages, was most popular among Russian oculists. AJO 1931,14:836

Gondret, Louis François (1776-1835) A French ophthalmologic charlatan. Born at Auteuil, near Paris, he received his medical degree at Paris in 1803 with the doctoral thesis: *Dissertation sur l´action des purgatifs* Paris 1803.. He was physician at the Third Dispensary of the Philanthropic Society, Physician to the Court of First Instance, etc. He advertised extensively a derivative salve of his pretended invention, called by various names, such as " pommade ou graisse ammoniacale," "caustique ammoniacal," and "liparole ammoniacal." This he pretended would (among other wonderful effects) cure cataract without operation. Gondret wrote: 1. *Observations d'Amaurose* (Paris, 1821). 2. *Observations sur les Maladies des Yeux* (Paris, 1823).3. *Mémoire sur le traitement de la cataracte* Paris 1825 4. *Des Effets de la Dérivation et 2° Appendice à mes Observations sur les Affections Cérébro-Oculaires* (1832; 2 ed., 1833, 3rd ed.1835). 5. *Du Traitement de la Cataracte sans 0pération* (1839).6. *Treatise upon a new, expeditious, and safe method of treating cerebro-sensorial affections particularly amaurosis and cataract* London 1840.7. *Du traitement des fièvres intermittentes par le moyen du vide ou ventouse* Paris 1850. American Encyclopedia of Ophthalmology, Vol.7, p.5605. Albert

Gonelli, Giovanni (1610-1664) Also called Gambasius and Gambasio. A blind Italian sculptor of considerable merit. He was born in Tuscany and lost his sight at the age of twenty, and, ten years later, was suddenly seized with a desire to become a sculptor. Besides ideal images, he carved a number of portraits, the most remarkable of which is that of Pope Urban VIII.American Encyclopedia of Ophthalmology,Vol.7,p.5605.

Gonin, Jules (1870-1935) Swiss ophthalmologist. Gonin´s early years of study were passed at the College Galliard and later in the Cantonal Gymnasium. He next entered the faculty of Science of the old Academy, then the faculty of Medicine at Lausanne, and later that at Berne.His first introduction to ophthalmology occurred while still an undergraduate when he served as *locum tenens* to the resident officer at the Hôpital de I'Asile des Aveugles, where, in 1896, he became the resident officer. In 1899, after a tour of study in foreign countries, he became chief assistant, and in 1901 second Associate-Surgeon. In

1918 he became Surgeon in Charge of the Asile des Aveugles, and in 1920, on the death of Professor Eperon, Professor of Ophthalmology in the University. Although ophthalmology was his life's work, Professor Gonin had many other interests. He was a great traveller and had explored the whole of Europe as well as Palestine and Egypt. He had the gift of languages: not only was he an adept in all the various dialects of Switzerland but could speak fluently in many other languages including Spanish, Serbian, Modern Greek and Arabic. Even after he had passed middle life he learned new languages. He spoke of this knowledge in terms of the gramophone, saying, that when about to speak English he would put on his English gramophone record. He was one of the founders of the Swiss Ophthalmological Society in 1908, and attended all the meetings with the exception of the last which took place fifteen days before his death. Coming now to his scientific work, without doubt the name of Gonin will always be associated with the cure of detachment of the retina, but his serious work on this subject did not begin until 1918. Before this date, his communications were numbered by the dozen. He gained his laureate at the University by his work on the development of the wings of the butterfly in the chrysalis. The butterfly was always his favourite, and his consulting room was decorated by actual specimens pinned to the ceilings and walls. His thesis for the Doctorate was on the regeneration of the crystalline lens. His aptitude for drawing, and the need he felt for elaborate note taking certainly has made for much of the accuracy which characterized his works. In 1898 he began his ophthalmological publications. At first they had an anatomical and pathological character with an examination of macroscopical and microscopical specimens, or dealt with the bacteriology of ocular affections. Later on, clinical observations played a greater role, one group concerning the annular scotoma of retinitis pigmentosa in which he showed that concentric diminution of the field of vision is often only annular, and that when it is really concentric it is but the terminal stage of an annular scotoma which has reached the periphery. In 1900 Professor →Dufour was entrusted with the re-writing of the large chapter (*'Diseases of the Retina and Optic Nerve'*) for the French Encyclopaedia of Ophthalmology, and he collaborated with his devoted pupil Gonin. Thus it happened that Gonin had to take notice of all that had been said or written on diseases of the retina. It was this work that gave birth to his ideas on the causes of detachment of the retina, its pathology, the importance of rents and so on. Gonin also wrote the chapter on amaurosis and amblyopia for he Encyclopaedia. The first work of Gonin on detachment of the retina appeared in 1908, but it was in 1918 that a paper '*The Anatomical Causes of Detachment of the Retina*' conducted oculists to the point they have reached to-day. Thirty-eight publications of greater or less -importance were made by Gonin on this subject between 1918 and 1934, and in 1934 appeared his large book *'Detachment of the Retina'* which crowned his work. It is necessary to go back seventy years earlier in the history of ophthalmology, to the introduction by von Graefe of the curative value of iridectomy for glaucoma, to meet with a discovery comparable with that of Gonin's. BJO1935,19:476-478

Gonzales y Morillas, Don José Maxia (?- ?) Cuban pathologist and ophthalmologist of Havana, whose life dates are unknown. He wrote: "*Monografia Oftalmológica ó Descripcion de Todas las Enfermedades que Pueden Padecer los Organos de la Vision y Partes Anexas*, (2 vols., Habana, 1848-50). *Lecciones elementales de patologia general* Habana 1860 American Encyclopedia of Ophthalmology, Vol.7,p.5613. Albert.Brit Museum.

Goodland, William An English surgeon of the early 19th century, who practised at Bolsaver, Derbyshire, and Bury, Lancashire. He wrote *"Observations on Purulent Ophthalmia*" (1810).American Encyclopedia of Ophthalmology,Vol.7, p.5613.

Gordon, Bernard de (end 13th-begin 14th century) French physician of Scottish descent, who received his medical education, at the school of Salerno, Italy. The dates of his birth and death are not known. He taught, however, at Montpelier, from 1285 to 1307. He wrote in 1302 (1303?-5?) a work entitled *"Lilium Medicinae"* (Lily of Medicine). This is a kind of medical encyclopedia, including as it does the entire pathology of the human system. In 1377 it was translated into French under the title *La Pratiqu,e du Tres excellent Docteur et Maistre en Médecine, Bernard de Gordon, qui 1'Appelle Fleur de Lys en Médecine*." The ocular portion of the "Lilium" includes no surgery at all. Whenever a

surgical matter requires mentioning, Bernardus simply refers us to a "chirurgus literatus et expertus."' However, the ocular portion of the "Lilium" is quite an interesting affair. First, it treats of ocular anatomy and physiology, then, in successive chapters, the diseases of the conjunctiva, the cornea, the uvea, those of the eye throughout its entirety, and, finally, those of the lids. What he says in chapter I, about the nature of vision possesses a special historical value. "The animal spirit called the visual, descends by the optic nerves to the eye, where it spreads to the crystalline humor, and then to the interior surface of the eye; it receives there the image of the object, which has been brought [i. c., from without] to the crystalline, in which situation is produced the first modification of colors (mutatio colorum) ; then it carries the representation of the object (simulacrum) as far as to the common sense [intelligence]."Bernard is said to have been the first medical writer to mention the use of spectacles. Of course, the word "medical," in this connection, should be well emphasized. (Roger Bacon it was who, in his "*Opus* Majus" almost fifty years earlier than Gordon's "Lilium"-first records-so far at least as history shows-the value of convex lenses for those who are old or weak-of-sight.) Gordon, moreover, adds that he knows of a collyrium which renders spectacles unnecessary. His words are indeed of so great historical importance that they are appended here as they stand in the original Latin: "Hoc collyrium est tantae virtutis quod decrepitum faceret legere litteras minutas sine ocularibus." So the printed editions run. Truc and Pansier, however, inform us that, in the manuscripts, the expression employed by Bernardus was not "oculare," but "oculus verrelinus" or "oculus berillinus" i. e., "eye of glass," or "eye of beryl.'American Encyclopedia of Ophthalmology,Vol.7, p.5613-5614.

Gorgone, Giovanni (flourished 1st half of the 19th century) Italian surgeon and anatomist of Palermo, the founder of a surgical clinic. He wrote: *Considerazioni pratiche sull'operazione della cateratta col metodo, dell'estrazione* Napoli 1824. *Corso completo di anatomia etc.* (4 vols.) Palermo 1834-41 ; *Lezione sul tessuto encefaloide* Palermo 1834. Albert. Brit Museum

Gosetti, Francisco (1837-1909) Italian ophthalmologist from Merlango near Treviso. He was ophthalmic surgeon at the Civil Hospital Venice. He published different subjects on ophthalmology and was the inventor of a new operation for cataract.

Gotch, Francis (1853-1913) British physiologist. Waynflete Professor of physiology at Oxford University and Fellow of Magdalen College Oxford. Known for his research on retinal functions. He served on the Departmental Committee of the Board of Trade considering tests for vision in the Mercantile Marine. The Ophthalmoscope, London 1913,p.505.

Gough, John. A celebrated blind instructor of sighted pupils. He was born at Kendal, Westmoreland, England, and at the age of two was completely blinded by smallpox. When six years old he was sent to the School of the Society of Friends, where he seems to have advanced more rapidly than any of his sighted companions. He afterwards studied mathematics under a private instructor, a Mr. John Slee. He then became an instructor of sighted pupils, and, in this capacity, is said to have been "the greatest known example". Among the celebrated scholars who once were under his tutelage, were →Dalton, →Whewell, Gaskin, King and Daws. Gough wrote numerous articles on the following subjects: botany, mechanics, static's, hydrostatics, pneumatics, acoustics, electricity, magnetism, zoology, music and scotography. These appeared, for the most part, in *Nicholson's* Journal and the *Memoirs of the Literary and Philosophical Society of Manchester*. Gough died in 1825, aged 68, and was buried in Kendal churchyard. American Encyclopedia of Ophthalmology,Vol.7, p.5616.

Goulard, Thomas (c.1724-1784) French physician, surgeon and ophthalmologist, introducer of "*Goulard's Extract*," an aqueous solution of the subacetate of lead, and of "*Goulard's Cerate*," an ointment containing this extract. He was born at Saint-Nicholas-de-1a-Grave, near Montauban, France, about 1724, and, at an early age, was appointed demonstrator royal of anatomy and surgery, as well as surgeon-major, at the Military Hospital in Montpellier. In 1740 he became a Fellow of the Academy of Surgery. He seems to have been a man of strongly quackish tendencies. His subacetate solution, to which he gave the name of "*Aqua Vegeto-Mineralis*," he commended as a well-nigh infallible cure for almost every disease in the nosology, especially for those of the eye and

the urethra. His principal writings are as follows: 1. *Mémoire sur les Maladies de I'Urètre et sur un Remède Spécifique pour les Guérir*. (Montpellier, 1746.) 2. *Lettre de M. Goulard, à M.de la Martinière sur les Bougies pour les Carnosités*. (Montpellier, 1751.) 3. *De la Composition des Bougies*. (Montpellier, 1751.) 4. *Traité des Maladies ,de I'Urètre, avee le Composition des Différentes Espèces de Bougies propres a les Guérir Radicalement*. (Montpellier, 1752.) 5. *Remarques et Observations Pratique sur les Maladies Vénériennes, etc.* (Montpellier and Pézénas, 1760.) 6. *Traité sur les Effets des Préparations de Plomb et Principalement de 1'Extrait de Saturne, Employé sous Différentes Formes, et pour Différentes Maladies Chirurgicales*. (Montpellier, 1760; EnglTrans., London, 1769 and 1775.) 7. *Oeuvres de Chirurgie*. (2 vols., Paris, 1763 and 1767; Liège, 1779.) Goulard also invented a number of surgical instruments. In 1772 he became blind, and, in 1784, he died. American Encyclopedia of Ophthalmology,Vol.7,p.5616-5617.

Gould, George Milbry (1848-1922) American Ophthalmologist. George M. Gould was born at Auburn, Maine. A remote ancestor was a Robert Goold (not Gould) who, in 1663, emigrated to Hull, Mass., from Somerset, England. In his early childhood, his own mother having died, George moved with his father and stepmother to Salina, Ohio. Here, and at Athens, Ohio, he studied in public and private schools. At the age of twelve, however, he enlisted in the Northern army of the Civil War as a drummer boy, serving in that capacity from 1861 to 1862. Later, at 16, he reenlisted, this time as volunteer, and served from 1864 to 1865. He received an A.B. at Ohio Wesleyan University in 1873, and an A.M. (hon.) from the same institution in 1892. At age 25 he was enrolled at the Harvard Divinity School, but preached for the Unitarian Church only a few months; then spent several years studying in Europe. He returned home a very well educated, bookish young man. At age 28 he opened a bookshop and fine arts store in Chillicothe, Ohio, but he was troubled by headaches and was exasperated that reading, his favorite pastime, made him uncomfortable. Doctor after doctor was consulted, including some eminent ophthalmologists in Europe. He had many different pairs of glasses but none of them solved his problem. He briefly considered becoming an oculist himself so that he could personally attend to his own eyes. He was past thirty when someone gave him a careful refraction and for the first time in his life he was comfortable and headache free. He had found his mission in life. He promptly closed his bookshop and his other business enterprises and entered Jefferson Medical College, in Philadelphia. While still in medical school, he and his classmate Walter C. Pyle wrote an ophthalmic study guide for fellow students called "*Compend of Diseases of the Eye*" (1886), which was popular until replaced by May's *Manual*. He was president of his class and received his M.D degree in 1888. He never practiced general medicine or surgical ophthalmology, but immediately opened an office on Walnut Street in Philadelphia, and devoted himself to doing high quality refractions. In 1908 he moved to Ithaca, N.Y. where he opened a practice specializing in problem refractions, and patients came great distances to consult him. In 1911 he and his wife (Laura Stedman) moved to Atlantic City where they remained until his death in 1922. From 1891-1895 Dr. Gould was editor of the '*Medical News'*, and of the '*Philadelphia Medical Journal'*, 1898-1900; and of '*American Medicine'* (which he founded) from 1901-1906. He was a medical editor of great importance; he was proffered the editorship of the Journal of the American Medical Association, but declined it. He was a Fellow of the College of Physicians of Philadelphia; a member of the American Ophthalmological Society and of the American Academy of Medicine (president, 1895). He was also member of the Phi Beta Kappa and a speaker at the Congress of Arts and Sciences at the St. Louis Exposition in 1904. In 1917 he received the first Doyne medal at the Ophthalmological Congress in Oxford, England – even though, at the last minute ill health made it impossible for him to attend. Gould's literary activities were varied and significant. In collaboration he wrote: "*Diseases of the Eye*" (1897) "*Encyclopedia of Medicine and Surgery*" (1900-13); "*Anomalies and Curiosities of Medicine*" (1901); a biography of his father-in law "*Life and Letters of Edmund Clarence Stedman*" (2 vols. 1910); "*Genius and other Essays by E. C. Stedman*" (1911). By himself he wrote or compiled: "*Student´s Medical Dictionary*" (1890, 11th Edition 1900) "*New Medical Dictionary*" (10 editions, 1891-1900); "*Pocket Medical Dictionary*" (1892-1913); "*Illustrated Dictionary of Medicine, Biology and the Allied Sciences*" (1894-1913 with supplement, 1905) ; "*Dictionary of New Medical Terms*" (1894); "*'The Practitioner's*

Medical Dictionary" (1906-17); "*American Year Book of Medicine and Surgery*" (1896-1903); "*The Meaning and the Method of Life*" (1893); "*Borderland Studies*" (2 vols., 1896-1905); "*An Autumn Singer*" (Poems, 1897)., "*Suggestions to Medical Writers*" - (1900) "*Biographic Clinics*" (6 vols., 1903-95 "*History of Jefferson Medical College*" (2 vols., 1904); "*Concerning Lafcadio Hearn*" 1908; and a "*Personal Bibliography*" of over 100 items, in 1910. Dr. Gould's interests, as may easily have been inferred from the bibliography above, were not by any means confined to ophthalmology or even to medicine. He was interested in questions of Natural History: Why the Sap Rises in Plants and Trees; How the Erosion of Shore Lines can he Prevented; What are the Reasons for the Composition and Shapes of Shells and Pebbles. Questions in theology and general literature also strongly appealed to him, and he wrote in these areas much that was widely read. The dominant theme, however, of Gould's medical writing was "*Eyestrain*". He felt that his own childhood and youth had been burdened with eyestrain, and he had searched in vain for relief in America and in Europe. He felt that getting a good pair of glasses had changed his life, and that helping others with the same problems was a career to be proud of. Based on his own experience, Dr. Gould was persuaded that even a very small amount of uncorrected refractive error could be the source of great suffering, so he recommended that refractions be done with great patience and exquisite care. He spent years struggling to impress upon public awareness the full importance of doing a really thorough refraction, correcting small amounts of astigmatism and then repeating the process after using atropine drops in the patient's eyes. Gould collected together many of these essays in a series of books called "*Biographic Clinics*". In these six volumes Gould analyses and traces the ill health of some of the famous figures of the 19th century, making the point again and again of how very different history might have been with a few well-placed and properly fitted pairs of glasses. He concluded that a lot of dyspepsia, migraine and assorted misfortune could be traced to an inadequate refraction. In retrospect it can be said that he overplayed his hand by attributing far more than eyestrain and headache to poor glasses. Lucien Howe sent a questionnaire out to ophthalmologists and later reported that most patients were not much troubled by a little imprecision in the optical correction of refractive error. Dr. Gould had been very vigorous and persistent in this advocacy and to some he began to sound like a broken record, however the quality of refractions being done for the fitting of glasses improved greatly during the years when Dr Gould was in full voice, and he can take some of the credit for it. -A matter once of great importance, but now nearly forgotten, was the invention by Dr. Gould of cemented bifocal segments. The original bifocal glasses, invented by Benjamin Franklin, consisted of two distinct pieces, an upper and a lower segment, set edge to edge - later known as the split bifocal. Gould cemented the bifocal segment on to the main lens with a clear glue; it was a distinct improvement.. He also originated a number of devices for ocular examination, special lenses, a trial frame, methods of lighting etc. AJO 6:62-65 (Thompson)

Goulden, Charles Bernard (? – 1953) British ophthalmologist, born at Canterbury, of Huguenot stock. His immediate ancestors had returned to the Roman Catholic faith, and he was educated at St. Edmund's College, Old Hall, near Ware and at Downing College, Cambridge. He continued his medical education at the Middlesex Hospital where he won the Freeman Scholarship. After being house surgeon at the Middlesex he decided to take up ophthalmology and entered Moorfields Eye Hospital (R.L.O.H.). Three years of experience at Moorfields found him ready to start in private practice but he spent one year at Bristol as Demonstrator of Anatomy. In 1908 he began to practise in Oldham, where he was appointed Ophthalmic Surgeon to the Royal Infirmary. He was still there at the beginning of the 1914-18 war and did most useful work in the organization of the Red Cross in that area from 1914-16. He would not enter the R.A.M.C. unless he could be accepted for ophthalmic work since he felt that this would be his most useful service. Consequently he did not receive a commission until the middle of 1916 when he was appointed to the 13th Stationary Hospital, Boulogne, then the chief eye centre in France, just before the beginning of the Somme offensive. The hospital contained fifty ophthalmic beds, which soon increased to seventy and later to 120, and its own operating theatre. Here Goulden found an adequate sphere for his energy, and under Colonel, afterwards Sir William Lister, contributed a large share to the great volume of work done there. After 2 years he was put in charge of the ophthalmic work at Rouen, an appointment he felt bound to accept since it was a definite and well-earned promotion, though he left Boulogne with

regret. He remained at Rouen until the end of the war. On returning to England he was persuaded by Lister to give up his practice at Oldham and come to London, where he was appointed to the staff at Moorfields and ophthalmic surgeon at the London Hospital. His work in both hospitals was of a most distinguished character, and his share, a major one, in the introduction of the slit-lamp and the institution of slit-lamp instruction at Moorfields was particularly valuable. With characteristic thoroughness he spent some weeks with Alfred→Vogt at Zürich in order to prepare the slit-lamp instruction courses at Moorfields. He succeeded Hepburn as Dean of the School and his work in organizing post-graduate instruction was most successful. He retired from Moorfields in 1939 but soon came back again in order to do the work of younger men serving with the forces. Added to this was a very considerable volume of advisory work for the Ministry of Health and the Emergency Medical Service. At the end of the war it was a fitting recognition of his distinction and achievement in ophthalmology when he was elected President of the Ophthalmological Society of the United Kingdom, 1945-6. His presidential address on Purkinje was but one example of his keen interest in history, both scientific and general. Goulden was an ophthalmic surgeon of eminence in every way, a skilful and neat operator, a good diagnostician and a valuable opinion on any sort of case. His translation of F. Ed.Koby's *Slit-lamp Microscopy of the Living Eye. Early diagnosis and symptomatology of affections of the anterior segment of the eye* (1925) with Clara L. Harris, and an exceedingly good book on "*The Refraction of the Eye*" were his major literary works, but he contributed regularly and most valuably to the Transactions of the O.S.U.K. and to the Proceedings of the Ophthalmic Section of the Royal Society of Medicine, of which Section he was also President. BJO 1953,37:703-704. JPW

Gouzée, Henri Prosper (flourished 1835-1855) Belgian ophthalmologist. Gouzée was surgeon-general of the Belgian army and director of the military hospital at Antwerp. He wrote: *De l'ophthalmie qui règne dans l'armée Belge et des moyens d'arrêter la propagation de cette maladie* Bruxelles 1842. Dutch translation: *Verhandeling Over De Oogziekte in het Belgische Leger*. Amsterdam 1844. His papers were published, mostly in the *Annales d´oculistique*, between 1838-1853. Albert. Bibliography in v.Duyse.

Gowers, William (Sir William) Richard (1845-1915) British Neurologist. Gowers had a brilliant career at the Christ Church School , Oxford and University College Hospital , London, where he received his M.D. in 1870. Gowers served on the staff of the National Hospital in Queen Square from 1873 and of the hospital of University College from 1872 to 1915. At the latter he was also Professor of clinical medicine (1883-1888). He was a Fellow of the Royal Society and honorary graduate of the Universities of Edinburgh and of Dublin. In recognition of his emminence as an Neurologist he received the honour of knighthood in 1897. Gowers was closely connected to ophthalmology and made many observations of great practical value to this branch of medicine. His "*Manual and Atlas of medical ophthalmoscopy*" London 1879 reached a fourth edition in 1904 and was translated into German (*Die Ophthalmoskopie in der inneren Medizin*, 1893).He also wrote: *Diagnosis of Diseases of the Spinal Cord* (1880); *Epilepsy* (1881); *Manual of Diseases of the Nervous System* (1886); *Diagnosis of the diseases of the brain and of the spinal cord*. New York 1885; *A manual of diseases of the nervous system* (2 vols.) London 1886-1888; The Ophthalmoscope, 1915,p.311. Albert.

Graça, Couto a da (1864-1917) Brazilian ophthalmologist, professor of ophthalmology in Rio de Janeiro.AJO,1:293.

Gradenigo, Count Pietro de (1831-1904) A famous Italian ophthalmologist. He was born at Venice and in his native city received his preliminary education. When seventeen years of age he served with distinction as a volunteer in the uprising against Austria. He studied medicine at Padua, receiving his medical degree from that institution in 1855. He was soon appointed assistant in the Ophthalmic Clinic in the same city, and, in 1858, surgeon to the Venice Hospital. The latter position he resigned in 1868, and in 1873 was appointed to the full professorship in ophthalmology in the University of Padua. Gradenigo is said to have introduced the ophthalmoscope into Italy. He certainly invented a special form of the clinical thermometer and of the stethoscope, both of which have been found very useful. He wrote a large number of articles on ophthalmologic subjects; chiefly ocular antisepsis, corneal opacities, the extraction of cataract and digital massage

in various diseases of the eye. His numerous contributions were published in volume form in 1904 by two of his pupils:→ Ovio and →Bonamico. American Encyclopedia of Ophthalmology,Vol. 7,p.5619

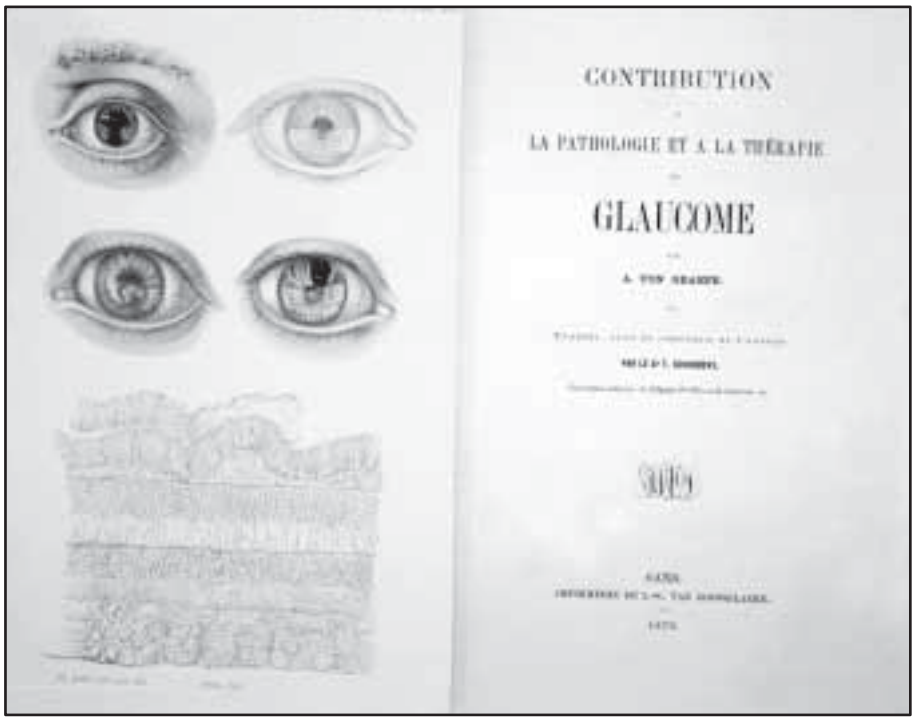
Gradle, Harry Searls (1883-1950) American ophthalmologist, born in Chicago. He attended the University of Michigan, Ann Arbor, where graduated from the Department of Liberal Arts with the degree of A.B. in 1906. His medical training was at the Rush Medical College where he earned the degree of M.D. in 1908. During the next two years he pursued graduate medical training in ophthalmology in Vienna, London, Berlin, Paris, and Prague. He was active in the teaching of ophthalmology and was assistant professor of ophthalmology at the University of Illinois College of Medicine from 1921 to 1927, professor in 1944-45, and extramural professor of ophthalmology at Northwestern Medical School from 1928 to 1944. Gradle was a fellow of the American Medical Association, American College of Surgeons, a member of the American Ophthalmological Society, the Ophthalmological Society of the United Kingdom, Chicago Medical Society, Illinois State Medical Society, American Association for the Advancement of Science, the Association of Military Surgeons of the United States. He was particularly active in the instruction program of the American Academy of Ophthalmology and Otolaryngology. He became a fellow of the Academy in 1911 and served on the Council in 1920 and 1921. He was instrumental in the establishment of a registry of ophthalmic and otolaryngologic pathology at the Army Medical Museum. In 1921 Gradle, who served as a first lieutenant in the Medical Corps of the Army of the United States in France, arranged for the establishment of a registry of pathology through the financial support of the academy. The present Registry of Pathology under the auspices of the National Research Council grew out of this sponsorship. In 1921, Gradle was made chairman of the committee on instruction which became a major function of the educational program of the academy. He directed the course of instruction until 1938 when he became president of the academy. When the home-study courses were established in 1940, Gradle was installed as secretary for the home-study courses and directed this activity until 1946 when he retired because of ill health. In cooperation with Moacyr Alvaro of Sao Paulo, Brazil, and Conrad Berens of New York, Gradle organized the first Pan-American Congress of Ophthalmology held in Cleveland in 1940. He was president of the Pan-American Association of Ophthalmology from 1940 to 1946. During the second World War, he was chairman of the subcommittee on ophthalmology of the National Research Council. He was also chairman of the committee on ophthalmology in the Department of the Interior and worked for the eradication of trachoma among the Indians in the United States. In 1948 he was awarded the first Pan American medal of the National Society for the Prevention of Blindness. For many years he was vice-president of the Illinois Society for the Prevention of Blindness and was chairman of the committee on ophthalmology of the Illinois Public Aid Commission Blind Assistance program. Gradle was attending ophthalmologist to the Michael Reese Hospital, the Cook County Hospital from 1922 to 1928, and Illinois Eye and Ear Infirmary where he was chief of staff from 1933 to 1945. In 1946 he received the Dana Medal for outstanding service in prevention of blindness. He was on the editorial staff of the Am J. of Ophthal. and of Ophthalmologia Ibero-Antericana. His interest in glaucoma was manifested by the writing of many papers. He was in great demand as a lecturer before medical societies and was a member of many committees on education and research. He was one of the founders of the Association for Research in Ophthalmology. His contributions to medical science and to the practice of ophthalmology are widely recognized. AJO 1950,33:1303

Gradle, Henry (1855-1911) A celebrated ophthalmologist of Chicago, author of the first work in English on the *"Germ Theory."* He was born in Frankfort-on-the-Main, Germany. His medical degree was received at the Chicago Medical College in 1874. After an internship at Mercy Hospital, Chicago, he studied in Vienna, Heidelberg, Leipsic, Paris and London. He was professor of Physiology in the Chicago Medical College from 1881 till 1895; and Professor of Ophthalmology and Oto-Laryngology in the same institution from 1895 to 1906. He was a member of the *Chicago Medical Society*, the *Chicago Ophthalmological Society* (of which he was once President), the *American Medical Association*, and the *Heidelberger Ophthalmologische Gesellschaft*. He wrote, as stated, the *first* work in English on the *"Germ Theory,"* and also a *"Textbook on the Nose,*

Pharynx and Ear." He also contributed numerous articles to American and German periodicals. He died at Santa Barbara California. His large collection of medical books was left to the John Crerar Library, at Chicago. He also left to the Crerar Library a fund, the yearly increment of which is devoted to the purchase of journals relating to the eye, ear, nose and throat. American Encyclopedia of Ophthalmology,Vol.7,p.5619-5621. The Ophthalmoscope, 1911,p.465.

Albrecht von Graefe in 1868

Graefe, Albrecht von (1828-1870) One of the greatest ophthalmologists of all time, inventor of iridectomy for glaucoma and of the linear operation for the extraction of cataract. Born at Berlin the son of Carl Ferdinand von Graefe, he received his early education at the French Gymnasium in Berlin. He then entered the study of medicine in the Berlin University. All who knew him in his student days declared him to be a man of incomparable brilliancy. Aug. 21, 1847, he received his degree, presenting as dissertation "*De Bromo ejusque Praeparatis.*" In 1848 he went to Prague, where he came under the influence of Ferdinand →Arlt, then in the zenith of ophthalmologic glory. To Arlt the thanks of the world are due for directing young von Graefe into ophthalmology as an exclusive life career. After parting with Arlt, von Graefe spent two years in Paris under →Sichel and →Desmarres. Then, for a time, he studied with →Jaeger, Father and Son, in Vienna, and in London with the great →Critchett and the still greater →Bowman. In London a beautiful friendship sprang up between Bowman, →Donders (of Utrecht) and the young von Graefe-a friendship on which was based an abundant three-cornered correspondence that endured till the death of the lamented von Graefe at the early age of 42. In 1850 von Graefe returned to Berlin, being now an epitome of all the ophthalmology, theoretical and practical, that existed in his day. He began instantly to practice, and was at once successful. In 1852 he became privat-docent in ophthalmology, presenting as his thesis "*Ueber die Wirkung der Augenmuskeln*." He was one of the first to employ the ophthalmoscope after its invention by von →Helmholtz in 1851. He it was who revived and improved the strabismus operation, which had fallen into disuse. In 1854 he founded the *"Archiv für Ophthalmologie*," which marked an epoch in the development of ophthalmology. His investigations into the nature and extent of the visual field were followed by rich results. He was the first to show that "optic nerve paralysis" was, in fact, a result of inflammation of the optic nerve. He discovered the relation which exists between cerebral tumor and the so-called "choked disc." He was the first to recognize, ophthalmoscopically, the conditions resulting from embolism of the *arteria centralis retinae.* His discoveries in connection with glaucoma were numerous and immensely important. In particular,,the operation of iridectomy as a means of treating glaucoma, has rendered him immortal [He did not, however, invent the procedure itself. The honor of so doing belongs to Joseph Beer, who, in 1795, both invented and employed this operation as a means of forming an artificial pupil, the →Cheselden operation (1728) having been a mere iridotomy. Von Graefe, however, was the first to employ an iridectomy as a means of treating glaucoma]. The modified linear extraction of cataract (1866) was also his invention [He was not the first to perform a combined cataract extraction-that is to say, to employ a preliminary iridectomy. The honor of having so done belongs to von Mooren of Düsseldorf (1864), but von Graefe was the first to do the combined linear operation]. For the performance of this operation von Graefe invented a straight and narrow knife, 2 to 3 mm. in width, which is still almost


CONTRIBUTION

LA PATHOLOGIE ET A LA THÉRAPIE

GLAUCOME

universally employed in cataract extraction, and still is known as the von Graefe, or, incorrectly, the Graefe knife. The linear operation, however, is now very seldom employed. Its purpose was to obviate suppuration-a consummation still to be devoutly wished, but now secured (since the time of Lister) by means of strict asepsis. Von Graefe's most important writings are as follows:"*Notiz über die Behandlung der Mydriasis*"[GM 5871];"*Vorläufige Notiz über das Wesen des Glaucoms*"[GM 5872] "*Über die Coremorphosis als Mittel gegen Chronische Iritis und Iridochororioiditis*"[GM 5873]; "*Beiträge zur Physiologie und Pathologie der Schiefen Augenmuskeln*"; "*Ueber Doppelsehen nach Schieloperationen und Incongruenz der Netzhäute* "; " *Ueber die Diphtherische Conjunctivitis und die Anwendung des Causticum bei Acuten Entzündungen*"; "*Ueber das Gesichtsfeld bei Amblyopie*"; "*Ueber die Iridectomie bei Iritis*";"*Über die Iridectomie bei Glaucom und über den Glaucomatösen Process*"[GM 5881]; "*Ueber den Werth Einseitiger Cataractextraction*" ; "*Ueber Lineare extraction*". "*Beiträge zur Lehre vom Schielen und Schieloperation*"[GM 5880]; "*Ueber Morbus Basedowii*"; "*Die Iridectomie bei Glaucom*";"*Ueber Embolie der Arteria Centralis Retinae als Ursache plötzlicher Erblindung*"[GM 5882];"*Neuritis Optica nach Cerebralkrankheiten*";"*Ueber Glaucom und Iridectomie*"; "*Ueber Calabar-Bohne*"; "*Ueber Muskuläre Asthenopie*"; "*Ueber die Modificirte Linearextraction*"[GM 5897]; "*Beiträge zur Pathologie und Therapie des Glaucoms*"; "*Ueber die Operation des Dynamischen Auswärtsschielens besonders in Rücksicht auf Progressive Myopie*";"*Über Complication von Sehnervenentzündung mit Gehirnkrankheiten*"[GM 5886]. *Rede über die Bedeutung ophthalmologischer Studien für die Medizin zur Feier des ein und siebenzigsten Stiftungstages* Berlin 1865. *The study of ophthalmology in its significance to medicine* translated by A. Samuelson. London 1865; *Sehen und Sehorgan* Berlin 1867. Like his celebrated cousin, →Alfred Graefe, Albrecht von Graefe was always of feeble health. This valetudinarianism was very much increased by his enormous activities -activities which, no doubt, were always somewhat over-stimulated by the presence at his clinics of great throngs of students and practitioners from every portion of the civilised world. Von Graefe was a very charitable and kindly man. All his patients, rich and poor, high and low, were alike welcome. There was never the slightest discrimination. All were met with gentleness and courtesy. Already in 1858 von Graefe was very much troubled by recurrent hemoptysis and pleurisy. He continued to work, however, until he died-July 20, 1870. At the time of his death he was still a young man, being only 42 years of age. No doubt his demise was hastened by his long-continued overwork. American Encyclopedia of Ophthalmology, Vol.7, 5621-5624.Albert


HANDBUCH

DER GESAMMTEN

AUGENHEILKUNDE

Prof. ALFRED GRAEFE und Prof. THEOD. SAEMISCH

ERSTER BAND.

ANATOMIE UND PHYSIOLOGIE.

ERSTER THEIL.

LEIPZIG.

Title of volume 1 of the rare first edition (7 volumes) of Graefe & Saemisch´s Treatise.

Graefe, Alfred Carl (1830-1899) Cousin of the more distinguished ophthalmologist, →Albrecht von Graefe, and nephew of that distinguished inventor in the field of general plastic surgery, →Carl Ferdinand von Graefe. Born in the castle of his grandfather, Martinskirchen, near Mühlberg, a. d. Elbe, he studied from 1850 to 1854 at the universities of Halle, Heidelberg, Würzburg and Leipsic. His medical degree was received at Halle in 1854, presenting as dissertation " *De canaliculorum Lachrymalium Natura.* " From 1855-58 he served as assistant to his cousin, the world-renowned Albrecht von Graefe. The cousins were nearly of the same age (Alfred being the younger by only two years) and, until the death of Albrecht were fast friends. In 1858 Alfred became privat-docent in ophthalmology at Halle, and in the same year founded the "*Klinik für Augenkranke*"-at first a private, but later a public institution. The attendance at this hospital was enormous, as was properly the case when the founder and surgeon-in-chief of the institution held a record of 400 cataract extractions without the loss of one single eye.[Graefe seems to have been a careful refractionist, as well as a brilliant operator. Thus, *The Ophthalmoscope*, Jul.1908, p. 560: Describing the life of that eminent Scot, Sir Donald N. Wallace, the "World" makes a singular statement about the state of ophthalmic knowledge in this country some 40 years ago. While a student in Edinburgh in the early 60's Sir Donald found that he was unable to read for more than a few minutes at a time. He accordingly consulted "the best men" in England, but it was not until he

saw Graefe in Berlin that the cause of his distress in the shape of astigmatism was diagnosed and remedied.]. In 1864 Graefe became *extraordinarius,* and, in 1873, *ordinarius.* To Graefe the honor belongs of introducing into ophthalmology Lister's ideas of sterilisation. These ideas, of course, required a great deal of modification, before they became of much use in this special field, and most of these modifications we owe to Graefe. Suppuration after cataract operations at once became a thing of the past, or at least of very rare occurrence. Graefe was also the first to observe a cysticercus in, and to remove one from, the interior of the eye. This was very soon after the invention of the ophthalmoscope by →Helmholtz (1851) and, in a very few years thereafter, Graefe had constructed a highly successful " special localizing ophthalmoscope, " the object of which was to aid in the removal of cysticerci. Perhaps his most important writing was: *"Klinische Analyse der Motilitdtsstörungen des Auges"* (Berlin, 1858), which still remains a very useful work. From 1874 to 1880 he published, together with Saemisch, the world-renowned "*Graefe-Saemisch Handbuch der Gesamten Augenheilkunde*." To this monumental affair he contributed the article "*Die Motilitätsstörungen des Auges*"(*The Disturbances of Motility of the Eye).* He was a very prolific writer. Among his numerous contributions, not already mentioned, the following are most important: "*Ueber Cysticercus-Extraction aus den tiefsten Theilen des Auges, mit Construction eines Localizations-Ophthalmoskops"*; "*Ueber Ischaemia, Retinae*"; "*Ueber das Binocularsehen bei Schielenden*"; "*Ueber Wundbehandlung bei Augenoperationen*"; "*Ueber Extraction Unreifer Staare*"; "'*Ueber, Enucleatio Bulbi*"; "*Ueber Caustische und Antiseptische Behandlung der Conjunctival-Entziindungen, mit Besonderer Berileksichtigung der Blennorrhoea Neonatorum.*" He also wrote a good deal of poetry and had he not chosen to become an ophthalmologist, he might very well have been a poet of the first rank. There was really a good deal of boyish fun in him. Thus one writer relates: "Having removed two cysticerci in one sitting from one and the same eye (July 12, 1892) he, in a jovial manner, announced to his friends and acquaintances, elegantly printed on a gold-bordered card: "The happy delivery of two, lively cysticerci". Because of ill health, he retired in 1892 from active practice and the direction of the "Klinik," and returned to beautiful Weimar. Here, for a number of years, he continued to write. He died at Weimar, April 12, 1899. In his honor was founded the well-known "Graefe Medal, a mark of distinction conferred "every tenth year on that person of whatever nationality who has done most to advance ophthalmology. " The first went to H.von →Helmholtz, the second to Th. →Leber.American Encyclopedia of Ophthalmology,Vol.7,p.5624-5626

Carl Ferdinand von Graefe

Graefe, Carl Ferdinand von (1787-1840) German general surgeon of the early 19th century, the father of Albrecht von→ Graefe and himself a well known ophthalmologist. Born at Warsaw, the son of an agent of Count Moszynski, he pursued the study of medicine at Dresden, Halle, and Leipsic. At the last named institution he received his degree in 1807. In 1808 he became Court Councillor and Body Physician to the reigning Duke of Anhalt-Bernburg-Alexius in Ballenstedt. Here he erected a hospital, and was otherwise very active. In 1810 he was called to Berlin as professor-in-ordinary and director of the Clinico-Chirurgico-Ophthalmic Institute. In 1826 he was ennobled by Czar Nicholas of Russia, and the honor was recognized by his own king. In 1830 he was called to London to treat Prince George of Cumberland for an ocular affection. Having gone to Hanover for the purpose of performing an ophthalmic operation on the Crown Prince, he died there July 4, 1840. As an operator on the eye, C. F. von Graefe was absolutely unexcelled. He was also a brilliant lecturer on ophthalmology, and a writer of no mean merit. His investigations into the cause, nature, and cure of Egyptian ophthalmia, are of very great value today (1915), and are often referred to by ophthalmic writers when treating of this disease. In the general field his light burned still more brightly. He was the first in all Germany to perform a staphylorrhaphy. He invented a combination of the Indian and the Italian methods of rhinoplasty-a procedure which still (1915) is known under the name of "*The German Method*." He was the first in Germany to tie the innominate artery. He invented the "*compressorium*" for the meningeal arteries, the ligature-staff, an operating-table, the coreoncion, and numerous other instruments and paraphernalia. His most important writings are: 1. *Angiektasie, ein Beitrag zur Rationellen Cur und Erkenntniss der Gefässausdehnungen*" (Leipsic, 1808). 2. "*Normen für die Ablösung Grösserer Gliedmassen nach Erfahrungsgrundsätzen Entworfen*" (Berlin, 1812,

with 7 plates). 3. "*Rhinoplastik, oder die Kunst, den Verlust der Nase Organisch zu Ersetzen*" (Berlin, 1818, with 6 plates). 4. *Die Gaumennaht, ein Neuentdecktes Mittel*" *(Jour. für Chir. u. Augenh.,* 1820). 5. "*Die Epidemisch-Contagiöse Augen blennorrhoe Aegyptens in den Europäischen Befreiungsheeren*" (Berlin, 1823) 6. Repertorium augenärztlicher Heilformeln Berlin 1817. American Encyclopedia of Ophthalmology,Vol.7,5626-5627.

Graefe, Edward Adolf (1794-1859) Younger brother of Carl Ferdinand von Graefe. Born at Pulsnitz, in the Kingdom of Saxony, he studied medicine at Halle and Berlin, receiving his degree at the latter institution in 1817. In 1820 he settled in Spremberg, but five years later moved to Berlin. He was rather a voluminous contributor to the literature of general medicine, and composed a number of papers on ophthalmologic subjects. Of these the most important is "*Erfahrungen über den Lichtstrahlen Brechende Vermögen der Durchsichtigen Gebilde in Menschlichen Auge*" (1820). He died at Unruhstadt in the Province of Posen. American Encyclopedia of Ophthalmology,Vol.7.p.5627.

Graham, Clarence H. (1906-1971) American psychologist, professor of Columbia University. He was renowned for his contributions to visual science and for his training of over 70 recipients of the doctor of philosophy degree. Graham received his A.B., M.A., and Ph.D. degrees from Clark University in Worchester. His doctoral dissertation (1930) concerned binocular summation. Thereafter, he collaborated with Dr. R. Granit and later with Dr. H. K. Hartline in the recording of nerve impulses in single cells of Limulus. From 1934 through 1941, he and his students at Brown University used psychophysical techniques to study threshold interactions of intensity, time, and area. During and after World War II, he was interested in space perception. At Columbia in the 1950s, he turned his attention to color vision and, in collaboration with Dr. Yun Hsia, investigated some fundamental characteristics of color blindness. In his last years he turned again to space perception, and he and his students studied movement perception. Graham was the recipient of many honors and awards including the Warren Medal of the Society of Experimental Psychologists (1941), the Presidential Certificate of Merit (1948), The Tillyer Medal of the Optical Society of America (1963), and the distinguished Scientific Contribution Award at the American Psychological Association (1966). Graham was elected to the National Academy of Sciences, the American Philosophical Society and the American Academy of Arts and Sciences. Dr.Graham's living memorial is the many graduate students he trained during his career. AJO 1971,72:1018

Graham, James (*?-1830) A well known London physician, who seems to have devoted considerable attention to the eye. His only ophthalmologic writing is "Thoughts on the Present State of the Practice in Disorders of the Eye and Ear, etc." (London, 1775). The date of his birth is not known, but he died in 1830 at a very advanced age.American Encyclopedia of Ophthalmology,Vol.7,p.5628.

Grand Boulogne, Alphonse de *see* **Alphonse de Grand Boulogne**

Grand, Paul le *see* **Le Grand, Paul**

Grandmont, Pierre Anatole Gillet de see **Gillet de Grandmont**

Grant, W. Morton (1915-) American Ophthalmologist who lived and worked in Boston, Massachusetts. Educated at Harvard College and Harvard Medical School (MD, 1940), Grant spent the rest of his career at the Massachusetts Eye and Ear Infirmary, directing its Glaucoma Service. He advanced to the rank of Professor at Harvard in 1967. Grant initially worked with Everett Kinsey on the mechanism of formation of aqueous humor (e.g. *The secretion-diffusion theory of intraocular fluid dynamic*. Br. J. Ophthalmol. 1944; 28: 355-361). These studies were set aside cause of World War II and a need for investigative work on mustard gas. This led to a series of publications on the effects of this gas and other poisons on the cornea (e.g. *Determination of the rate of disappearance of mustard gas and mustard intermediates in corneal tissue*. J. Clin. Invest. 1946; 25: 776-779), as well as attempts at influence on its destructive effect. After the war years, Grant returned to the problem of glaucoma. He clarified the process of ocular outflow in the trabecular meshwork and developed a method of ocular tonography, a major contribution to the field (*Clinical tonography*. Trans. Am. Acad. Ophthalmol. Otolaryngol. 1951: 774-781). Of great clinical importance was his pioneering work on carbonic anhydrase

inhibitors for lowering the intraocular pressure (Grant and Trotter *Diamox (Acetazolamide) in the treatment of glaucoma*. Arch. Ophthalmol. 1954; 51: 735-739). In the laboratory, Grant developed a model to study the resistance to aqueous flow in the trabecular meshwork (*Experimental aqueous perfusion in enucleated human eyes*. Arch. Ophthalmol. 1963; 69: 783-801). This technique has since been fruitfully utilized by a number of his followers. Grant had a unique and long-standing professional relationship with a distinguished clinician, Paul Chandler. Together they were monumental thinkers in the field of glaucoma, and their collaboration resulted in a textbook "*Glaucoma*" (Philadelphia. Lea & Febiger, 1979) which continues, in updated versions, to guide generations of clinicians. Among other specific recommendations, they clarified the mechanism of so-called malignant glaucoma (Chandler, Simmons and Grant: *Malignant glaucoma, medical and surgical treatment.* Am. J. Ophthalmol. 1968; 66: 495-502). Plateau iris was shown to have consequences for the intraocular pressure (Wand, Grant, Simmons, and Hutchingson: *Plateau iris syndrome*. Trans. Am. Acad. Ophthalmol. Otolaryngol. 1977; OP 122-129). Although Grant's fame is so firmly tied to the subject of glaucoma, he had also, time for issues within toxicology. Aside from the mustard gas problem, chemical burn to the ocular surface was researched in depth. He also described a simple way to dissolve calcifications of the cornea (Arch. Ophthalmol. 1952; 48: 681-685). Gradually, Grant's interest in the pharmacology and toxicology deepened and it resulted in the monumental text "*Toxicology of the Eye*" which appeared in four editions from 1962 to 1993. Grant retired in 1982. He has been the recipient of numerous honors, such as the Proctor Medal 1956, the Knapp Medal 1961, the Howe Medal 1968 and a "*Festschrift*" from the New England Ophthalmological Society 1990. (By C. H. Dohlman) (SM)

Grapheus, Benevenutus (12th century, 14th century?) of Jerusalem (also called, Benvengut, Beneventus, Vengut, Grassus, Grassi, Grasso, and Ben Vengut de Salerno). The most famous ophthalmologist of the Latin (European, or Christian) Middle Ages, and the author of the *first* monograph on diseases of the eye printed by means of movable types. The time and place of his birth and death are all unknown; Haeser believes he was born in Jerusalem. It is likely that he flourished in the 14th century, but Julius→Hirschberg refers him to the middle of the 12th. He was probably a Jew; he certainly studied at Salerno, and quite as certainly practiced in Italy and the South of France. He wrote a book on diseases of the eye, called "*Practica Oculorum*," which, for centuries, was the standard work of its kind throughout Christian Europe (English translation Stanford 1929). Numerous manuscripts of this treatise are still extant, written in various early Western European languages, as well as in Latin, and as early as 1474, it received the honors of print. Despite its great and long-standing popularity, however, the book possesses but little original value. It seems to have owed its remarkable acceptance to the fact that it comprised not only the oculistic science of the ancients, but also that of the Arabians. American Encyclopedia of Ophthalmology, Vol.7,p.5631-5632.

Grasmeyer, Paul Priedrich Herman (? - ?) German physician. The *first* one in history to employ a mydriatic in connection with diseases of the eye. Born in Hamburg , Germany, he received his medical degree at Göttingen, where he settled for practice. While there he wrote "*Diss. de Conceptione et Foecundatione Humana*" (Göttingen, 1789), "*Abhandlung von Eiter und den Mitteln, ihn von allen ihm Aehnlichen Feuchtigkeiten zu Unterscheiden*" (Göttingen, 1790). Later he moved back to his native Hamburg and there he first made use of belladonna in the practice of ophthalmology. In the presence of Reimarus, in 1796, he extracted a cataract via a pupil which had been dilated for that purpose by means of belladonna. American Encyclopedia of Ophthalmology,Vol.7,p.5632

Grassi *see* **Grapheus**

Grassi, Orazio (1582-1654) astronomer and physician, born in Savona, Italy, entered the Jesuit order in 1600 and afterward was a professor of mathematics at Genoa and Rome. Grassi is remembered for his dispute with Galileo over the nature of comets (1618-1626), a dispute that centered on Galileo's contention that, contrary to Aristotle's teaching, change could occur in the heavens, and that observation and scientifically derived principles might overrule authority. He wrote: *De iride. Disputatio Optica*. Roma 1617 and *Cometae.De tribus cometis anni 1618* 1619.

Grassus *see* **Grapheus**

Graves, Robert James (1797-1853) Irish physician, by some considered as the discoverer of the so-called Graves' disease, or exophthalmic goitre. Born at Dublin in 1797, he studied at Dublin, London, Berlin, Göttingen, Hamburg, and Copenhagen. In 1821 he began to practise in Dublin. A short time afterward, he founded the Park Street School, in which he taught medical jurisprudence, anatomy and internal medicine. He was a skilful diagnostician, and a teacher of unquestioned genius. He was physician to the Meath Hospital, the County of Dublin Infirmary and the Hospital for Incurables. In 1827 he became Professor of the Institutes of Medicine at King's and Queen's College of Physicians. He was also a Fellow 'and Censor of the College of Physicians. For ten years he was one of the editors of the *Dublin Journal of Medical and Chemical Science*, and he contributed numerous article(to this and to various other periodicals. Among his best known books are: *1. Clinical Reports of the Medical Cases in the Meath Hospital and County of Dublin Infirmary during the Session of 1826-27* (in collaboration with Stokes; Dublin, 1827). 2. *A Selection of Cases from, the Medical Records of the Meath Hospital* (in collaboration wit Stokes; Dublin, 1827). 3. *Lecture on the Functions of the Lymphatic System* (Dublin, 1828). 4. *Clinical Lectures Delivered during the Sessions of 1834-5 and 1836-7* (Philadelphia, 1838). 5. *A System of Clinical Medicine* (Dublin, 1843; various editions in other years and countries). 6. *Clinical Lectures on the Practice of Medicine* (Dublin 1844). His chief performance was the discovery of the symptom complex which is sometimes called *Graves' disease*, sometimes *Basedow´s disease*, and, perhaps most frequently of all, exophthalmic goitre. For a discussion of the question of priority in connection with this matter, see →Basedow. Twenty-five years after his death a statue was erected to his honor in Dublin. American Encyclopedia of Ophthalmology,Vol.7,p.5634

Gray Charles M. (?-) American, Associate Professor of Neurobiology. Gray received his B.S. (Biochemistry) at University of Arizona in 1981 and his Ph.D. (Neuroscience) Baylor College of Medicine in 1986. His interests are focused on Neuronal mechanisms underlying mammalian visual pattern recognition. Integration of visual information received by neurons in different locations of the visual cortex. Papers: Gray CM. 1994. *Synchronous oscillations in neuronal systems: mechanisms and functions*. Journal of Computational Neuroscience 1:11-38; Jagadeesh B, CM Gray, and D Ferster. 1992. *Visually-evoked oscillations of membrane potential in neurons of cat striate cortex studied with* in vivo *whole cell patch recording*. Science 257:552-554; Gray CM, AK Engel, P Koenig, and W Singer. 1992. *Synchronization of oscillatory neuronal responses in cat striate cortex: temporal properties*. Visual Neuroscience 8:337-347. Address: Center for Neuroscience, 1544 Newton Court, Davis, CA 95616 Tel.: (530) 757-8837 cmgray@ucdavis.edu (AB)

Gray, A.S. (1826-1907) Australian ophthalmologist, founder of the Victorian Eye and Ear Hospital in Melbourne. The Ophthalmoscope, London 1907,p.614

Gray, Henri (1825-1861) Famous British anatomist of considerable importance in ophthalmology both because of the ocular portion of his *"Anatomy, Descriptive and Surgical"*London 1858 (33rd edition 1962), [GM 418]and also because of his "*On the Anatomy and Physiology of the Nerves of the Human Eye*," which brought him, in 1839 the triennial prize of the Royal College of Surgeons. He was Professor of Anatomy at St. George's Hospital and Assistant Surgeon at the same institution. This remarkable man died at the early age of 36, in 1861.American Encyclopedia of Ophthalmology,Vol.7, p.5635.

Greef, Carl Richard (1862-1938) German ophthalmologist. Greef was born in Elberfeld, Germany, and received his M.D. in 1888 at Marburg. He postgraduated in Berlin, Frankfurt, and other European cities before becoming professor of ophthalmology at the University of Berlin (1901). He wrote particularly on the pathologic histology of the eye: *Der Bau und das ophthalmoskopische Aussehen der Chorioidea*. Breslau: J.U. Kern's Verlag (Max Müller), 1897 (in: Magnus HF: *Augenärztliche Unterrichtstafeln*, Heft 12); *Anleitung zur mikroskopischen Untersuchung des Auges*. Berlin 1898;American edition: *Guide to the Microscopic Examination of the Eye*, Philadelphia 1902 (2nd Am.ed. New York 1913; *Die Pathologie des Auges*, Berlin 1902-1906; *Studien über epidemische Augenkrankheiten auf Grund von Untersuchungen* Jena 1898.*Atlas of External Diseases*

of the Eye, New York 1913 (2nd ed.1914). He re-edited Schweigger´s *Vorlesungen über den Gebrauch des Augenspiegels* Wiesbaden 1895. Albert.JPW

Green, John (1835-1913) American ophthalmologist of St.Louis, MO., inventor of Green's operation for entropium, Green's extirpation of the lachrymal sac, Green's styles, Green's tendon-tucker, Green's test types, etc. He was born at Worcester, MA., the nephew, grandson, and great-grandson of doctors all of whom bore the name of John Green and all of whom resided at Worcester, Mass. Green entered Harvard College in 1851, received the degree of A. B. in 1855, that of S. B. in 1856, A. M. in 1859, and M.D. in 1866. From 1858-1860 he studied medicine in Europe. In 1857 he accompanied Prof. Jeffries Wyman on a scientific expedition to Surinam. Four years later he began to practise medicine in Boston. In 1862 he served on the Western U. S. Sanitary Commissions, and was for a time acting assistant surgeon in the armies of the Tennessee. He was a delegate to the *American Medical Association* in 1864, 1865, 1873 and 1877. In 1865 he went again to Europe for further study in ophthalmology and on returning to America, moved to St. Louis. There he at once became a successful and influential ophthalmologist. Green was made a member of the *American Ophthalmological Society* in 1866, and was one of the charter members of the *American Ophthalmological Society*. He was a member of the *International Ophthalmological Congress* in 1872, a delegate to the *International Medical Congress* in 1876 and secretary in that congress to the section on ophthalmology. He was appointed, full professor of ophthalmology and otology in the St. Louis College of Physicians and Surgeons in 1866, lecturer on ophthalmology in the St. Louis Medical College in 1871, surgeon to the *St. Louis Eye and Ear Infirmary* in 1872, consulting ophthalmic surgeon to the St. Louis City Hospital in 1872, and ophthalmic surgeon to St. Luke's Hospital in 1874.American Encyclopedia of Ophthalmology,Vol.7,p.5638-5647[with an extended, if not complete bibliography of J. Green]. Albert. The Ophthalmoscope,1914, p.520.

Green, Joseph Henry (1791-1863) English surgeon, anatomist, physiologist and ophthalmologist. Born in London, he studied at Berlin and also at St. Thomas's Hospital, London, where, in 1813, he was made prosector. In 1815 he became an M. R. C. S., and, three years later, instructor in anatomy and physiology at St. Thomas's. He was a very successful operator, especially for stone, having performed, before 1827, 40 lithotomies, with only one death. Green is credited to have performed the *first* thyroidectomy. [GM 3814]. In 1828 he published his *"Manual of Modern Surgery,"* and two years later was appointed Professor of Surgery at the newly founded King's College, a position which, however, together with his private practice, he gave up in 1837. He was also for a few years a professor of anatomy at the Academy of Fine Arts. Green's "*Lectures on Diseases of the Eye"* reached its ninth edition in 1836, and was highly esteemed both by students and practitioners. He also wrote: *The principles and practice of ophthalmic surgery, comprising the anatomy and pathology of the eye* London 1839; *The dissector´s manual* London 1820; *A letter to Sir Astley Cooper* London 1825; *The touchstone of Medical Reform* London 1841; *Vital dynamics. The Hunterian oration* London 1840. In 1849 he was President of the College of Surgeons, and again in 1858. American Encyclopedia of Ophthalmology, Vol.7, p.5647-5648.Albert.

Greene, Duff Warren (1851-1913) American ophthalmologist of Dayton, Ohio. He was born at Fairfield, Greene County, Ohio, the son of Dr. John W. Greene, a general practitioner of that place. He, attended the Ohio Wesleyan University, at Delaware for two or three years, but did not graduate. His medical degree was received at the Ohio Medical College, Cincinnati, in 1876. For a time he practised general medicine at Fairfield in partnership with his father. Then, pursuing the study of ophthalmology for several months in New York City, he moved from Fairfield to Dayton, where he practised as an ophthalmologist until the very day, almost hour, of his death-more than thirty-one years. In 1888 he studied ophthalmology in Vienna for six months. In 1909 he went to Julundur, India, where he made a special study of the intracapsular method of cataract extraction as practiced by Colonel Smith. In 1912 he proceeded again to Europe, where he studied the eye in various hospitals in all the medical centers. 1884 he was appointed oculist and aurist to the National Military home, Ohio, a position which he held twenty-nine years, until his death. He belonged to numerous medical societies, general and special, and in 1912 was made a member of the *Oxford Ophthalmological Congress.* For the last ten

years of his life he was associated in practice with Dr. Horace Bonner. Dr. Greene was a voluminous and excellent contributor to ophthalmic literature. Aside from numerous journal articles, he wrote most valuable chapters on the intracapsular operation for cataract in Vol.2 of Casey A. Wood's *System of Ophthalmic Operations* and in *American Encyclopedia of Ophthalmology*. American Encyclopedia of Ophthalmology, Vol.7,p.5837-5838; The Ophthalmoscope, London 1913,p.702.

Greeves, Reginald Affleck (1878-1966) British ophthalmologist, Emeritus Consultant Ophthalmic Surgeon to the Middlesex Hospital and to Moorfields Eye Hospital. Born in Strandtown. Co. Down, the youngest of a family of eleven children, he was educated privately and at Queen's University, Belfast. In 1900 he graduated B.A. with honours, and gained a first class exhibition. After a distinguished undergraduate career in medicine at University College Hospital, London and at Guy's Hospital, he qualified as M.B. London (1903), B.S. with honours (1906). M.R.C.S. and L.R.C.P. (1906) and F.R.C.S.. England(1906). Greeves was not immediately to specialize in ophthalmology but went to South Africa where he was a country doctor in the Transvaal. After acting as Surgical Tutor and Registrar to Guy's Hospital, he decided to specialize in ophthalmology. He was appointed assistant ophthalmic surgeon to the Middlesex Hospital in 1914, later becoming full ophthalmic surgeon to that hospital, from the active staff of which he retired in 1946. He was elected to the surgical staff of Moorfields in 1915, after two years as the curator of the Museum and Pathologist to the hospital, and retired in 1938, to become an active member of its staff again during the war years, when he held outpatient clinics at the hospital and operated regularly at the Tindal House Emergency Hospital in Aylesbury. Greeves was a particularly able clinician, a well-trained pathologist, and a competent surgeon with the good judgment that this demands. His opinion on difficult fundus cases was sought by his former pupils and colleagues until his complete retirement in 1960. He wrote many important papers on the pathological and clinical aspects of ophthalmology and included in his teaching and his publications many of the nice points of refraction that are so important in ophthalmic practice. In 1941-2 he was president of the Ophthalmological Society of the United Kingdom, of which he had been an unusually active member since 1911, and had contributed richly to its transactions. Brit.J.Ophthal.1966,50:744; AJO 1967,63:181

Gregg, Norman (Sir Norman) McAlister (1892-1966) Australian ophthalmologist. Gregg graduated at the University of Sydney in 1915 and immediately left for the first World war wherein he served as a Captain R.A.M.C. on the western front and gained the Military Cross (1915-19); Thereafter he studied ophthalmology in London, took the D.O.M.S. in 1922 and returned to Sydney where he worked at the Prince Alfred Hospital and the Royal Alexandra Hospital for Children, an institution of which he subsequently became president, and was lecturer in ophthalmology at the university (1939-52). He was also President of the Children's Medical Research Foundation. During all his working life he conducted an exceptionally busy and successful private practice. Gregg attained his world-wide reputation because of the revolution he created by his inspired observation that rubella contracted during the first trimester of pregnancy could lead to the occurrence in the child of congenital cataract, deafness, and anomalies of the heart, great vessels, and other organs (1941-44). This discovery resulted not from experimenting in the laboratory but from painstaking and exact clinical observation at which he was an adept; in a sense it resembles the discovery of vaccination by Edward Jenner from the observation that milkmaids who had contracted cowpox were immune from smallpox. The importance of Gregg's work in the sphere of teratogenesis lies in the fact that it constituted the first proof that an environmental agent could cause congenital deformities in man, and disproved the validity of the general belief that such clinical syndromes of congenital origin were always due to a faulty "germ plasm". His observations were confirmed by many others in all countries of the world and led to a revolution in thought in this branch of medical science. From the practical point of view his work led to the protection of pregnant women from this otherwise harmless infection by anti-rubella serum. Gregg was widely honoured; he was awarded the Charles Mickel Fellowship by the University of Toronto (1952), elected a Fellow of the Royal College of Obstetrician and Gynaecologists (1952) and of the Royal Australian College of Physicians (1953), awarded a doctorate in medicine *honoris causa* of Melbourne University (1952) and an honorary D.Sc. of Sydney University (1953) and

was knighted in the same year. In 1963 he was elected an Honorary Fellow of the Australian Post-graduate Federation in Medicine, and in 1964 he shared with Dr. Kate Campbell of Melbourne the 10.000 dollar Encyclopaedia Britannica Award for the most outstanding achievement of medical research in Australia. Brit.J.Ophthal.1966,50:679-680; AJO 1967,63:180-181

Gregory, Thomas Stanley Sherwood (1916-1981) British ophthalmologist. Thomas Stanley Sherwood Gregory was born at New Maiden, Surrey. He was educated at Newport Grammar School, Essex, Sherborne School and Gonville and Caius College, Cambridge. He studied medicine at St Bartholomew's Hospital, London, and qualified MB, BCh in July 1940. He spent a year as house physician at St Bartholomew's and was RSO at the Royal Masonic Hospital for two years, followed by six months as ophthalmic house surgeon at Guy's Hospital. He took the DOMS in 1947 and the FRCS in 1948. During his training he was influenced by J.D. Morgan Cardell, 0. Geyer Morgan and F.W. Law. Gregory was an eye specialist in the RAMC 1944-47 with the rank of Captain. After the war he was in ophthalmic practice in the Aylesbury Health District and became a casualty ophthalmic surgeon for the Aylesbury and High Wycombe Health District. He received following titles: MRCS and FRCS 1948; BA Cambridge 1937; MA 1949; MB,13Ch 1940; DOMS 1947.LFRCSE

Grey-Edwards, Henry (1856-1913) British ophthalmologist of Bangor. He graduated at the Dublin University in arts and in medicine. He held the post of ophthalmic surgeon to the Caernarfon and Anglesey Infirmary, as well as to the North Wales Blind Society. He was a member of the Oxford Ophthalmological Congress and a member of the Ophthalmological Society of the United Kingdom. He wrote about the *efficacy of subconjunctival injections* (1907) and the *use of staphylococcic vaccine in the treatment hypopyon-ulcer of the cornea* (1908), both articles in *The Ophthalmoscope*. The Ophthalmoscope, London 1913,p.570.

Griffin, Ovidus Arthur (1872-1911) American ophthalmologist of Ann Arbor, Mich. He was born in Fayette, Ohio, received the degree of B. S. at the State Normal School, Fayette, and his medical degree at the University of Michigan, June, 1899. He studied the eye, ear, nose and throat at New York, Philadelphia, Vienna and Berlin. For three years he was Dr. Flemming Carrow's first assistant and demonstrator of ophthalmic and aural surgery and clinical ophthalmology and otology in the department of medicine and surgery in the University of Michigan. Until his death he continued to practice in Ann Arbor. He was a member of the *Ann Arbor Medical Club*, the *Washtenaw Medical Association*, the *American Medical Association*, and the *American Academy of Ophthalmology and Oto-Laryngology*. Among his more important writings are: 1. *Disorders from Eye Strain*. (Read before the Michigan State Medical Society, at Petoskey, June, 1905.) 2. *Complete Removal of the Faucial Tonsils*. (Read before the American Academy of Ophthalmology and Oto-Laryngology, 1906.) 3. *Ocular Symptoms of Nasal Origin*. (Read before the Michigan State Medical Society, 1907.) 4. *Diseases of the Ear*. A Student's Manual: Lea Bros., 1905. He invented a number of useful instruments, among them the well known Griffin tonsil scissors. He also designed a model operating chair. American Encyclopedia of Ophthalmology, Vol.7,p.5648-5649.

Griffin, William Watson (1869-1937) New Zealand ophthalmologist, born at Timaur, South Canterbury, New Zealand, the fourth child and second son of Samuel Stewart Griffin and Catherine Finegan, his wife. His father, born in Canada, was medical man, clergyman, politician, and pioneer settler. He was educated at Christ's College, Christchurch, where he did brilliantly gaining five first class two prizes in 1885, the first. Tancred prize for English history in 1887, and the senior Somes scholarship. He entered the Otago University in 1888 and graduated M.B., B.Ch. in 1891, after winning a special prize given for proficiency in diseases of the eye and ear. In 1892 he served as the first junior resident surgeon at the Dunedin Hospital, and at the end of his term of office sailed for England in the s.s. *Fifeshire* to continue his medical studies in London. In London he acted as clinical assistant to Edward Nettleship at the Ophthalmic Hospital, Moorfields, and to William Lang at the Middlesex Hospital, and attended the National Hospital for Nervous Diseases at Queen Square, Bloomsbury. In 1894 he was admitted a Fellow, and it was noted with pride by the University of Otago that he was the first to obtain the

distinction in so short a time after leaving New Zealand. By the advice of Lang and other friends he then determined to settle in England and devote himself to ophthalmology. He therefore went to Brighton, where he was elected ophthalmic surgeon to the Royal Sussex County Hospital on 12 June 1901 and to the Worthing Hospital, acquired a good practice, and was a vice-president of the ophthalmic section when the British Medical Association met in the town in 1913. On 27 April 1908 he joined the newly formed Territorial Army with the rank of major, R.A.M.C.; in 1914 he was called up and was attached to the Second Eastern General Hospital, where he served throughout the war as the eye specialist. After demobilization in 1919 the health of his wife compelled him to live abroad, so that he resigned his posts at Brighton; on his return to England he practised at Margate. He earned following degrees: M.R.C.S. 15 November 1893; F.R.C.S. 11 October 1894; M.B., B.Ch. New Zealand 1891; L.R.C.P. 1893. Brit med J. 1938,1:151;LFRCS 1930-1951:347-348

Griffith, Alexander Hill (1858-1937) British ophthalmologist born in Aberdeen, the seventh son of Charles Fox Griffith, J.P. He was educated at the Aberdeen Grammar School and University of Aberdeen and passed his final examinations for the degree of M.B., C.M., before he was twenty-one years of age. After his qualifying examination (April, 1879) and before he received his M.B. degree in April, 1880, he was appointed House Surgeon at the Manchester Royal Eye Hospital, a position which he held for nearly seven years. At that time little was done for the treatment of astigmatism and it was principally due to Griffith that adequate attention was given to this branch of refraction. Again during the time of his residence he was very interested in fields of vision and as a result of his investigations he wrote an excellent paper on this subject in the Manchester Medical Chronicle. In 1883 he obtained the degree of M.D. In 1886 Griffith was appointed to the Honorary Surgical Staff of the hospital, first as assistant surgeon and three years later to the full staff. He was now in a position to pursue his clinical investigations and perfect his technique. This was supplemented by his love for histology. He was a keen microscopist and cut all his own sections. In 1896 he took the F.R.C.S.(Edin.). His contributions to ophthalmic literature evidently attracted the attention of his contemporaries, for in 1897 he was awarded the Middlemore prize by the British Medical Association. In 1898 he wrote the section on diseases of the choroid and vitreous in Norris and Oliver's *Textbook of Ophthalmology*. This was an excellent contribution on these subjects and amongst many interesting points he expressed views on the permeability of the suspensory ligament of the lens, a subject noted by him in a previous communication to the Ophthalmological Society. In his chapter on choroidal disease he emphasized the importance of transillumination as an aid to the diagnosis of choroidal neoplasms. In 1899 Griffith was appointed Honorary Ophthalmic Surgeon to The Manchester Royal Infirmary and later lecturer on ophthalmology to the University of Manchester. He joined the Ophthalmological Society in 1885, was on its committee from 1893 to 1896 and later was a Vice.President (1905 to 1908). For many years he was a member of the Manchester Medical Society and made several valuable contributions to it. For forty-three years he was a member of the British Medical Association was its secretary to the section of Ophthalmology at the annual meeting held in Manchester in 1902, and was Vice President at the Belfast Meeting in 1909. He was one of the founders of the North of England Ophthalmological Society and was its first President. On his appointment to the stall of the Manchester Royal Infirmary he was brought into contact with the students and it was soon apparent that his abilities as a teacher were great. Griffith was an excellent operator. It was really delightful to watch his technique in such an operation as iridectomy for glaucoma for no anterior chamber seemed too shallow for him to enter with a broad keratome. Again, his cataract operations were beautifully executed and his originality is well illustrated by the novel manner in which he approached the corneo-sclera when trephining for glaucoma-a technique mentioned in Elliot's book on this subject.BJO 1938,22:123-125

Griffith, Arthur Donald (1882-1944) British ophthalmologist. Griffith qualified in 1905, obtaining the Fellowship of the Royal College of Surgeons in 1909. He was appointed to the honorary staff of the Royal Eye Hospital, where he had previously served as House-Surgeon, Registrar and Pathologist. He combined his duties at the Royal Eye Hospital with service as Ophthalmic Surgeon at the Westminster Hospital. During the hostilities of

1914-18 he served as Ophthalmic Specialist and Officer-in-Charge of Military Hospital, Hamrum, Malta from 1914-16, Surgeon Specialist at Salonika 16-17 and Senior Medical Officer Faenza area, Italy 1918-19. His war experiences were published in *The Lancet* in 1916: *„Injuries of the Eye and Orbit"*. After the war his special interests focused on stereoscopic vision and radiotherapy published in the *Transactions of the Ophthalmological Society* and in the *Proceedings of the Royal Society of Medicine*. At the Royal Eye Hospital his memory was perpetuated by a lectureship in optics.BJO 1944;28:258-260.Times 7.Mar 1944,6g;Lancet 1944,1:391.LFRCS 1930-1951,348-349.

Grimaldi, Francesco Maria (1618-1663) Italian physicist, who discovered the diffraction and the interference of light. Born in Bologna, Italy, he became an instructor in mathematics at the Bolognese Jesuit College. His only work on optics was entitled, *"Physico-Mathesis de Lumine, Coloribus et Iride Aliisque Annexis Libri ll,"* which did not appear until 1665, that is to say, two years after his death. In this small volume we find, among others, an account of its author's great discoveries. First, he took up the diffraction of light. The experiment showing this phenomenon was performed as follows: In a room that was otherwise dark, a single cone of light was permitted to enter, and was caught upon a white ground, or screen. Then a staff was held between the screen and the place of entrance of the light, and the shadow of the staff on the screen was examined closely. Grimaldi then observed: *1*. That the full shadow was larger than, by the ordinary calculation, it should have been. *2.* On either side of the shadow was a zone of color, which, in the direction of the shadow, was blue, and, in the opposite direction, red. *3*. The light-intensity and the color-intensity of both these color zones diminished from the shadow outwards. *4.* If the light that entered the room was very bright sunlight,. then certain zones of color appeared in the shadow itself. These "influences" of the shadow on the illuminated portion of the screen, and *vice versa,* were called by Grimaldi himself "the diffraction of light," so that the discoverer of the phenomenon is also the inventor of the term. Grimaldi also correctly explained these influences of illuminated part on shadow and *vice versa,* as due to a bending of some of the rays of light, either inward or outward, as it passed by the border, or edge, of the shadow-casting body. Next, Grimaldi, in his little book, took up the interference of light. This phenomenon he discovered in the course of an experiment by which he endeavored to show that diffraction is something altogether different and apart from both reflection and refraction. Laying aside the staff he had employed in the original experiment, he plated in the path of the light an opaque plate in which there was a small opening. Once again catching the light upon a white ground, or screen, he found the illuminated circle larger than, according to the size of aperture, might have been pre-estimated.He next proceeded to make in the shutter of the darkened room a second aperture for light, and then, on a single screen, caught ihe two light-discs from the two apertures at such a distance that the light-discs partly overlapped each other. Then Grimaldi observed, around each disc of light, a zone or ring of darkness, which, after the manner of the discs themselves, intersected each other. He also observed that the area which lay within both the rings was very much brighter than that which lay inside either one of the rings alone. Furthermore, the border of each disc was dark in the illuminated area of the other circle. Grimaldi's conclusion was: "*An illuminated body can become darker, when to the light which it receives is added other light.*" As will readily be perceived, Grimaldi did not eliminate from his experiment the influence of diffraction. He took, however, the very first step toward a knowledge of the interference of light, while further steps remained to be taken by Thomas→Young, and especially by Jean Augustin→Fresnel. American Encyclopedia of Ophthalmology, Vol.7, p.5650-5651. Albert, DSB (extended biography).

Grimaud, Aimé (1789-1866) French physician who paid considerable attention to diseases of the eye. Born at Angers, he received his medical degree in 1818, became physician to the Bureau of Charity, and lectured for many years on internal medicine. Grimaud's only ophthalmologic writing was *"Traité de la Cataracte: Moyens Nouveau de la Guérir sans 0pération Chirurgicale"* (Paris, 1842).American Encyclopedia of Ophthalmology,Vol.7,p.5651.

Grimm, Johann Friedrich Karl (1737- ?) German botanist and physician, who devoted considerable attention to diseases of the eye. Born in Eisenach, he received his medical degree at Göttingen in 1758, and settled as general practitioner in Eisenach. He made an

excellent translation of the Hippocratic Collection (First ed., Glogau, 1781-92; 2d ed., Glogau, 1837-39). His only ophthalmologic writing was his graduation dissertation, entitled "*De Visu*" (1758).American Encyclopedia of Ophthalmology,Vol.7,p.5651.

Grimsdale, Harold Barr (1866-1942) British ophthalmologist. Grimsdale received his education at Winchester, Caius College, Cambridge and St.George´s Hospital. Grimsdale took the Cambridge M.B. in 1892 and was House Physician at St.George´s Hospital. The retirement of Brudenell→Carter left →Frost single handed and Grimsdale was chosen ophthalmic registrar and at the same time he went to Moorfields to work under William Lang whose Chief Assistant he became. He took the F.R.C.S.Eng. in 1894. Towards the end of the 19th century he joined the staff of the Royal Westminster Ophthalmic Hospital. Grimsdale was the author of three books: one about refraction was written early in his career, followed by a student´s *Handbook of Ophthalmic Operations* which was later elaborated with the help of Elmore Brewerton to a well known *Textbook of Ophthalmic Operations* ,London 1907 of which three editions were published (1907,1920 and 1937). BJO 26,284-285,1942; Times 9. May 1942,Brit med J. 1942,1:655;LFRCS 1930-1951:354-355.JPW

Griti, Rocco (1828-1920) born in Bergamo Province, Italy, received his M.D. at Pavia in 1853, and from 1865 to 1892 was chief surgeon at the Ospedale Maggiore in Milan. He wrote: *Dell' ottalmoscopo e delle malattie end-oculari per esso riconoscibili* .Milano 1862. Albert

Groenouw, Arthur (1862-1945) German ophthalmologist born near Raciborz in Poland. Groenouw received his M.D. in 1886 at Breslau, where he became lecturer in1892 and professor of ophthalmology in 1899. He wrote: *Anleitung zur Berechnung der Erwerbsfâhigkeit bei Sehstörungen*. Wiesbaden 1896.

Grom, Edward (1917-1998) Venezualian ophthalmologist from Caracas. He was born in Rohatyn, Poland. He was graduated summa cum laude as a doctor of medicine 1947, in Warsaw, Poland. He subsequently moved to Venezuela, where he was regraduated as a doctor of medicine on 1958. Although he spent his professional life in Caracas, he passed the American Board of Ophthalmology in 1961 and became a fellow of the American College of Surgeons in 1963. He was promoted to full professor in the Department of Ophthalmology at the University Hospital in Caracas in 1963, and from 1976 to 1985 he was chairman of the Department of Ophthalmology at the University Hospital in Caracas. He was a fellow of many ophthalmological societies in his own country, France, the United Kingdom, and the United States, and was awarded many distinctions and honors throughout his career in Venezuela and abroad. Here is a short list of some of these honors: in 1970, he was made a director of the Institute of Research in Ophthalmology in Caracas; in 1976, he was elected a member and secretary-general of the *Academia Ophthalmologica Internationalis*; in the same year, he was awarded the Francisco de Miranda Order First Class. He was also elected vice president of the International Glaucoma Congress in Miami in the same year. In 1978, he was elected a member of the International Council of Ophthalmology and, in the same year, was honored with the Jose Maria Vargas Order First Class. In 1979, he was elected co-chairman of the International Study Committee on Teaching in Ophthalmology. He was elected vice president of the Academia Ophthalmologica Internationalis in 1980 and, in 1986, was chosen as the guest of honor of the *XXV International Congress of Ophthalmology* in Rome. In the same year, he was awarded the highest Venezuelan decoration, the Order of Liberador. He was elected an Honorary Member of the Medical College of Merida State in Venezuela and was given the "La Sapienza" Medal of the Istituto d'Oftalmologia in Rome, Italy, in 1987. In 1990, he was elected an honorary member of the Italian Ophthalmological Society. Grom was a prolific contributor to the scientific literature. He was responsible for 360 publications, mostly on comparative anatomy of the eye, the pathology of eye tumors, surgery of the retina, psychophysiology of vision, and the history of ophthalmology and ethics. He was also responsible for 9 books on many aspects of ophthalmology. The last of these was entitled "*To My Students*," in which he wrote about his philosophy of the practice and ethics of ophthalmology. Arch Ophthal 117,981,1999

Grönholm, Väinö (1868-1939) Finnish Ophthalmologist, Helsinki, Finland. He graduated from the University of Helsinki in 1896 and he served as a resident in Ophthalmology 1896-1900. He completed his training by travelling in Sweden, Norway,

Väinö Grönholm

Denmark, Germany, Switzerland, Belgium, Holland, Italy and France. He presented his doctoral thesis at the University of Helsinki in 1900. He had completed it in Heidelberg under Professor Th.→Leber and it dealt with the effects of eserine on aqueous flow (*Experimentelle Untersuchungen über die Einwirkung des Eserins auf den Flussigkeitswechsel und Circulation in Auge*. Albrecht v Graefe's Archiv f Ophthalmol 1900:49:620-711). He served as Professor of Ophthalmology at the University of Helsinki 1912-1935. The number of his scientific papers exceeds one hundred and can be found in the leading ophthalmological journals. His interests were trachoma, glaucoma, hereditary eye diseases and even experimental ophthalmology. At the International Congress of Ophthalmology in Amsterdam in 1929, he gave the Scandinavian and Baltic experience in fighting trachoma. He served as a long-time member of the editorial board of *Klinische Monatsblätter für Augenheilkunde*, Albrecht v Graefe' s *Archiv für Ophthalmologie* and he was one of the founders of *Acta Ophthalmologica*. Grönholm was an excellent teacher. At the request of the Faculty of Medicine, University of Helsinki, he reorganized the undergraduate curriculum to consist of rigid courses by which the medical students lost their academic freedom. During his time in the chair there was a reduction of trachoma patients by 50%. He served as the President of the Finnish Ophthalmological Society 1913-1914, and 1931-1932. He was rewarded by becoming its Honorary Member, he was also appointed Honorary Member of the Mexican Ophthalmological Society and Honorary Doctor of Medicine at the University of Uppsala, Sweden. [by Ahti Tarkkanen]

Gross, Samuel David (1805-1884) American general surgeon of Philadelphia, who was also widely known as an operator on the eye. He was born near Easton, PA., the son of Philip and Juliana Brown Gross. After a classical education, he studied with Dr. Joseph K. Swift, of Easton, and also with Prof. George McClellan, of Philadelphia. Entering Jefferson Medical College in 1826, he there received his medical degree two years later, his graduation thesis being entitled "*The Nature and Treatment of Cataract*." He settled at once in Philadelphia, but soon removed to Easton, then to Cincinnati, Ohio, where, in 1833, he became Demonstrator of Anatomy in the Ohio Medical College. Two years later he was made Professor of Pathological Anatomy in the Medical Department of the Cincinnati College. Four years later he moved to Louisville, where he was professor of surgery in the University of Louisville for ten years. In 1850 he moved to New York City, where he succeeded Dr. Mott in the chair of Pathological Anatomy. The following year he returned to his former position at Louisville. In 1856, however, he returned to Philadelphia, in order to accept the chair of surgery in the Jefferson Medical College-a position which he held till about two years before his death. Dr. Gross was a very prolific, as well as a clear and cogent, writer. His most important work, no doubt, was the well known "*A System of Surgery*" , 2 vols., Philadelphia 1859 [GM 5607] which passed through many editions. He wrote, however, a number of other important volumes: *Lives of eminent American physicians and surgeons of the nineteenth century Philadelphia* 1861; *John Hunter and his pupils Philadelphia* 1881; He contributed "*Surgery*" *in* E.H. Clarke *A century of American Medicine* 1876. He was also one of the founders and chief editors of the *North American Medico-Chirurgical Review*. He received numerous honors, among them D. C. L., Oxford, and LL.D., Cambridge.American Encyclopedia of Ophthalmology,Vol.7,p.5652-5653.Albert

Grosseteste Robert (13th century) British. *Magister scholarum* of the University of Oxford and a proponent of the view that theory should be compared with observation, Grosseteste considers that the properties of light have particular significance in natural philosophy and stresses the importance of mathematics and geometry in their study. He believes that colours are related to intensity and that they extend from white to black, white being the purest and lying beyond red with black lying below blue. The rainbow is conjectured to be a consequence of reflection and refraction of sunlight by layers in a 'watery cloud' but the effect of individual droplets is not considered. He adheres to the view, shared by the earlier Greeks, that vision involves emanations from the eye to the object perceived.(JPW)

Grossmann, Karl A. (1851-1916) British ophthalmologist of German origins. He received his M.D. at Freiburg i.B. in 1889 and afterwards took the Fellowship of the Royal College

of Surgeons of Edinburgh. He was appointed the first ophthalmic surgeon of the Stanley Hospital in Liverpool. He was for a time vice-president of the Liverpool Medical Institution and took an active interest in the British Medical Association. He wrote widely on ophthalmic subjects and more specially on the leprous diseases of the eye, the mechanism of accommodation and on colour blindness. Grossmann was one of the founders of the "Ophthalmic Review" and for some time editor of that journal with →Priestley Smith. The Ophthalmoscope,1916, p.564-565.

Grosz, Emil (1865-1941) Hungarian Ophthalmologist. Emil Grosz was born in Nagyvarad where his father Albert practiced as ophthalmologist. He studied medicine in Budapest, and in 1888 joined the staff of Schulek's Clinic. In 1895 he was awarded Privatdocent and in 1900 Associate Professor. In 1905 he received invitation to the Chair of Ophthalmology of the Budapest University where he remained for 31 years, to the end of his life.?After his appointment, his main concern was to find adequate premises for his small and out-moded hospital. He achieved this in 1908 and the new building in Maria Street was built and equipped according to his plans. To the present day the building is the II. Eye Clinic of the University Medical School. Professor Grosz was a first-rate organizer, a learned clinician and a splendid surgeon. His proxility was exceptional. His literary activities embraced practically the whole field of ophthalmology. He contributed over 350 articles to various scientific journals and more than 120 to daily papers. His contributions appeared in Hungarian, German, English and French. He was the author of several books. Among them mention should first be made of the 3-volume '*Handbook of Ophthalmology*', edited in collaboration with Karoly→Hoor, to which he also contributed several chapters. Among his numerous qualities his talent for organizing was outstanding. It was partly owing to this fact that from 1902 to 1918 he served as government Commissioner to check trachoma, and from 1913 to 1917 as Commissioner of Hospital Affairs in Hungary. Thanks to his initiatives the State Eye Hospitals of Budapest, Szeged, Brasso, Zsolna and Perlak were founded primarily for the treatment of trachomatous patients. In 1929 he was elected Chairman of the '*International Organisation against Trachoma*'. The Organisation was founded in the same year in Amsterdam. He was also appointed member of the Council of the 'Association Internationale de Prophylaxie de la Cecite". Professor Grosz was one of the original members of the Hungarian Society of Ophthalmology and was Chairman from 1905 to 1920**.** He edited the journal 'Szemo-szet' ('Ophthalmology') from 1904 to 1935, and was honorary member of 12 medical and Ophthalmological Societies. From 1938 he was Chairman of the Central Committee for Postgraduate Training of Physicians. He was also founder and co-editor of a journal devoted to postgraduate training, entitled 'Orvoskepzes' ('Training of Doctors'), for more than 28 years. He was member of the board of the Forensic Council, the Hungarian Council for Public Health and the Council for Higher Education. In recognition of his services he was awarded the title of Royal Court Councillor. Magda Radnot: *Famous Hungarian Ophthalmologists* (Budapest, 1970) BJO 26,286-287,1942

Gruening, Emil (1841-1914) American ophthalmologist from New York. Gruening was the *first* to draw attention to the danger of blindness from wood alcohol. The Ophthalmoscope,1914,p. 520.

Grunert, Karl (1867-1905) German otologic surgeon, born in Berga, Germany, received his M.D. in 1889 at the University of Halle, where he became lecturer (1896) and then professor (1900) of otology. He wrote in ophthalmology: *Der Dilatator Pupillae des Menschen, ein Beitrag zur Anatomie und Physiologie der lrismuskulatur*. Wiesbaden 1898.Albert

Grut, Edmund Hansen (1831-1907) Danish ophthalmologist, born in Copenhagen, he first studied medicine in that city, and later ophthalmology in Paris and Berlin. He received his degree in 1857, presenting as dissertation a treatise on the ophthalmoscope. From 1859-61 he was first assistant at the Surgical University Clinic of the Frederick Hospital, Copenhagen, and in 1863 began to give instruction in diseases of the eye as privatdocent. From 1882-1890 he was full professor of ophthalmology at the Copenhagen University. He was a man of very great influence over the younger generation of Danish ophthalmologists. In 1889 he delivered the Bowman lecture before the Ophthalmological Society of the United Kingdom, of which he was an honorary member. He contributed

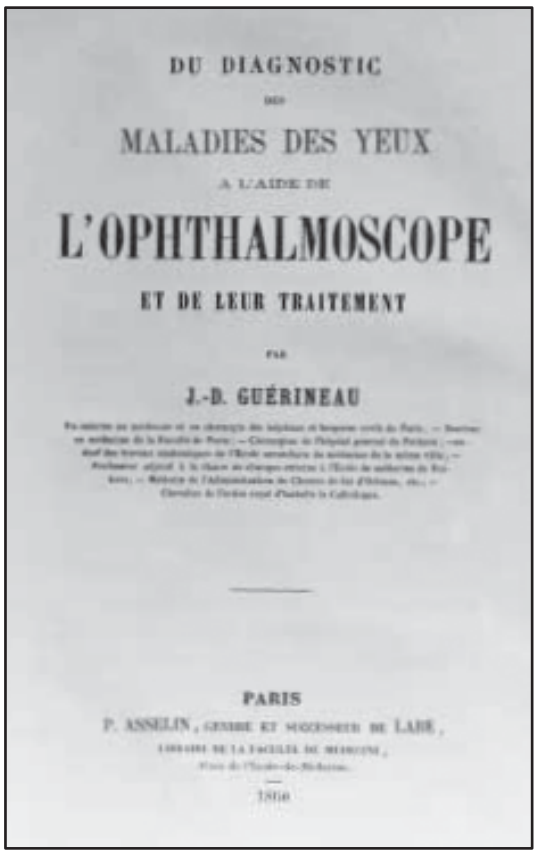
numerous articles, chiefly on ophthalmologic subjects, to the Danish journal*"Hospitals Tidende"*. American Encyclopedia of Ophthalmology, Vol.7, p.5653-5654.

Guenz, Justus Gottfried (1714-1751) German anatomist, physician and surgeon, who devoted considerable attention to ophthalmology. Born in Königstein, Germany, he received his early education from his father, a highly educated minister, and his medical training at Leipsic, where he graduated in 1738. After a number of "*Wanderjahre"*, he settled at Leipsic, and became in 1747 professor of physiology, and, a little later, of anatomy and surgery. He was a celebrated lithotomist, and wrote a number of articles on cataract and glaucoma. In 1751 he was appointed body-physician to the Elector of Saxony. Shortly afterward he died.American Encyclopedia of Ophthalmology,Vol.7,p.5655.

Guépin, Ange (1805-1873) French ophthalmologist of Nantes. He was born in Pontivy, France, and received his medical degree in 1828. Having settled at Nantes, he there became professor of economic and industrial chemistry. In 1835 he became an ophthalmologist exclusively-so far at least as medicine is concerned, for he held a number of political offices. He was one of the founders of the *Revue Philosophique et Religieuse*. His medical works are as follows: 1. *Lettres à Ribes, de Montpellier, sur Divers Sujets de Méd., de Chir., et d'Hygiène*. (Nantes and Paris, 1835.) 2. *Etudes d'Oculistique*. (Paris, 1844.) 3. *Nouvelles Etudes Théoriques et Cliniques sur les Maladies des Yeux; I' Oeil et de la Vision*. (Paris, 1857.) 4. *Des Eaux Mineralisées*. (Paris, 1857.) 5.Philosophie du XIXème Siècle (1854) American Encyclopedia of Ophthalmology,Vol.7,p.5656. Albert.

Guépratte, Alphonse Pierre Prosper (1808-1847) A French naval physician, who seems to have devoted some attention to the eye. Born in Brest, he received his medical degree in 1842 at Montpellier. After about five years of practice in this city, he died, aged only 39 years. His only ophthalmologic writing was "Héméralopie des Pays Chauds, Observations Recueillies à Bord de la Frégate Armide," etc. *(Gaz. Méd. de Montpellier,* 1847).American Encyclopedia of Ophthalmology, Vol.7,p.5656.

Guérin, Jules René (1801-1886) French physician, pathologist, and surgeon, who paid considerable attention to ophthalmology. Born in Boussu, Belgium, he obtained his medical degree at Paris in 1826. Two years later he was editor and proprietor of the *Gazette de Santé*. In 1838 he founded the Orthopedic Institute at Passy, where he himself performed a large number of orthopedic operations. In 1839 he was appointed Orthopedic Surgeon at the Children's Hospital. His only ophthalmologic writing was *Mém. sur 1'Etiologie Générale du Strabisme* (2d ed., 1843).American Encyclopedia of Ophthalmology, Vol.7, p.5656.Albert


DU DIAGNOSTIC
DES
MALADIES DES YEUX
A L'AIDE DE
L'OPHTHALMOSCOPE
ET DE LEUR TRAITEMENT
PAR
J.-D. GUÉRINEAU
PARIS

Guérin, Pierre (1740-1827) French surgeon and ophthalmologist. Born in Lyons, France, he became a Fellow of the Royal College of Surgeons at Lyons, surgeon-in-chief of the Lyon Hôtel Dieu, etc. He died in Bordeaux.. Guérin's only ophthalmologic writing was *Traité des Maladies des Yeux* (Lyons, 1769). American Encyclopedia of Ophthalmology,Vol.7,p.5656. Albert

Guérineau, Joseph Désiré (?- ?). French ophthalmologist. He was Interne at the Hopitaux et Hospices civils de Paris, he had received his MD degree from the Paris medical faculty and was adjunct Professor to the Ecole de Medecine de Poitiers. He received the Ordre Royal d´Isabelle la Catholoque. He wrote *: Du diagnostic des maladies des yeux a l'aide de l'ophthalmoscope* Paris 1860 (2nd edition 1861), *Du diagnostic différential à l'aide de l' ophthalmoscope des amauroses vraie et simulée* Paris 1860. JPW

Guiata, Luigi (? – 1914) Italian ophthalmologist, professor of ophthalmology in Florence and one of the editors of the "*Annali di Ottalmologia*". He was director of the ophthalmic hospital in Florence. The Ophthalmoscope, London 1915, p. 312.

Guido de Cauliaco. See **Guy de Chauliac.**

Guido see **Guy de Chauliac**.

Jacques Guillemeau

Guillemeau, Jacques (1560-1613) French surgeon, and one of the brightest pupils of Riolan, Courtin and Ambroise Paré, he became physician-in-ordinary to the King of France and a surgeon of world-renowned ability. He was not very great as an ophthalmologist, but his book, *Des Maladies de 1'Oeil qui sont en Nombre de Cent Treize aux quelles il est Sujet* (Paris, 1585)[GM 5818], (English edition: *A worthy treatise of the eyes* .London 1587-88),(Flemish edition: *Tracktaet van alle de ghebreken der oogen* Dordrecht 1597), on account of the excellence of its matter and the clearness of its literary style, was very popular in Germany and England, as well is in France, for many years. In England, indeed, it was well enough thought of to form the sum and substance of Banister's *One Hundred and Thirteen Diseases of the Eyes and Eyelids*, London 1622 [GM 5820]which, by the way, seems to have been the earliest general work on eye diseases in the English language. Guillemeau's work is based almost entirely on the Arabians and the Greeks, but it contains a few, if unimportant, original operations among them one for lid-coloboma .American Encyclopedia of Ophthalmology,Vol.7,5656-5657. Albert.

Guillié, Sebastian (1780-1865) French ophthalmologist of Paris. He was born at Bordeaux and received his professional degree at Paris in 1807. For a short time he was a field physician in the army. Then he became superintendent of the Institution for the Blind. Almost immediately afterwards he was arrested and imprisoned by mistake and so remained in durance for a year. He seems to have been a man of quackish tendencies, for he advertised and sold at a high price a "*Drogue Antiglaireuse*," whereby he achieved a fortune. His writings are as follows: 1. *Traité de 1'Origine des Glaires* (devoted to the exploitation of his nostrum, and vigorously pushed to its 31st edition). 2. *Rapport Fait à S. E. le Ministre de l´Interieur, par le Docteur Guillié, sur 1'Etat de I'Institution Royale des Jeunes Aveugles, pendant les Exercices de 1816 et 1817* (Paris, 1818). 3. *Nouvelles Recherches sur la Cataracte et la Goutte-Sereine* (Paris, 1818). 4. *Essai sur 1'Instruction des Aveugles, etc.* (Paris, 1817; 3d ed., 1820, Engl.edition : *An essay on the instruction and amusements of the blind*. London 1819). 5. *Rapport Fait à MM. les Membres et les Souscripteurs de la Clinique Oculaire de Paris pendant 1820, 21* (Paris, 1821),. 6. *Bibliothèque Ophtalmologique, ou Recueil d'Observations sur les Maladies des Yeux faites à la Clinique de I'Institution Royale des Jeunes Aveugles; avec des Notes de Dupuytren* (Paris, 1820, 21). American Encyclopedia of Ophthalmology,Vol.7,p.5657.Albert:Source Book of Ophthalmology, p.134-135

Guilloz, Theodore (1867-1916) French physician, pupil of Augustin →Charpentier. Guilloz was a certain time much occupied with physiologic optics and he was one of the *first* to obtain good photographs of the eye ground. After the discovery in 1896 of X-Rays by W.C. Roentgen , Guilloz devoted himself to radiography. He became himself an early victim of the Roentgen rays.AJO,1:294.

Gullstrand, Allvar (1862-1930) Swedish Ophthalmologist and Nobel Laureate Gullstrand qualified in medicine at Uppsala and was awarded the Doctorate of Science 1890, with a thesis on the theory of astigmatism. In 1894 at 32 years of age he was elected the first Professor of Ophthalmology at Uppsala. His theoretical mathematical studies on replacing surfaces and optical systems, the introduction of the schematic eye and the replacement of the conceptions of focal distance with diopter contributed to a considerable extent to the development of physiological optics (*Allgemeine Theorie der Monochromatischeen Aberrationen und Ihre Naechsten Ergebnisse fuer die Ophthalmologie*. Uppsala, 1900; *Helmholtz Handbuch der physiologischen Optik*, Dritte Auflage, Band I, Verlag von Leopold Voss, Hamburg & Leipzig, 1909, *Einführung in die Methoden der Dioptrik des Auges des Menschen*. Verlag von S. Hirzel, Leipzig, 1911). The last two books were translated into English by the Optical Society of America in 1924, (Helmholtz's *Treatise on Physiological Optics*, Volume I, ed. J. P. C. Southall). The many constructions of ophthalmological instruments; for example the slit-lamp, the electric hand ophthalmoscope and the binocular ophthalmoscope for reflex free stereo-examination of the fundus enlarged essentially the range of ophthalmological diagnostics. Gullstrand was awarded the Nobel Prize in Medicine and Physiology in 1911 and in 1914 he obtained a personal chair in Physiological optics at Uppsala. At his 60-years birthday

the Swedish Society of Medicine founded the Gullstrand Gold Medal. The prestigious medal is awarded every tenth year to a leading ophthalmologist irrespective of nationality. (by L. Berggren)

Gunn, Donald (1862? –1939) British ophthalmologist. Qualifying M.R.C.S. in 1883 he took the Fellowship in 1889 and from 1889 to 1891 was House Surgeon at Moorfields as a colleague of D.J. Wood, of Cape Town, and the two remained fast friends throughout life. Gunn was elected to the staff of the Royal Westminster Ophthalmic Hospital in 1895 and did much good work both as a clinician and pathologist. He was also on the staff at Great Ormond Street. A notable career in ophthalmology seemed open to him when he retired in 1902, owing to ill health. He wrote: *Injuries and Diseases of the Eye*, in *Catalogue of the Westminster Hospital Museum*, 1899.All his life he was interested in art and literature and this, with travelling, sufficed for him. It was characteristic of the man that his death was recorded on the front page of The Times with the mere date and name, not even his F.R.C.S. being mentioned. BJO 23,363-64,1938;LFRCS 1930-1951:358-359

Gunn, Robert Marcus (1850-1909) English ophthalmologist, discoverer of "Gunn',s dots", or, as he himself preferred to call them, "Crick dots". "Born in Dunnet" Sutherlandshird, of Scandinavian stock, he received his early education at the Thos. Fraser School in Golspie. Proceeding to the University of Edinburgh, he there received the degree of M. A. in 1871 and the M. B. and C. M. in 1873. Then for a number of months he studied at Vienna with →Jaeger. Returning to London, he became at the Royal London Ophthalmic Hospital ("Moorfields") Junior House Surgeon in August, 1876, and Senior House Surgeon in, the following December. In 1882 he became an F. R. C. S. (England), and in 1883 Assistant Surgeon, in 1888 Surgeon, to the Royal London Ophthalmic Hospital. Among his other hospital appointments were: Ophthalmic Surgeon to the National Hospital for the Paralysed and Epileptic, Ophthalmic Surgeon to the Hospital for Sick Children, and Assistant Ophthalmic Surgeon to the University College Hospital. From 1896 to 1899 he was Vice President, and from 1907 to 1909 President, of the *Ophthalmological Society of the United Kingdom*. In 1898 he was Vice-Chairman of the Section of Ophthalmology of the *British Medical Association*, and, in 1906, at Toronto, Chairman of the same assemblage. He delivered a number of addresses on ophthalmologic subjects before various foreign ophthalmologic bodies, perhaps the most important being " *On Certain Affections of the Optic Nerve*" before the *American Academy of Ophthalmology and Oto-Laryngology*. His original work in the field of human ophthalmology was almost wholly on the subject of the optic nerve, the retina, and the cornea; the anatomy, physiology, and diseases of these structures. His researches in comparative ophthalmology, especially comparative anatomy and histology, are very extensive and important. He wrote no books, but published a number of articles, the chief of which are: 1. *Peculiar Appearance of the Retina.* ("Crick-dots," or "Gunn's dots," B. *L. 0. H. Reports*, III.) 2. *Amblyopia from Bisulphide of Carbon.* (T.O.S., Vol. VI.) 3. *Uniocular Nystagmus*. (Ibid., Vol. VII.) 4. *Toxic Amblyopia.* (Ibid., Vol, VII.) 5. *Growth of New Lens-Fibres.* (Ibid., VIII and XV.) 6. *Peculiar Foveal Reflex in Myopic Amblyopia.* (Ibid., Vol. VIII.) 7. *Congenital Malformations of Eye. (Ophthal. Review,* Vol. VIII, 2 Lectures, 1889.) 8. *On Sympathetic Inflammation of the Eyeball. (R. L. 0. H. Reports,*, Vol. XI, pp. 78-102, and 273-326.) 9. *Note on Certain Retinal Reflexes Visible with the Ophthalmoscope.* (Ibid., Vol. XII, 348.) 10. *Light-Percipient Organs and Light and Color-Perception*. (Ibid., Vol. XII, p. 101.). 11. *Ophthalmoscopic Evidence of Increased Arterial Tension, and of General,Arterial Disease.* (T. *0*. 8., Vols. XII, XVIII, and XXIV.) 12. *Pemphigus of Conjunctiva.* (Ibid., Vols. XIII and XV.) 13. *Hemorrhage into Optic Nerve Sheath.* Ibt ., Vol. XIV.) 14. *Acute Bullous Eruption of Skin and Conjunctiva.* (Ibid., Vol. XVI.) 15. *Retinitis Circinata*. (Ibid., Vol. XVIII.) 16. *Bowman Lecture-Visual Sensations*. (Ibid., Vol. XX.) 17. *Keratitis Nodosal, Family Case.* (Ibid., Vols. XXII and XXIX.) 18. *Family Optic Atrophy.* (Ibid., Vol. XXVII.) 19. *Presidential Address.* (Ibid., Vol. XXVIII.) 20. *Hemorrhagic Disease of Retina, with Obliteration of Veins*. *(Helmholtz Festschrift*, Plate II, 1891.)American Encyclopedia of Ophthalmology, Vol.7,p.5661-5663. The Ophthalmoscope 1910, p.64-69 (by Edward →Nettleship).

Gunning, Willem Marius (1834-1912) Dutch ophthalmologist of considerable local reputation. Born at Hoorn, Holland, he received his medical degree at Utrecht, Sept. 11, 1857. For a time he was assistant physician at "Buiten-Gasthuis," but always, owing to the influence of →Donders, under whom he had studied in the University, he desired to be an

ophthalmologist. In accordance with this desire, he began about 1863 to devote himself to ophthalmology exclusively. In 1877 he was appointed -full professor of ophthalmology at the Amsterdam University. He wrote a few articles and reports, but no books. American Encyclopedia of Ophthalmology,Vol.7,5663.

Günz, Justus Gottfried (1714-1754) German, surgeon, obstetrician, medico-historian and ophthalmologist. Born at Königstein, Germany, he received his training in the liberal arts at the gymnasium in Görlitz, and his medical education at the University of Leipzig from 1732-38. In 1747 he was appointed to the chair of physiology in his alma mater, and, a little later, to those of anatomy and surgery in the same institution. In 1751 he became official physician to the Elector of Saxony, but very soon afterward died. According to →Hirschberg, his ophthalmologic writings are as follows: 1. *Diss. de Staphylomate, etc.* (Leipsic, 1748.) 2. *De Suffusionis Natura et Curatione.* (Liepzig, 1748.) The first of these works, according to the same authority, is of very little value, while the second possesses a high degree of merit because of its clear and exact description of the cataract operation.American Encyclopedia of Ophthalmology, Vol.7,p.5667.

Bing-Kuan Guo

Guo, Bing-Kuan (1904-1991) Chinese Ophthalmologist. He was born in Fujian Province, southern part of China. In 1924~1928, he studied in Yan Jing University, Union Medical College, Beijing. During 1928~1936, he studied at the University of Vienna, where he had Ophthalmology training. He studied Ophthalmology under Prof. A. Pillat and received Doctorate of Medicine in 1936. On return to China in 1936, he was appointed to be the professor and the director of Ophthalmology department in Medical College of Tong Ji University, GuiYan Medical College, Shanghai National Defense Medical College during the war. He further extended his career as a visiting scholar to the Manhattan Eye and Ear Hospital of Columbia University , New York, in 1945. From 1949 to 1991, he served as the professor and the director of the Ophthalmology Department of Shanghai Medical University (SMU). In 1952, Prof. Guo and his ENT colleagues founded the Eye and ENT Hospital, Shanghai Medical University, which is one of the major special eye center in China. It has 250 beds and an average of 800 out patients every day. Many patients are referred from all over the country and more than 20 fellows were trained each year. In 1978, he founded the Eye Research Institute in the Hospital, to carry out basic research in addition to clinical works. During the period of 1980s, Prof. Guo was the vice-chairman of the Chinese Ophthalmologic Society, Chairman of Chinese Ophthalmologic Society, Shanghai Branch, and he was the co-editor of the Chinese Journal of Ophthalmology and the co-editor of the Chinese Medical Encyclopedia, Volume of Ophthalmology. Prof. Guo devoted his major efforts to medical education, and his students were distributed all over the country and most of them have become the leaders of Ophthalmologic Society as well as departments. Prof. Guo published more than 40 papers, and his book *Ophthalmology* having five editions, is the major Ophthalmology reference book read by almost Ophthalmologists in China and frequently cited in the papers published in China.(SM)

Guo, Jingqiu (1933-) Chinese Ophthalmologist, Professor and Director of the Department of Pediatric Ophthalmology, First Teaching Hospital of Beijing Medical University). Born in Jinan, Shan Dong Province, she graduated from Beijing Medical University in 1957 and studied Ophthalmology at the University. Since 1985, she serves in the present position as above, and conjointly as the Director of Research Center of Vision Development and Eye Diseases for Children, and the Director of the National Prevention and Therapy Center of Pediatric Amblyopia and Strabismus supported by the Ministry of Public Health. She is the Chief-Editor of *Chinese Journal of Amblyopia and Pediatric Ophthalmology* and also editor of the *Chinese Journal of Ophthalmology*, *Chinese Journal of Practical Ophthalmology*, *Journal of China Ophthalmology*, *Journal of Ophthalmic Research*, and *Journal of Shanghai Oculiotorhinolaryngology*. She also serves as Commissioner of Committee of Chinese Science and Technology for Health, Director of Society of Chinese family education, Chairman of the Committee for preventing and treating eye diseases affiliated to Association of Prepotent Procreate. Her major interest is vision development, amblyopia, squint and pediatric Ophthalmology, and published more than 80 papers and wrote 4 monographs in these fields. Her program for the prevention and therapy of amblyopia in children is adopted in the five-year plan of the Ministry of Public Health. Through outstanding contributions, she received Awards in 1981, 1982, 1985, 1987,1988, 1993,1994, 1995 and 1996. (Department of Pediatrric Ophthalmology,

First Teaching Hospital, Beijing Medical University, Beijing 100034, P. R. China. phone: +86-10-65125254; fax:+86-0-65599946) (SM)

Guo, Xirang (1939-) Chinese Ophthalmologist, Director of Henan Institute of Ophthalmology, Zhengzhou. He graduated from Henan Medical University in 1964, and studied Ophthalmology at the University and received Doctor of Medical Sciences in 1979 (thesis: Treatment of serous retinopathy with argon laser combined with fluorescein angiography. Chin. J. Ophthalmol. 15: 254, 1979). After having worked as Associate Professor (1986-1991), he was promoted to Professor in 1991 and serves in this position to present. The positions held in professional Societies or Organizations are Chairman, Henan Branch, Chinese Association of Ophthalmology in Chinese Medical Association, Member, Specialty Group of Ocular Fundus Diseases, Chinese Association of Ophthalmology in Chinese Medical Association, Member, Laser Medicine Specialty Group in Chinese Medical Association, Executive member, Henan Medical Association and Member, Retinal and Vitreous Surgery Specialty Group, Chinese Association of Ophthalmology in Chinese Medical Association. He is an editor to the following journals: *Chinese Ophthalmic Research*. Editor-in-chief, *Henan Medical Research*. Member of Editorial Board, *Chinese Journal of Ocular Fundus Diseases*. Member of Editorial Board, *Chinese Journal of Ophthalmology*. Member of Editorial Board, *Journal of Clinical Ophthalmology*. Member of Editorial Board, *Chinese Journal of Practical Ophthalmology*. Member of Editorial Board, *Henan Medical Information*. Member of Editorial Board and *China Journal of Ophthalmology and Otolaryngology*. Member of Editorial Board. He wrote many books, e.g. *Ophthalmology*. *Standard Training Course for Clinical Residents*. Chief-editor Henan Medical University Publishing House. 1997 and *Modern Vitreoretinal Surgery*. Chief-editor, Haitian Publishing House, 1997. He has published more than 45 original articles, and some examples are " *A study on relationship between PVR and lipid peroxidation after retinal detachment*. Chinese Ophthalmol. Res. 1999,17(3):220", "*Operative management of the dislocation of intraocular lens into the vitreous and its reposition*. Chinese Ophthal. Res. 1999,17(6):446" and "*Changes of the Glucose catabolism in rabbit retinal pigment epithelium after experimental retinal detachment*. Chinese Journal of Ocular Fundus Diseases. 1999, 15(1):40-41". For his accomplishments, he received many Honor Awards, e.g. Provincial excellent award of science and technology, 1978, Provincial significant award of science and technology, 1980, Provincial excellent award of scientific and technological progress, 1986 and Provincial award of scientific and technological progress, 1995. (Henan Institute of Ophthalmology, 7 Weiwu Road, Zhengzhou, Henan 450003 The People's Republic of China. Tel: +86-0371-5991123; Fax: +86-0371-5952907; E-mail: ykstss53@public2.zz.ha.cn) (SM)

Gurd, Dudley Plunkett (1910-1987) British ophthalmologist, Surgeon Rear-Admiral. He entered the Royal Navy as a surgeon lieutenant in 1934. In 1943 he was awarded the Gilbert Blane medal for services to naval medicine. In 1952 he was seconded to St John Ophthalmic Hospital as warden, a post he held for three years during a most difficult time in the hospital's history when it was housed in three separate buildings in the old walled city of Jerusalem. His hard work in most trying conditions was rewarded by the Queen in the form of a knighthood of the Most venerable Order of the Hospital of St John of Jerusalem. He served in naval hospitals in Malta. Barrow Gurney, Hong-Kong, Plymouth and Haslar. He ended his naval career as surgeon rear-admiral and medical officer in charge of RN Hospital, Bighi, until 1960 when he took up private practice as an ophthalmologist.BJO 1988, 72:400. The Times 25 August 1987.JPW

Guthrie, George James (1785-1856) British surgeon born in London Guthrie was apprenticed to a surgeon at thirteen and became a member of the Royal College of Surgeons at sixteen; he served from 1801 to 1807 as army surgeon in Canada and from 1807 to 1815, during the Napoleonic Wars, in Spain and Waterloo. He published a major treatise on gunshot wounds in 1815. Guthrie was also an excellent ophthalmic surgeeon; he wrote important treatises on the subject and in 1816 founded the Westminster Ophthalmic Hospital, serving as its chief surgeon until 1838. He wrote: *A treatise on the operations for the formation of an artificial pupil* London 1819; *Lectures on the operative surgery of the eye* London 1823 (2nd ed 1827); *A practical treatise on the operative surgery of the eye*. 3d ed. London 1838. *On injuries of the head affecting the brain* London 1842. Albert. Brit. Museum.

Guthrie, Charles W. Gardiner (1817-1859) British surgeon and ophthalmologist of London. Charles was the son of George James Guthrie, and was trained at Westminster Hospital, where he became surgeon and lecturer on surgery. He became also surgeon at the Westminster Ophthalmic Hospital. He published : *On cataract and its appropriate treatment* London 1845. *On the Cure of Squinting* London 1840 (2nd. Edition also 1840?).

Guthrie, Fred Ashford (1872-1915) American ophthalmologist of La Salle, Illinois. Born at Aledo, son of Noah H. and Delilah Guthrie, he received his general education at the University of Illinois and his medical training at the Rush Medical College, at which institution he received the degree in 1896. Forming a partnership with Dr. J. M. Wallace at Aledo, he practiced for a time as general practitioner, but, afterwards studying ophthalmology and otolaryngology, he moved to La Salle, IL., where he practised as specialist in those branches until his death. American Encyclopedia of Ophthalmology,Vol.7, p.5667-5668.

Guthrie, Leonard George (1868-1919) This well known London, England, neurologist and pediatrician who was for a time physician to the Western Ophthalmic Hospital. His education was received at King's College School, Magdalen College, Oxford, and St.Bartholomew Hospital, London. He was always deeply interested in ophthalmology, and was a close student of the ocular relations of neurology and pediatrics.He was a brother to Anstey Guthrie, author of "Vice Versa," "The Giant's Robe," etc., whose pen name was F. Anstey. AJO 2, 1919, p.770

Guy de Chauliac (c.1300-1368) The greatest surgeon of the Middle Ages. He was born about 1300 at the village of Chauliac, or Cauliaeo, on the borders of Auvergne, France. Educated at Montpellier, Bologna, and Paris, he settled in Lyons, where he practised for a long time, and finally became physician-in-ordinary to three successive popes-Clement VI, Innocent VI, and Urban V at Avignon. Guido's greatest work is his *"Chirurgicae Tractatus Septem, cum Antidotario"* or *"Collectorium Artis Chirurgicalis Medicinae"* better known, however, as *"Chirurgia Magna,"* because of another and smaller work by the same writer, entitled " *Chirurgia Parva* " The " *Chirurgia Magna,* " a marvel of learning and of literary style, was *facile princeps* of all the works on surgery throughout Western Europe for many centuries. De Chauliac's writings on ophthalmology, so far as extant, are comprised in the second part of the seventh division of his "*Chirurgia Magna.*". Opinions differ greatly as to the value of these 31 folio pages. →Pansier declares them to be an "uninteresting compilation"; →Hirschberg, on the contrary, says regarding them: "*I find this treatise better than almost any other which the European Middle Ages have bequeathed to us in our special branch; at all events, it was, in its day, more practical and instructive*." The truth, in this instance, is probably with Pansier, for little that is really original appears in the book. The following passage, however, on cataract and "gutta serena, " is memorable, as exhibiting, in a style at once terse and clear, the medieval views on cataract and amaurosis: " *Cataract is a cuticular blemish in the eye, in front of the pupil, which disturbs the sight. It consists of a foreign humor, which gradually descends into the eye, and hardens in consequence of the eye's coldness. Whether this humor collects between the cornea and the iris (as Jesus proves) or between the aqueous humor and the crystalline lens (as Galen pretends in the tenth book 'On the Use of,the Parts') does not interest me just now. The first stage is called 'Illusion of the Sight;' the second, 'The Falling of the Water,' or, sometimes, 'Gutta,;' the third, or last, stage, 'Cataract,' because it obstructs the visual power, as the sluice of the mill, and as the waterfall from the sky obstructs the sun.*" Besides the general surgeries-magna and *Parva*-Guido also wrote a purely ophthalmologic monograph, no longer extant, entitled "*Manner of Life for Cataract-Patients.*" Concerning the origin of this book there runs a story. John, King of Bohemia, finding that he was going blind, sent to France for an oculist. The unfortunate eye-doctor arrived, but, proving unable to cure the irritable monarch, he was sewn up in a sack and cast into a river. An Arabian oculist was next sent for. He also was unsuccessful, and would, no doubt, have suffered a like fate with that of his Frankish confrere, but for the fact that he had been clever enough to arrange in advance for a "safe conduct." Then the king betook himself to Montpellier, there to consult the great de Chauliac. Guido, however, would not undertake the case. Instead, he wrote for his royal patient the little book in question-"*Manner of Life for Cataract-Patients.*" The king, however, does not seem to have been greatly cheered by

the volume which ,his calamity had called forth, and, becoming shortly afterward stone blind, he purposely sought and soon found "the greater darkness still" in the battle of Crécy.American Encyclopedia of Ophthalmology,Vol.7,p.5668-5670.

Tateo Gyotoku

Gye, Caroline *see* **Mann, Dame Ida Caroline (1893-1983)**

Gyotoku, Tateo (1862-1945) Japanese Ophthalmologist and Congressman. He graduated from Kumamoto Medical School in 1886, and studied Ophthalmology under Prof. KOMOTO Jujiro at Tokyo University. On his return to Kumamoto, he taught Ophthalmology at Kumamoto Medical School. He studied in Germany during 1900-1901, in Berlin under Prof. J. Hirschberg, in Breslau under Prof. Uthoff, in Leipzig under Prof. Sattler, and in Vienna under Prof. Fuchs. After returning home, he founded Gyotoku Hospital which is maintained today by his descendants. He was elected to Congress as a member in 1917, and played the central role in the enactment of the Trachoma Prevention Act in 1919. This law was the basis for public health of the eye for almost half a century, the law having been repealed in 1983, since this blinding disease disappeared in Japan. (SM)

H

Haab, Otto (1850-1931) Swiss ophthalmologist born in Wulflingen, Switzerland. Haab received his M.D. in 1875 at the University of Zürich, where he worked under Johann Friedrich→Horner, who´s successor as professor of ophthalmology (1886-1919) he became. He invented the Haab Ophthalmoscope. Haab was interested in pathological anatomy of the eye and made progresses especially in treatment of eye injuries; he identified a phenomenon later called Haab's reflex (Korrespondenzblatt Schw. Ärzte 1886, 16:153), and designed a giant magnet for extracting foreign bodies from within the eye (1892). Haab wrote many books: *Die wichtigsten Störungen des Gesichtsfeldes* Breslau 1893. (*in* Hugo Magnus: *Augenärztliche Unterrichtstafeln*, Heft 5); *Atlas und Grundriss der Ophthalmoskopie* München 1895; American edition: *An atlas of ophthalmoscopy* Translated and edited by Ernest Clark. New York 1895; English edition *Atlas and epitome of ophthalmoscopy and ophthalmoscopic diagnosis* London 1901, American ed.Philadelphia 1905; French edition, translated by A.Terson & A.Cuénod: *Atlas manuel*

Otto Haab

Otto Haab´s popular Atlas on ophthalmoscopy.

d´ophtalmoscopie, Paris 1896; *Atlas der Äusseren Krankheiten des Auges München* 1899, 4th ed.1910, American edition: *Atlas of the external diseases of the eye* Philadelphia 1899; *Das Glaukom und seine Behandlung* (in *Slg. Abh.Augenheilkunde* Vol.4/issue 6-7) Halle 1902; *Skizzenbuch zur Einzeichnung ophthalmoscopischer Beobachtungen* 2.edition München 1895. Haab also contributed to Graefe-Saemisch´s *Handbuch der*

Augenheilkunde (2nd edition) and to Norris and Olliver´s *System of the Diseases of the Eye*. Albert.Fischer. AJO 15:71.JPW

Haaf, Gerhard ten (1720-1791). Dutch surgeon and ophthalmologist. Haaf was born in 1720, he served for a time in the army, then settled in Rotterdam. Here in 1788 he was appointed Professor of Surgery in the College of Surgery. He was a brilliant teacher and a writer of some ability. His chief ophthalmologic writing was, "*Korte Verhandeling Nopens de Nieuwe Wyze om de Cataracta te Genezen*."American Encyclopedia of Ophthalmology,Vol.8,p.5673.

Habershon, S. H. (1858-1915) British general physician from London, who paid considerable attention to ophthalmology. Son of the celebrated Dr. Samuel Osborne Habershon (author of "*Diseases of the Stomach*," etc.) he became secretary of the *Ophthalmological Society of the United Kingdom* (from 1894-1897) and a member of the Council of the same body (1897-1900). He was for years the physician of William E. Gladstone, and, at the time of his death was senior physician to the Hospital for Consumption and Diseases of the Chest, at Brompton. American Encyclopedia of Ophthalmology,Vol.8, p.5673. The Ophthalmoscope, 1915,p.221.

Habrahym. (fl.middle of the 13th century) A Jewish Saracen of Spain. He is specially remembered for having cured Alphonse de Poitiers, Count of Toulouse (1220-1271), of ocular affection, the exact nature of which is not known. On the recommendation of Raymond Gaucelm, Seigneur de Lunel, the count sent to Aragon for Habrahym, enclosing a safe conduct. Habrahym was immensely wealthy, and received large fees.American Encyclopedia of Ophthalmology,Vol.8,p.5674.

Genseki Habu

Habu, Genseki (1762-1848). Famous Japanese Ophthalmologist in the Edo Era, before the systematic import of Western Ophthalmology. He studied Dutch Medicine and served as the Ophthalmologist for Tokugawa Shyogun. He learned from Philipp Franz von SIEBOLD how to produce the mydriatic drug and became the first Ophthalmologist to use it for the treatment of eye diseases in Japan. According to FUKUSHIMA Giichi (see his Biography), the drug was the extract of Hyostyamus. He trained many Ophthalmologists and they played key roles in the evolution of modern Ophthalmology in Japan. (SM)

Haddock, Charles W.(1856-1918) American ophthalmologist of Beverly, Mass. Was born in Beverly, and after a preliminary course of Study at the Massachusetts College of Pharmacy, he attended the Harvard Medical School, where he graduated with the class of 1879. From 1880-'82 he studied at Heidelberg and Vienna, and returning to America, practiced at Beverly with his father until the latter's death. Then he studied the eye, ear, nose, and throat in Boston, Philadelphia, and New York; and, beginning with 1892, devoted himself for nineteen years exclusively to ophthalmology and otolaryngology at Salem and Beverly, Mass. In 1915 he retired from practice.AJO 1919, 2:165-166

Haessler, Ferdinand Herbert (1890-1965) American ophthalmologist who was born in Milwaukee, Wisconsin, and attended local schools, and later the University of Wisconsin where he received his B.A. degree in 1913. After a year of medicine, he received his M.D. degree from Johns Hopkins in 1916. He was a member of Phi Beta Kappa and Alpha Omega Alpha. There followed internships at Henry Ford Hospital, Detroit, and Children's Memorial Hospital, Chicago; a year as pathologist at the City Hospital, Louisville, Kentucky; a year in the U. S. Army Medical Corps (1917-1918) and two years at the Rockefeller Institute. At this time, Dr. Haessler decided to study ophthalmology and spent two years in eye residency at the Pennsylvania Hospital, Philadelphia. In 1922, he returned to Milwaukee, where he remained in private practice until his appointment as the first fulltime professor of ophthalmology at Marquette University Medical School in 1949. He continued in this capacity until his retirement 10 years later. In 1961 he and his wife, also a physician, moved to Alamo, California, where he died. While a competent ophthalmic surgeon, Dr. Haessler's greatest professional interest was in the relation of the eye to general and neurologic diseases. He became a member of the American Ophthalmological Society in 1927, his thesis being "*The functional blood in corneal vascularization*." He was also a member of the American Academy of Ophthalmology and Otolaryngology, the Association for Research in Ophthalmology and the American Medical Association. While not a prolific writer in the modern sense, Haessler published some 30 articles, three

textbooks, and one film. Two of his outstanding publications were the film, "*Principles of immunology*" (1950), and the book, *Eye Signs in General Disease* (1960). Another book he wrote was Ophthalmologic Diagnosis (1953). His greatest contribution to Ophthalmology was his long-time editorship of the abstract department of the American Journal of Ophthalmology. He joined the staff as a collaborator in 1929 and became abstract editor in 1945, serving until 1963. AJO 1966,61:357-358

Hagen, Sigurd (1885-1938) Norwegian ophthalmologist at the Eye Clinic in Oslo. Hagen was born in 1885, and he succeeded Hj. Schiötz in 1922. His interests extended to all parts of ophthalmology. His researches into the post operative development of detachment of the choroids and of the regeneration of the aqueous of the anterior chamber deserved notice as they were published in 1920 and 1921. He wrote on glaucoma, retinoscopy, transitory hypermetropia and diabetes mellitus, melanosarcoma of the choroid and other subjects. He gave one of the opening addresses at the XIIIth International Ophthalmological Congress "*Etiology and not operative treatment of Glaucoma*." In June, 1937, he read a paper for the North of England Ophthalmological Society on a visit to Oslo. Professor Hagen was a very skilful operator, and he had obtained great experience during his work at the University Eye Clinic in Oslo and in his private practice. BJO 23,219,1938

Hager, Michael (1795-1866) Austrian surgeon, who devoted considerable attention to ophthalmology. Born at Hermannstadt in Siebenbürgen, he received his medical degree at Vienna in 1822, and, settling in Vienna, became Professor of Surgery at the Josephs Academy. Hager's only ophthalmologic writing was *"Ueber die Erhaltung der* Augen und den *Zweckmässigen Gebrauch der Brillen"* (Wien, 1823). American Encyclopedia of Ophthalmology,Vol.8,p.5675.

Ryutaro Hagino

Hagino, Ryutaro (1901-1977) Japanese Ophthalmologist, graduated from Nagoya University in 1927, who studied Ophthalmology under Prof. Ch OGUCHI, and was appointed Professor of Ophthalmology at the Research Institute of Environmental Medicine of Nagoya University in 1946. After retirement in 1956, he was made Professor Emeritus of Nagoya University and then invited to Nagoya City University as Professor and Chairman of the Department of Ophthalmology, the position he held until 1963, when he was elected the President of the Nagoya City University. He was an expert in the research of accommodation, and he gave a special lecture "*Physiology of Accommodation and its Clinical Significance*" at the 65th Congress of the Japanese Ophthalmological Society in 1961. After retirement from Nagoya City University, he was invited to Aichi Medical University, and was made the President of the University in April 1977: he died only 4 months after this appointment. (SM)

Hogara Hagiwara

Hagiwara, Hogara (1904-1969) Japanese Ophthalmologist. He graduated from Tokyo University in 1929, and studied Ophthalmology under Prof. ISHIHARA Shinobu. He received his Doctor of Medical Science from Tokyo University in 1938 through studies of binocular vision. Hagiwara's Haploscope was used in Japan for many years. He was invited to Okayama University as the Professor of Ophthalmology in 1948, but due to the death of Prof. M. NAKAJIMA, he was asked to come back to Tokyo as the Professor and Chairman of the Department of Ophthalmology of Tokyo University. He retired from the position in 1964: during his tenure of 13 years, he trained many Ophthalmologists of international fame: to name a few, S. KITANO, Y. FUKADO, M. FUKUDA, S. MISHIMA, Y. UCHIDA, M. ITOI, K.SHIMIZU, Y. SHIMIZU, K. MINODA, T. MARUO, and many others. He organized a research group of Behcet's disease which was then the most frequent cause of acquired blindness, and he delivered a special lecture "*Of Behcet's Syndrome*" at the 63rd Congress of the Japanese Ophthalmological Society and served as the President of that Congress. His endeavor has been preserved for posterity: this disease is now rare in Japan. The most significant of his many contributions was the Foundation of an English Language Journal [the *Japanese Journal of Ophthalmology*]. He visited many University Clinics in North America and Europe in 1955: to his regret no Japanese Journals were read even though many good papers had been published in Japanese Journals. On his return from a world trip, he started the "*Japanese Journal of Ophthalmology*" in 1957 with financial support from his friend, Mr. M. Suzuki, President of Sankyo Pharmaceutical Company. He served as the Chief Editor until his retirement. The Chief Editorship of this English Language Japanese Journal was transferred to

S.→SHIKANO, S.→MISHIMA and then to K.→MASUDA. The Journal is now the official Journal of the Japanese Ophthalmological Society and published bimonthly under the Chief Editorship of K.MASUDA. The Journal is included in the main Ophthalmological Journals of the World and is abstracted in the "CORE JOURNAL" of Excerpta Medica, and serves to introduce good Japanese works to the World. (SM)

Haguenot, Henry (1687-1775) A French physician, who paid considerable attention to diseases of the eye. Born at Montpellier, son of Jean Henri, grandson of Jean, and grandnephew of Thierry Haguenot, all celebrated surgeons, he studied his profession at Montpellier, where his father was teaching surgery. In 1711**,** at the very early age of 24, he was elected a Fellow of the Royal Society of Sciences at Montpellier. Almost immediately afterward, he was made professor of surgery in the University, in succession to his father, who had just resigned. Haguenot practiced and taught at Montpellier for more than 50 years, and with great success. When 80 years of age, i. e., in 1767, he relinquished his professorship and also retired from practice. Four years later he died, aged 84. He had no children, and therefore left to the Hôtel Dieu St. Eloi his entire fortune, including his very large library. This became the nucleus for the present most excellent library of the Medical College at Montpellier. Haguenot's writings were almost all concerned with general medicine. In one of his works, however, *Tractatus de Morbis Externis Capitis* (12 mo., Avignon, 1751), he gives a bare, uninteresting and highly unoriginal treatise on the diseases of the eye. American Encyclopedia of Ophthalmology, Vol.8,p.5675.

Hahnemann, Christian Friedrich Samuel (1755-1843) German, founder of the homeopathic method of treatment. He wrote: *Organon der rationellen Heilkunst* Dresden 1810 (Countless editions followed).Hirsch.GM.

Frédéric Hairion

Hairion, Frédéric (1809-1887) Belgian hygienist, syphilographer and ophthalmologist, one of the institutors of the *International Congress for Ophthalmology at Brussels* (1857) and for some years, beginning with 1837, one of the editors of the *Annales d'Oculistique*. Born in Beaumont, Belgium, he received the medical degree at Leuven (in French:Louvain) in 1832, pursued further studies at Paris, Brussels, and again at Paris, became for a number of years a military surgeon, and in1835 settled permanently in Leuven. Here he at first taught syphilis, diseases of the skin and hygiene; later, ophthalmology was add his subjects. In 1840 or 1841 he founded the "*Institut Ophtalmique de l´Armée*" of which he was shortly afterwards made director. Hairion's most important ophthalmologic writings are as follows. 1. *Considérations Pratiques et Recherches expérimentales sur le traitement de I'Ophtalmie qui règne dans I'Armée Belge*. (Louvain 1839.) 2. *De I'Ophtalmie Gonorrhoïque*. (Ibid., 1846.) 3. *Des Granulations Palpébrales.* (Annales *Belges d'Oculistique*, 1870.) 4. *De I'Emploi du Collodion en Ophtalmologie*. *(Bull. de I'Académie Royale de Medecine*, 1848-49.) *Discours prononcé dans la discussion sur l'ophthalmie des armées* Bruxelles 1864. American Encyclopedia of Ophthalmology,Vol.8,p.5675-5676 ;Albert:Source Book of Ophthalmology,p. 138; van Duyse Coup d´Oeil sur l´Histoire de l´Ophtalmologie en Belgique au XIXème siècle, p.169 & 256-257[cplt. bibliography].[*In this case, both the *American Encyclopedia* and also Albert *Source Book* erroneously are quoting Hairion as being French and having settled in Lyons. Obviously Lyons has been confounded with the Belgian town of Leuven, which university was founded in 1425-and where Hairion settled.JPW]

Halberg, Gyula Peter (1915-) American Ophthalmologist of Hungarian origin. Professor Emeritus of Ophthalmology, New York,Medical College. Born as the son of a respected physician, Dr. Paul Halberg in Budapest, he completed his schooling in Budapest. He graduated from the Medical Faculty of the Pazmany Peter University (now called the Semmelweis University of Medical Sciences) in Budapest, in 1942 and he received his MD degree. He then completed his Ophthalmology residency at the University Eye Hospitals in Budapest (1942-1945) and subsequently worked in Fellowship in Ophthalmology and received the Hungarian Board of Ophthalmology Certificate in 1945. He further extended his studies at Geneva University Ophthalmology Clinic under Professor A.→Franceschetti (1947), at Instituto Pedro Lagleyze Buenos Aires under Professor Jorge→Malbran (1948), at Columbia University Institute of Ophthalmology

under Professor Algernon→Reese and Professor J. Dunnington (1949-1950) In the USA. He served as a resident in Ophthalmology, Newark Eye and Ear Infirmary (1952) in the USA and received the American Board of Ophthalmology Certificate in 1958, the American Preceptorship in Ophthalmology under Professor Conrad Berens (1955 to1960). He served at the New York Eye and Ear Infirmary from 1955 to the present-day and extended his career from assistant Attending Surgeon to Director of Glaucoma Service and currently he is Honorary Ophthalmic Surgeon. While working at the New York Eye and Ear Infirmary Visual Physiology Laboratory he recorded the Electrical Activity of the Living Human Eye during Accommodation, published with his associates in the *American Journal of Ophthalmology* Vol. 46: 231-238, 1958. At New York Medical College he served from 1962 to present-day: from Assistant Professor to Professor Emeritus. He is a Life Fellow of the American College of Surgeons. He joined as a Fellow the American Academy of Ophthalmology in 1958. Now he is a Life Fellow of the American Academy of Ophthalmology and a recipient of the Honor Award and Senior Honor Award of the Academy. In 1992 he received a 50-year Gold Diploma from the Semmeiweis University of Medical Sciences. His major interests in Ophthalmology have been Contact lens complications, Glaucoma and Ophthalmic Photography. He is the *first* to photograph the human fundus with the modern color film material - Agfachrome - with the modified Nordenson Camera in 1942 in Budapest. He is innovative in various ophthalmic instruments, eg. "*Organization of a photographic Department*. Br. J. Ophthalmol. 34: 121, 1950", "*Simple camera support for the operating theatre*. Ibid. 33: 780,1949", "*Portable Refractor Unit*. Am J. Ophthalmol. 46: 218, 1958, "*Monocular Trial Frame*. Am J. Ophthalmol.27: 692, 1959". He improved the Maklakoff hand applanation tonometer, Transactions of the American Academy of Ophthalmology Vol: 72: 112-114, 1968. He Standardized the Schirmer Tear Test, with Conrad Berens, American Journal of Ophthalmology, 151, May, 1961. He contributed numerous chapters in Handbooks of Ophthalmology, such as *Diagnosis and Treatment of Eye Diseases*, edited by Conrad Berens, McGraw-Hill, 1960 and a number of others. Duke-Elder's *Textbook of Ophthalmology*, quotes with a photograph one rare case of a genetic anomaly published in the British Journal of Ophthalmology Vol. 33 :709-713,1949. He organized with the approval and guidance of Professor Jules Francois, the late President of the International Council of Ophthalmology, a new international organization the "International Contact Lens Council " in 1966 and organized International Medical Contact Lens Symposia in conjunction with the International Congresses of Ophthalmology since I 966, to the present day without interruption. He served as the President of this Council and created the Emile Javal Gold and Silver Medals, that are conferred upon individuals who made outstanding contributions to the medical Contactology field. To honor his contributions, Halberg Lectureship and medal was created. This medal is given at the International Medical Contact Lens symposia, to honor scientists with special merits in the field. In 1998, he retired and was named Honorary Chairman of the International Contact Lens Council. He has served from its foundation in 1963 as an officer of the Contact Lens Association of Ophthalmologists in the U.S. (CLAO) and published many original articles in the medical contact lens field. "*Soft Contact Lenses: Past, Present and Future*" *Soft Contact Lens*, (Ed), Kaufman, H. Mosby Co. St Louis, 1972", "*Contact Lenses in Aphakia*", *Symposium on Contact lenses*, Mosby Co. St. Louis, 1973" and many others. In 1968 he organized with Prof. Kajiura Mutsuo, a Japan - USA Symposium of Medical Contact Lenses; this international meeting gave a significant impetus to the progress of Medical Contactology in Japan. He delivered numerous special lectures in the USA, Europe, Japan as well as in other countries, including the Conrad Berens Memorial Lecture at the CLAO meeting in 1977. He served from 1980 to 1983 as the Editor-in-Chief of Ophthalmology Times, a popular newspaper throughout the world. (Dr. Gyula Peter Halberg, Professor Emeritus of Ophthalmology, 40 West 77 Street, New York, NY 10024-5128 USA. Tel. USA 212-362-1172 (Fax on demand); E-mail: gphny@aol.com) (SM)

Haldat du Lys, Charles Nicolas Alexander de (1770-1852) French surgeon and ophthalmologist. Born at Bourmont , he was for a time a surgeon in the French army, but, having retired into civil practice at Nancy, he there became Instructor in Physics at the Ecole Centrale de la Meurthe. In 1803 he received the degree of Doctor in Medicine at Strassbourg. Returning to Nancy, he became in 1824 Inspector of the University, a position which he held for eight years. He also became a Fellow and Secretary of the

Academy of Science, Letters and Arts at Nancy. His ophthalmologic writings are as follows: 1. "*Expériences sur la Vision Double.*" (Laméthrie, *Jour. de Physique*, 1806.) 2. "*Recherches sur les Limites de la Vision Simple et les Points de Correspondance de la Rétine, etc*." (Ibid., 1807.) 3. *Optique Oculaire, Suivi d'un Essai sur I'Achromatisme de I'Oeil.* (Paris, 1849.)American Encyclopedia of Ophthalmology,Vol.8,p.5679

Halifa b. Abil-Mahasan (flourished second half 13th century). A distinguished ophthalmologist of Aleppo, who flourished in the latter half of the 13th century. Concerning the man himself we know almost nothing; his one writing, however, entitled "*The Book of Sufficiency in Ophthalmology*," is still extant, and for many reasons is worthy of note. Of great importance is the list of Arabian ophthalmologists and ophthalmologies with which the book begins. As Halifa was one of the latest of the Arabian writers on the eye, the list, of course, is about complete, so far, at all events, as concerns the more important writers and books. The following is a translation of the highly interesting passage in question: " Generally recognised is the advantage of visual power, and the profit which one is in a position to create out of that power for his spiritual completeness. After I had studied in detail the works concerned especially with eye diseases and their treatments, for example, (1) the ten books of Hunain on the eye, and (2) his three books on the same subject, in the form of question and answer; (3) the book of his sister's son, Hubais, which he calls *'The Book of the Explanation of Eye-Diseases*, and in which he has provided the eye and a few diseases, as for example the large pterygium and the pannus, with illustrations; (4) The Memorandum-Book of the Oculist, Ali ben Isa; (5) The Commentary thereto by Daniel, the son of Saja; (6) The Tables of Rhazes; (7) The Final Aim of Ophthalmology; (8) The Memorandum-Book of Mansur; (9) The Book of Akbari; (10) The Book of the Oculist of Amid; (11) the work of Ibn Abi as-Sajjar; (12) The Work on Cataract, its Treatment and its Operation, by the Egyptian Ibn Duhail; (13) the book of the oculist Abdan; (14) the book of the oculist ad-Dan of Tiberias; (15) the work composed by the double-minister Abul Mutariff, of the Magrib, on the visual spirit, wherein he writes with excellent ideas concerning the treatment of the visual power; (16) The Book of the Correction of the Seer and of the Sight; (17) The Book for the Examination of the Oculist; (18) the iambic poem of al-Misri concerning the eye, its pathology and its treatment-as indeed still many others; for there is no book on the art of healing, whether short or long, that does not contain the anatomy of the eye and the description of a few of its diseases, and their treatment;-then I found in all these works the ordinary rules of the art, but still a neglect of a few subordinate subjects out of the chapters relating to this special branch." The contents of Halifa's important book can best be given in his own words: "The Book comprises two main divisions. The first treats of the anatomy of the eye and of its various conditions. The second, of everything connected with its treatment. " The *first* section of the first division treats of the definition of the eye, of its mingling, and of its color, and of the causes of the latter. The *second*, of the anatomy of the membranes of the eye and of their origin. The *third*, of the humors of the eye. The *fourth*, of the visual spirit [*see* Ali ben Isa] and its nerves and of the condition of vision. The *fifth*, of the nerve of motion of the eye and of its origin. The *sixth*, of the anatomy of the muscles of the eye, and of the lids and the lashes and their roots and their nourishment. After that, I give the figure of the brain and of the two eyes and the nerves of both of them, as availably to the understanding as is for me possible." The second main division comprises six sections. The *first* treats of the general rules concerning the scientific specialty, of the preservation of health and of the times of disease. The *second* contains an explanation of the preservation of the health of the eye, and also an explanation of such things as assist and injure the eye and of those which preserve its health and strength. The *third* section of this treats of this, how one opens the eye and introduces medicine into it. The *fourth*, of the best kind of sound and its employment. The *fifth* mentions the apparatus by means of which each kind of collyrium is fortified. The *sixth* mentions the most appropriate kind of clothing for the eye-doctor. "Hereupon follow tables, which contain the number of the diseases of the lids as well as of the eyes themselves, and how such diseases arise, and at what seasons of the year and in what periods of life their occurrence is most frequent; and their causes and their symptoms and the treatment of such of them as man can treat. To eye-diseases belong those perceptible to the senses, as well as those not so perceptible. "I add to each table the simple remedies,

according to the expression of the learned as to what is specific for each affection-in order that thou mayest find occasionally indemnification for the compounded remedies. Thereupon follows the enumeration of several anesthetic [benumbing] remedies, which, by their mingling, benumb sensation, also specific means for the same purpose-according to the best knowledge and as briefly as possible. 'Finally follow tables on the treatment of those diseases which demand surgical intervention. Then I add, tables of the hidden diseases of the eyes and close the book with an index of remedies. I will keep short the table on compounded remedies, particularly as these have been already referred to. Thus is this appendix sufficient for the practitioner, May he, in my work, improve what is bad and complete what he finds to be defective. God is our trust. " Much of the contents of his "*Book of Sufficiency*" Halifa undoubtedly borrowed from the earlier Arabians. Nevertheless, he has given us some new matter also, and even what he borrows he clarifies. Probably most important, and at all events most interesting, of all the contents of this highly interesting book, is "the figure of the brain and of the two eyes and of the nerves of both of them " referred to above in Halifa's own analysis of the contents of his book. This illustration is one of the earliest, possibly the very earliest, scientific illustration of the eye which has come down to our day. Almost as interesting as this earliest illustration of the eye are the pictures given by Halifa, in the same work, of the various instruments which, in his time, were employed in ocular surgery. American Encyclopedia of Ophthalmology,Vol.8, p.5680-5687

Hall, Geoffry Craythorne (1848-1923) British surgeon who was educated at Guy's Hospital (receiving his M.R.C.S. in 1871),and who served in India as a medical officer, retiring in England with the rank of colonel. He was the author of two ophthalmic works. *A few words about senile cataracts*. Allahabad 1899.

Hall, John Charles (1816-1876) English physician, especially renowned as an ophthalmologist and for his writings on occupational diseases. Born at Nottingham, England, he studied at St. George's Hospital (M.R.C.S., 1839), as well as in Paris. Returning to England, he settled at first in Bedford. In 1848 he became a Fellow of the Royal College of Physicians (Edinburgh) and in the same year settled in Sheffield. A few years later he was made professor at the School of Medicine. In ophthalmology he wrote: *Clinical remarks on certain diseases of the eye and on miscellaneous subjects* London 1843; *On the nature and treatment of some of the more important diseases medical & surgical, including the principal diseases of the eye* London 1844. American Encyclopedia of Ophthalmology, Vol.8, p.5687-5688.Albert

Albrecht von Haller

Haller, Albrecht von (1708-1777) Swiss physician, founder of modern physiology and of medical and scientific bibliography. Haller was born in Bern, Switzerland, and received his M.D. at Leiden (Holland) at the age of nineteen. Physician, mathematician, and botanist, Haller became president of the University of Göttingen as well as professor of anatomy, surgery, and botany in 1736. In 1753 he returned to Switzerland, working on physiological research and numerous other scholarly activities. Haller's most important single contribution was his demonstration that irritability, or contractility, is the specific property of muscular tissue, while sensibility is exclusive to nervous tissue. Haller also made important additions to knowledge of the anatomy and physiology of the visual apparatus. Of his vast published output, the major works are his *Icones anatomicae* (1743-1756), *Elementa physiologiae corporis humani* (1759-1766), and various medical and scientific bibliographies (1771-1778). *Sur la formation du coeur dans le poulet; sur l'oeil, sur la structure du jaune, &c*. (2 vols.) Lausanne 1758. *Bibliotheca medicinae practicae* (4 vols.) Basel and Bern 1776-1788; *Grundriss der Physiologie für Vorlesungen* Berlin 1788.Albert.

Haltenhoff, Georg (1843-1915) A Swiss oculist of Geneva, who studied at Geneva, Würzburg, Zürich, Paris, Berlin, and Heidelberg, returning to Zürich to received the medical degree in 1866. Concerning his life from 1866 to 1872, the pre writer has not been able to secure the slightest information. In 1872 however, Haltenhoff settled as an ophthalmologist in Geneva, before the year was over, had qualified as privat docent in ophthalmology. In 1891 he became extraordinary, in 1903, ordinary professor. Not till seven years later, however, was he placed in charge of the eye-division of a town clinic. Some of Haltenhoff's ophthalmic writings are as follows: Mém. sur la création d'une division ophthalmique à 1'hôpital cantonal de Genève. (Gen., 1872, p. 23.) Retinitis

haemorrh. bei Diabetes Mellitus. (Klin. *Mon.-Bl.,* pp. 291-298 and Ann. d'Ocul., LXTT, pp 31.) Cataracte traumatique luxée, resorption spontanée. (Bul. *la Soc. méd. de la Suisse Romande,* No. 12, 1873.) Fragment de. dans la cavité orbitaire. (Ibid., No. 10, 1973.) C. R. de quel travaux récents sur les cavités lymphatiques de 1'appareil visuel *(Ann. d'Ocul.*,LXXI, pp. 208-212, 1874.) Apparat zu optischen Demonstrationen. *(Klin. Monatsbl..,* pp. 198-200, 1874.) Prolapsus traum. de la glande lacrim. orb. (Ann. d'Ocul. CXITT, p.1895.) 0pération de la cataracte chez le chien. (Ibid., CXXI, p. 129, 1898.) Un cas de tétanos céphalique avec paralysie faciale et oculaire. Guérison -. *(Ann..* d'Ocul., CXXVIII, p. 467, 1902.) Cas de lèpre avec localis. oc. *(Ibid,.,* 1902.) Die Berger'sche Binokular-Lupe. *(Ophth. Klinik,* No. 22, and *Clinique opht.,* p. 281, 1905.) Hérédosyph. a la troisième génération. (R. m. *Suisse Romande.,* XXXVI, No. 6, 1906.) Double conj. diphtheroïde. (Ibid., 1906.) Ophtalmoplégie externe double nucléaire *(Ann. d'Oc.,* CXXXIX, p. 290, 1908.) Mercure a prendre pour combattre 1'ophtalmie des nouveau-nés. (Ibid,., CXL, p. 394, 1908.) *Welches sind die gesetzlichen Massnahmen, die in der Schweiz zur Bekämpfung der Augen-Entzündung der Neugeborenen zu ergreifen sind?* (St. Gallen, 1908.) Lésions ocul. tabétiques. *Revue gén. d'Ophtalm.,* p. 426, 1910.) American Encyclopedia of Ophthalmology,Vol.8,p.5690-5691

Hamano, Hikaru (1923-) Japanese Ophthalmologist, Clinical Professor of Ophthalmology of Louisiana State University, U. S. A. and Director of Hamano Clinic. He graduated from University of Osaka Medical School in 1944, studied Ophthalmology under Prof. Y.→UYAMA and received the degree Doctor of Medical Sciences in 1952 (thesis: *Experimental study on reading distance*. Folia Ophthalmol. Jpn. 3: 245, 1952). His research interest is in contact lenses and he has done extensive studies on the basic physiology of contact lens wear. He is an Executive Board Member of the Japan Contact Lens Society. He is the Founding member of the International Contact Lens Council of Ophthalmologists and serves as the Secretary General of the Council since 1978. He is also a member of the International Society for Contact Lens Research and Contact Lens Association of Ophthalmologists. He delivered the First Halberg Award Lecture at the International Symposium of Contact lens held in Singapore, entitled "*Fundamental and clinical studies of corneal physiology and contact lenses*", the paper having been published in Asia-Pacific Journal of Ophthalmology 2: 42, 1990; 2: 108, 1990; 3: 37, 1991: 3: 77, 1991. He published many scientific articles and wrote many books on the contact lens, e.g. "*The Physiology of the cornea and contact lens applications*. Churchill Livingstone Inc. New York, 1987" and "*Corneal Physiology and disposable contact lenses*. Butterworth-Heinemann. Boston, 1997". (Hamano Eye Clinic, Dai-Hanshin Build. 3F, 1-13-13, Umeda, Kita-ku, Osaka, 530-0001, phone: 81-6-6343-0770, fax: 81-6-6361-5556, e-mail: hamano@med.email.ne.jp) (SM)

Léon Hambresin

Hambresin, Léon (1888-1966) Belgian ophthalmologist. Hambresin obtained the M.D. degree in Leuven in 1912. He specialized in ophthalmology with Anatole →Vanderstraeten in Leuven, Victor →Morax in Paris and Ernst→Fuchs in Vienna. From 1919 he wrote several papers on *medical and surgical treatment of glaucoma*. In 1938 he made a report on *shock therapy for ocular diseases*. In 1958 he made for the International Congress of Ophthalmology in Brussels another report on *visual disability from work accidents*. He wrote also on *retrobulbar anesthesia* (1922), *treatment of spasmodic entropium, tabagic amblyppia, diabetic cataract* etc. He was president of the Professional association of the Belgian ophthalmologists and founder-president of the *Belgian association of specialists*. He had many pupils and among them Charles L.→Schepens, who wrote on him: *'We was a perfectionist, totally honest, and very knowledgeable. As a practitioner he was probably not recognized for the remarkable scholar that he was*". (Verriest)

Hamill, John R. (1864-1908) American ophthalmologist. Hamill was professor for ophthalmology at the Chicago Clinical School. The Ophthalmoscope, London 1908.

Hamilton, Frank Hastings (1813-1886), American surgeon and anatomist. Hamilton was born in Wilmington, Vermont, and received his M.D. at the University of Pennsylvania in 1835. He taught anatomy and surgery at the Geneva (New York) Medical College from 1835 to 1843, the University of Buffalo from 1846 to1858, Long Island College Hospital in Brooklyn from 1858 to1861, and Bellevue Hospital Medical College in New York from 1861 to 1875). He was a pioneer in skin grafting and an authority on military surgery. He wrote a little ophthalmic book: *Monograph on strabismus, with cases*. Buffalo 1845.Albert

Hamilton, John Bruce (1901-1968) Australian ophthalmologist. He belongs to the fourth generation of emigrants who went to Van Dieman's Land (now known as Tasmania) 190 years ago. Educated first in his native Hobart, he pursued his medical studies first in Sydney, then in Melbourne, and finally in Moorfields Eye Hospital where he was a Resident. He obtained the DOMS (London) in 1928 and the DO (Oxford) in 1929, became a fellow of the RACS in 1932 and an MD (Sydney) in 1948. In Australian ophthalmology he occupied a prominent place. He was chairman and member of the Research Committee of the Ophthalmic Institute of Australia, vice-president of the Royal Tasman Society for the Blind and Deaf, president of the Ophthalmological Society of Australia, a councillor of the Royal Australasian College of Surgeons, and president of the Tasmanian branch of the British Medical Association. In a wider field he was a vice-president of the International Association for the Prevention of Blindness, and he retained his connexions with Great Britain in being a member of the Faculty of Ophthalmologists, a life-member of the Ophthalmological Society of the United Kingdom, and a Fellow of the Royal Society of Medicine. During the second world war, from 1941 to 1943, he served as a Major in the Australian forces in the Middle East. In addition to sixty papers in various journals in the English-speaking world, he published two books: *A Guide to Ophthalmic Operations* and *The Significance of Heredity in Ophthalmology* (Melbourne 1951). His interests were not confined to ophthalmology, for he took a prominent position in the public life of Tasmania; a typical hobby was the building of the Bligh Museum of Pacific Exploration in Adventure Bay on a small island on the southern coast of Tasmania. Here with immense pains and after much travelling he gathered priceless historical relics of the distinguished visitors to the island, who included Tasman, Captain Cook, and Vice-Admiral Bligh of the Bounty. The museum, opened in 1954 on the 200th anniversary of Bligh's birthday, is itself historical, for it was built of bricks taken from an old church; these were hand-made by convicts in the 1840s and still show the finger-prints of the labourers. BJO 1968,52:942

Hamilton, Robert. A Scottish surgeon of the early 19th century, who seems to have devoted a considerable portion of his time to eye diseases. His life-dates are unknown. He was, however, for a time, surgeon at the Edinburgh Eye Infirmary, and, in 1843, published in the *Edinburgh Medical Journal* an article entitled "*Substance of an Introductory Lecture to a Course upon the Structure, Functions and Diseases of the Eye; Comprising a Comparison of the State of ophthalmic Science in Germany and England; and a Recommendation to Introduce the German Method of Instruction into the British Schools.*" American Encyclopedia of Ophthalmology,Vol.8,p.5691-5692.

Hamilton, William (Sir William) Rowan (1805-1865) Irish mathematician born in Dublin. His earlier essays connected with caustics and contact of curves grew by degrees into an elaborate treatise on the *Theory of Systems of Rays*. To this he added various supplements, in last of which, published in 1833, he predicted the existence of the kinds of conical refraction, the experimental verification of which Lloyd still forms one of the most convincing proofs of the truth of undulatory theory of light. His next great work was *A General Method in Dynamics*. For these researches Hamilton was elected honorary member of the Academy of St. Petersburg, a rare and coveted distinction. While an undergraduate at Trinity College, Dublin, he was pointed in 1827 successor to Dr. Brinkley in the Andrews chair of Astronomy in the University of Dublin, to which is attached the astronomer-royalship of Ireland. This post he held until his death. In 1835 he was knighted on his delivering the address as secretary to the British Association for its Dublin meeting. American Encyclopedia of Ophthalmology,Vol.8,p.5692

Hammurabi, The Code of An ancient Assyrio-Babylonian code, oldest book on law in all the world, and, incidentally, the oldest document of any kind to mention matters, medical or ophthalmic. The Egyptian *".Papyrus Ebers"* is, in fact, almost modern by comparison: for the date of its composition is about B. C. 1500, while that of Hammurabic Code is actually B. 2250. The parts of the Code in question which relate to ophthalmic matters are as follows (according to the translation of Robert Francis Harper, Ph.D.*)* :196.- *If a man destroy the eye of another man, they shall destroy his eye.* 198:*If one destroy the eye of a freeman or brake the bone of a freeman, he shall pay one mana of silver*. 199: *if one destroy the eye of a man's slave or brake a bone of a man's slave, he shall pay one-half this price*. 215: *if a physician open an abscess (in the eye) of a man with a bronze lancet and save that man´s eye, he shall receive ten shekels of silver (as his fee).* 216: *If he*

be a freeman, he shall receive five shekels. 218: *If a physician open an abscess (in the eye) of a man with a bronze lancet and destroy the man's eye, they shall cut off his fingers.* 220: *If he open an abscess (in his eye) with a bronze lancet, and destroy his eye, he shall pay silver to the extent of one-half of his price.* "American Encyclopedia of Ophthalmology,Vol.8,p.5692-5693

Hancock, William Ilbert (1874-1910) British ophthalmologist. He studied at Guy´s Hospital and qualified as a member of the Royal College of Surgeons in 1896, and as fellow in 1898. He became a member of the Ophthalmological Society of the United Kingdom in 1899 and contributed several papers in *Transactions* .At the time of his early death (36 years) he was assistant surgeon to the Royal London Ophthalmic Hospital (Moorfields) and surgeon to the East London Hospital for Children and to the Bolingbroke Hospital and last senior assistant to Central London Ophthalmic Hospital. Hancock also contributed several papers to *Moorfields Hospital Reports.* American Encyclopedia of Ophthalmology, Vol.8,p.5694, The Ophthalmoscope, 1910, p. 242-243.

Hancook, Henry (1809-1880) A famous British surgeon from London who devoted most of his time to ophthalmology, and who invented the procedure of division of the ciliary muscle for glaucoma. Born at London, he studied at first pharmacy, but appears never to have practised that profession. In 1830 he began the pursuit of medicine at the Royal Westminster Ophthalmic Hospital, later at King's College and at Westminster Hospital. For a time he was a pupil of →Guthrie. In 1832 he was appointed house-surgeon at the Royal Westminster Ophthalmic Hospital, in 1834: prosector of anatomy in the Westminster School, and in 1837 lecturer on anatomy and physiology at the Charing Cross Medical Hospital. Two years later he was made assistant surgeon at the Charing Cross Hospital. For many years he was surgeon to the Westminster Ophthalmic Hospital where his lectures were well attended. In 1846 he became president of the *Westminster Medical Society*, and, two years later, of the London Medical Society. In 1863 he became a Fellow of the Council of the Royal College of Surgeons. Hancock's sclerocyclotomy, or division of the ciliary muscle for glaucoma, seems to have found little favor in his day, and, at the present time (1916), is recommended only for the alleviation of pain in glaucoma absolutum. (See Wood's *System of Ophthalmic Operations* II, p. 1122, article by Williain Campbell Posey on "*The Operative Treatment Glaucoma*.") Ball is an ardent advocate of Hancock's operation for this one purpose. Aside from numerous works on general surgery (the most important of which is entitled " *On the Operative Surgery of the Foot and Ankle Joint*") he wrote "*On the Division of the Ciliary Muscle in Glaucoma*. *(Westminster Oph. Hosp. Reports*, no. 12, July, 1860, p.13-20 and *On the ophthalmia of children or remittent ophthalmia*. London 1855. American Encyclopedia of Ophthalmology,Vol.8,p.5693-5694. Albert

Hanna, Henry (1874-1946) Irish ophthalmologist who received his early education at Belfast Royal Academy while his university career was spent between Queen´s College, Belfast, and St.John's College, Cambridge. The old RoyaI University of Ireland conferred upon him a *Bachelor of' Arts* degree in 1894 and a Master of Arts, Bachelor of Science degree in 1896. In the following years he worked at Cambridge University but in due course returned to Ireland to commence a medical career. His undergraduate studies finished when he was awarded his Bachelor of Medicine degree in 1903. Having completed a resident medical officer appointment in the newly built Royal Victoria Hospital, Belfast, and a period of demonstrating in the department of anatomy, he proceeded to Vienna to study at their eye, ear and throat clinics. Returning to Belfast he commenced to practise in his chosen speciality and in due course became head of the department in the Royal Victoria Hospital and also the Belfast City Hospital. He was honoured with many of the highest offices: he was President of the Irish Ophthalmological Society, President of the Ulster Medical Society, and also presided over his special section at the British Medical Association meeting in Belfast in 1937. BJO 1946,30:769-770

Hannover, Adolf (1814-1894) Danish anatomist, physician and ophthalmologist. Born in Copenhagen, he was there admitted to medical practice in 1838. Later he studied for a number of years in Paris and Berlin. He then became a military surgeon, also assistant physician at the Royal Friedrich's Hospital, and for a time was privat docent in pathologic anatomy. In 1856, and again in 1878, he received the Monthyon Prize of the Institute of

France for his investigations in ocular anatomy and pathology. Hannover's chief ophthalmologic writings are: 1. *Ueber der Netzhaut u.s. w. (Müller's Archiv 1840.) 2. Die Linse. (Ibid., 1815.) 3. Der Glaskörper. (Ibid.,* 1845.) 4. *Das Auge, Beiträge zur Anatomie, Physiologie und Pathologie dieses Organs*. (Danish, 1850; German, Leipzig, 1852.) 5. *La Rétine de I'Homme et des Vertébrés, Mém. Histologique, Historico-Critique et Physiologique.* (Danish, 1875; French, Copenhagen and Paris, 1876.)American Encyclopedia of Ophthalmology,Vol.8,p.5696-5697.Albert

Hansell, Howard Forde (1855-1934) American ophthalmologist of Philadelphia. Hansell received his M.D. in 1879 at Jefferson Medical College, and became professor of ophthalmology in the same place in 1894. He was a member of the ophthalmologic staff of the Philadelphia Hospital. Hansell wrote with James H. Bell: *A manual of clinical ophthalmology*. Philadelphia 1892, with Wendell Reber: *A practical handbook of the muscular anomalies of the eye* Philadelphia 1899 and with William M. Sweet *Textbook of Diseases of the Eyes*, Blakiston´s Son & Co.1903. JPW

Hansen-Grut,Edmund (1831-1907) Danish ophthalmologist.Professor for ophthalmology at the University of Copenhagen. The Ophthalmoscope, London 1907,p.530.

Einosuke Harada

Harada, Einosuke (1892-1946) Japanese Ophthalmologist. He graduated from Tokyo University in 1917 and studied Ophthalmology under Prof. J. KOMOTO and Prof. S. ISHIHARA. In 1922, he discovered a rare case of acute uveitis with bilateral retinal detachment. He compiled similar cases and established that this was a new clinical entity, which is now named "*Harada Disease*". Later it was found that this disease together with the diseases described by A.→VOGT and by Y.→KOYANAGI is an expression of the same disease entity, i.e., Vogt-Koyanagi-Harada disease. Dr. Harada carried out research at the Department of Pharmacology and was granted the degree, Doctor of Medical Science for studies of ocular pharmacology. In 1930 he started to practice in the city of Nagasaki; his hospital was destroyed by the atomic bomb. Although he survived the bomb, he died before he could restart practice. (SM)

Harcourt, Richard Brian (1934-1987) British ophthalmologist, consultant ophthalmic surgeon to the General Infirmary at Leeds. Honorary senior clinical lecturer to Leeds University and President of the Ophthalmological Society of the United Kingdom. Harcourt was born the son of an engineer and the grandson of a surgeon, and was educated at Quarry Bank School, Liverpool, before studying medicine at Trinity College, Cambridge, and St Bartholomew's Hospital, London. After national service in the Royal Air Force he chose ophthalmology as his specialty and undertook his training at the High Holborn branch of Moorfields Eye Hospital. Early in his ophthalmic career he showed a flair for paediatrics and after spending a year as a Research Fellow in paediatric ophthalmology at the Hospital for Sick Children, Great Ormond Street, and the Institute of Ophthalmology he was appointed to the consultant staff of the General Infirmary at Leeds in 1968. He was made an honorary clinical lecturer to Leeds University and was promoted to honorary senior clinical lecturer in 1978. At Leeds he developed his expertise in paediatric ophthalmology and in strabismus so that in a very few years he had become one of the acknowledged experts in these fields. His many publications culminated in the book *The Diagnosis and Management of Ocular Motility Disorders*, (1986) written in collaboration with Miss Joyce Mein. In addition to his extensive clinical practice, he was very active in national and international ophthalmic committees. He was elected a member of council of the Faculty of Ophthalmologists in 1970 and had been its honorary treasurer since 1979. He was a member of the General Optical Council, one of the British representatives on the Section of Ophthalmology of the European Union of Medical Specialists, and represented British ophthalmologists on the board of governors of Moorfields Eye Hospital. In addition to being a member of its court of examiners he had recently been appointed regional adviser in ophthalmology to the Royal College of Surgeons of England. In 1987 he was elected President of the Ophthalmological Society of the United Kingdom. He played a major part in developing the interests of ophthalmology, not least in his support for the proposed College of Ophthalmologists.BJO 1988,72:321.The Times 17 Nov 1987.JPW

Harfitt, Roy (1944-1994) British ophthalmologist. Roy Harfitt was born in Alexandria, Egypt. He had no medical connections. His grandfather, Vicar of St Mary at Hill (the

Billingsgate fish market church) founded the Christian Evidence Society. Ronald Stanley Harfitt, his father, worked in civil aviation and his mother was Josephine Lilian, née Massad. He was brought up in London and went to school at St Gabriels Angel, and then Cardinal Vaughan, Holland Park. He trained at Bart's, winning the ophthalmology prize. After a variety of junior posts he became SHO at Oxford Eye Hospital, registrar at Moorfields, and at St Thomas's and Guy's he held the post of consultant ophthalmic surgeon in the Merton and Sutton Health District from 1977 until his death. He was also lecturer at St George's Hospital, Tooting. He established ophthalmology in paediatrics at Queen Mary's Hospital, Carshalton, and was president of the Sutton and District Blind Association. Harfitt received following titles: MRCS 1967; FRCS 1974; DO 1971; FRCOphth 1989; LRCP 1967. BMJ 1995,310:734.

Harlan, George Cuvier (1835-1909) American ophthalmologist of Philadelphia, inventor of Harlan's tests for malingering and Harlan's operation for symblepharon. He was born in Philadelphia, Pa., the son of Dr. Richard Harlan. In 1855 he received the degree of Bachelor of Arts from Delaware College, and the Master's degree from the same institution in 1858, the year in which he received his medical degree from the University of Pennsylvania. His graduation thesis at the last named institution was entitled *The Iris*. As early as April 6, 1857 (even before he had received his medical degree) he was appointed resident physician at the Wills Eye Hospital. From 1861 till 1864 he was surgeon at the same institution, although, for a time, in 1861, he was assistant surgeon in the U. S. Navy. In 1868 he again became full surgeon at the Wills Eye Hospital, and remained in that position till May, 1901-more than twenty-three years. On Oct. 29th of the same year he was made consulting surgeon. He was also connected at various times with numerous other hospitals in his capacity as ophthalmologist. He was the *first* incumbent of the chair of ophthalmology at the Philadelphia Polyclinic and School for Graduates in Medicine. As a teacher he was clear, concise and practical. He was also a very skilful operator, never quick and brilliant, but conservative and conscientious. His manner in the midst of an operation was, in fact, so placid and composed that the patient himself would often be considerably influenced by it. He used to tell his students that operation-fright was, at least in greater part, the offspring of too much haste. He was a member of the *College of Physicians of Philadelphia*, the *Philadelphia County Medical Society*, the *Medical Society of the State of Pennsylvania*, the *American Medical Association*, the *Wills Hospital Ophthalmic Society*, the *American Ophthalmological Society*, and the *International Congress of Ophthalmologists* in 1876. Aside from numerous journal articles, he wrote "*Diseases of the Eyelids*," and "*Operations Performed upon the Eyelids*," both for Vol. III of Norris and Oliver's "*System of Diseases of the Eye*," and "*Eyesight and How to Care for It*" (1879). The latter composition was a popular manual, clear, practical and thorough, and of very great value to the laity. It had a large sale. His operation for symblepharon is widely employed, and the same may be said of his various tests for ocular malingering. American Encyclopedia of Ophthalmology,Vol.8,p.5698-5700. The Ophthalmoscope 1909, p.800.Albert

Harley, George (1829-1896) A Scottish physician, who devoted some attention to ophthalmology, and who was himself, for a time, almost blind. Born at Haddington, East Lothian, he received his medical degree in 1850 at Edinburgh. He is said to have performed, before his graduation, a Caesarean section, whereby, after the death of the mother, he delivered a living child, who grew up and became a father of a family. After his graduation, Harley studied at Paris, Würzburg, Giessen, Berlin, Vienna and Heidelberg, and, returning to England in 1855, he settled as general practitioner in London. Here he became, in 1856, Instructor in Physiology and Histology at University College, three years later Professor of Legal Medicine, and in 1860 Physician at the University College Hospital. In 1854 he became a Fellow of the *Royal College of Physicians*, and in 1865 of the *Royal Society*. An ardent devotee of the microscope, he acquired, from excessive employment of the eyes in microscopic work, a retinitis which rendered him well nigh blind for nine or ten months. For all of this time he remained in a darkened room, and, after his recovery, wrote an account of his experiences, entitled "*Autoclinical Remarks on Injury of the Retina from Overwork with the Microscope* (Lancet, 1868*).*American Encyclopedia of Ophthalmology,Vol.8,p.5700.

Harman, Nathaniel Bishop (1869-1945) British ophthalmologist. Born the seventh child and third son, but the first son to survive, of Walter John Harman of Highgate and his wife née Bellamy, who came of a City family, owners of Bellamy's Wharf. He was educated at the City of London School and at St John's College Cambridge, of which he was a foundation scholar and afterwards Hutchison research student. He took his clinical training at the Middlesex Hospital, qualifying in 1895, and came under the influence of William Lang (1852-1937), with whom he later worked for many years as clinical assistant in the hospital's eye department. He then took first-class honours in both parts of the Natural Sciences Tripos, 1897-98, and was appointed lecturer in anatomy at Caius and King's Colleges, Cambridge. He was also demonstrator of anatomy, and subsequently an examiner in anatomy. Harman volunteered for service in the South African war, as a surgeon to the Field Force. He won the Queen's medal with five. clasps, wrote a thesis on veldt sore. When he came back to England he began to practise in London as an ophthalmologist, working at Moorfields (the Royal London Ophthalmic Hospital) as chief clinical assistant to E. Treacher Collins. In 1901 he was appointed ophthalmic surgeon to the Belgrave Hospital for Children. While attaining to a leading ophthalmic practice and making his mark in extra-professional interests, Harman's outstanding work, for which he will be chiefly remembered, was as a pioneer of reforms in the education of children with defective sight. He also made time to take an active part through a long period the central counsels of the British Medical Association, not least as its honorary treasurer for the record period of fifteen years. Harman's chief hospital connexion was with the West London, where he became ophthalmic surgeon 1909, and was ultimately consulting ophthalmic surgeon; he was also lecturer in ophthalmology and dean of the West London Postgraduate College. He served as consultant oculist to the National Institute for the Blind. In 1902 Harman was appointed ophthalmic consultant to the London School Board, a position he continued to hold when the Board's work was taken over by the education department of the London County Council. Working with James Kerr (1862-1941), School Medical Officer for London 1902-11, he persuaded the authorities to institute special classes for defective-sighted children, and later special "myope" or sight-saving schools. This work was beneficial not merely to the children directly concerned, but to those in other countries which quickly followed London's example. Harman became quite a celebrity in America on this count alone. Besides his strictly clinical interest in this problem, Harman was active in designing special equipment for these schools. He was influential in improving school lighting in general and the design of school books. He served on the Departmental Committees on the Causes and Prevention of Blindness in 1920-22 and 1938, and secured the compulsory notification of ophthalmia neonatorum. In connexion with his B.M.A. work he established the National Eye Service 1929, and persuaded the Association to back its central organ, the National Ophthalmic Treatment Board, of which he was chairman, by advancing a substantial loan, which, as he foresaw, was fully and quickly repaid. This body provides qualified eye examination for those unable to afford a private specialist's fee. Two of his books, *Preventable blindness* 1907 and *The eyes of our children* 1915, were addressed to the general public and made some mark. He wrote numerous books and articles on clinical and professional subjects, and invented several widely used ophthalmic instruments. Some of his books and essays are: *The Conjunctiva in Health and Disease* (1905); *Science and Religion* (1935) and *Aids to Ophthalmology* of which the 9th edition was published in 1940. Harman also wrote poetry, and was a contributor to the Hibbert Journal and in some demand as a speaker in the Unitarian Church, of which he was a prominent member. Harman was a member of the Ophthalmological Society of the United Kingdom for forty-five years, and demonstrated to it in 1909 his diaphragm test for binocular vision, which became widely adopted. Harman's connexion with the British Medical Association began in the Marylebone division, which he served successively as honorary secretary, treasurer and chairman; he was also active in the Metropolitan Counties branch, of which he became president in 1922-23. His first contact with the central work of the Association was as a member of the Representative Body at its first meeting in 1903, but he did not attend it again regularly till 1911. In 1915 he was elected to the Council and during 1915-1919 undertook the arduous work of joint secretary of the Central Medical War Committee, which allocated medical men to appropriate national service; his colleague was Alfred Cox, O.B.E., medical secretary of the B.M.A. 1912-32. As chairman of the Hospitals Committee

1920-24, the policy which he successfully promoted was statesmanlike in its anticipation of the evolution of hospital services. In 1924 he was elected honorary treasurer of the Association for five years; he did his work so well that he was twice re-elected, and retired only in 1939. When he took charge of the purse, the Association had newly moved from the Strand to Tavistock Square; Harman was active in his foreseeing guidance of the developments consequent on that move. His advice was also taken about the physical appearance of the Association's house. He was awarded the Association's highest honour, its gold medal, in 1931 and was later elected a vice-president. On the scientific side of the B.M.A. Harman served as chairman of the Council's ophthalmology committee and of the committee of the ophthalmic practitioners' group. He was president of the section of ophthalmology at the Winnipeg meeting 1930. In 1931 he was given an Honorary Doctorate of Laws at Manchester, and was elected an Honorary Fellow of the Royal Academy of Medicine of Ireland in 1933. He served for many years as treasurer of the National Insurance Defence Trust Fund. He was nominated in 1929 a direct representative for England and Wales on the General Medical Council, in the room of Sir Thomas Jenner Verrall, M.R.C.S. (1852-1929); he was later appointed to the Dental Board and became its treasurer. His wife, herself a doctor, endowed in 1926 the Katharine Bishop Harman prize, to be awarded by the Association for research into disorders of maternity. In 1939 he founded a clinical prize and bequeathed £1,000 to the Association to increase this prize. He earned following titles: M.R.C.S. 9 July 1895; F.R.C.S. 8 December 1898; B . A. Cambridge 1897; M.B., B.Ch. 1898; M.A. 1901; Hon.LL.D. Manchester 1931. LFRCSE.

Harms, Clemens (1875-1915) German ophthalmologist. Harms was born in Celle, near Hanover. Studied in Tübingen, Berlin, and München and, in 1900, he was honored with approbation and promotion.He spent two years with Uhthoff from whom he received especial notice of his work and was enabled to work with Willibald Nagel in Berlin. He was later assistant doctor in the Tübingen Eye Clinic. Besides his smaller works in casuistics and anatomy, he contributed to the scientific knowledge of the pathology of the central vascular system of the retina. In his last publication in volume 87 of Graefe's Archives, shortly before the war, he reported further studies of the same subject. He had also taken up studies of great literary value on other planes which were interrupted by his death. All of his works on the above themes show themselves to be careful critical reviews of "the clinical "'material which he collected.AJO 1924, 3:488-489

Harnisch, Friedrich Curt (1860-1918) American ophthalmologist of Chicago, who was born in Teuchern, Saxony, and who received his degree in medicine at the University of Leipzig in 1890. He practised for a time at Leipzig, and the date of his move to America has not been learned. He was ophthalmic surgeon to the Alexian Brothers, St. Elizabeth´s, and St. Mary of Nazareth's Hospitals.AJO,1:694.

Harper, John (? – 1831) An early American surgeon, of some importance in ophthalmology. The date of his birth is not known. He was, however, a native of Ireland, received his degree at Glasgow, and, emigrating to America, settled in Baltimore. Here he was widely known as a cataract operator, performing, however, merely dislaceration of the capsule.American Encyclopedia of Ophthalmology, Vol.8,p.5701.

Harrington, David Oliver (1904-1990) American ophthalmologist born in Ocean Park, California. Raised in San Francisco, he received his entire undergraduate and medical training at the University of California (A.B.,1927; M.D., 1931; internship, 1930-1931; residency, 1931-1932). Harrington was the *first* ophthalmology resident physician at the University of California Hospital. Encouraged by Frederick→Cordes, then chairman of the Department of Ophthalmology at the University of California School of Medicine, he traveled to Europe for additional training. There, Dr. Harrington initially served as Hospitant at the University of Vienna General Hospital and subsequently as a Fellow at the University of Edinburgh Royal Infirmary and at Moorfield's Hospital in London. In Edinburgh he worked with H.M. →Traquair, learning the techniques of quantitative visual field examination and interpretation. This area of investigation was to become a lifelong interest for Dr. Harrington. Upon his return to San Francisco he established a private practice in ophthalmology and became an instructor in the Department of Ophthalmology at the University of California Medical School. Here he also served in the Department of Neurosurgery under the directorship of Howard C. Naffziger. He had the opportunity to

observe patients before as well as after neurologic surgery, thus correlating his visual field studies with the pathologic lesions that produced them. His service with the University of California continued for 40 years. He became emeritus professor in 1974 and then accepted an appointment to work with residents for another ten years, receiving two outstanding teacher awards. During his long career Dr. Harrington developed pioneering visual field screening devices and wrote more than 50 articles in the areas of neuro-ophthalmology and glaucoma. He was also the author of *The Visual Fields-Textbook and Atlas of Clinical Perimetry*, (1956, 2nd ed.1964,3rd.71,4th 76,5th 81,6th 1989) translated into 12 languages. During World War II he served in the Navy as Chief of Ophthalmology for the Pacific Theater and left as a Commander. Harrington was a member of the American Board of Ophthalmology (1964-1973) and its chairman in 1973. He was vice-president of the American Academy of Ophthalmology and Otolaryngology in 1970. He served as a member of the editorial board of the Western Journal of Medicine and also as a governor of the American College of Surgeons. In 1977 he was elected president of the American Ophthalmological Society and in 1981 he was the recipient of the Society's Howe medal. AJO 1990,109:752-753. JPW

Hart, Ernest (1835-1898) British medical editor, hygienist, and oto-ophthalmologist, inventor of gelatine discs for the medication of the eye. Born in London, the son of a dentist, he studied at St. George's and St. Mary's Hospitals. In 1856 he became a member of the Royal College of Surgeons of England. He was for a time prosector at St. George's, and, later, instructor in diseases of the eye and ear at St. Mary's. In 1866 he was elected editor of the *"British Medical Journal*-a position which he held until his death. He was also for a long time editor of *"The Lonclon Medical Record"* and of *"The Sanitary Record.* In addition to numerous journal articles, he wrote *"A Manual of Public Health"* (London, 1874). In 1893 he received the honorary degree of D.C.L. from the University of Durham.American Encyclopedia of Ophthalmology,Vol.8,p.5702.

Hartridge, Gustavus (1850-1923) British ophthalmologist. Hartridge received his medical education at Kings College, London (M.R.C.S., 1872), and was Hunterian Prosector at the Royal College of Surgeons of England. He was Assistant Surgeon to the Central London Ophthalmic Hospital. Indeed, he filled several hospital appointments. He was Ophthalmic Surgeon to and Lecturer on Ophthalmology at the Westminster Hospital, Surgeon to the Royal Westminster Ophthalmic Hospital, and finally Ophthalmic Surgeon to St. Bartholomew's Hospital, Chatham. He wrote several books, of which the best known is the phenomenally successful " *Manual for Students on the Refraction of the Eye"* (1884) which had reached its sixteenth edition in 1923. Other books were *The Ophthalmoscope*, of which the second edition appeared in 1894; *Retinoscopy* London 1883 and a translation of Schweigger´s book on strabismus: *Clinical investigations on Squint* 1887. Hartridge had been Vice-President, Secretary, and a member of the Council of the Ophthalmological Society of the United Kingdom. BJO 1923,7:494. Albert. BMC

Hartshorne, Edward (1818-1885) An American physician, famous, but of slight importance in ophthalmology. Born at Philadelphia in 1818, the second son of Dr. Joseph Hartshorne, he received the degree of A.Bl. at Princeton in 1837, that of A.M. at the same institution in l840, and that of M.D. at the University of Pennsylvania in the same year. In 1844 he went to Europe, where he studied for several years. Returning to America, he settled in Philadelphia, and soon was widely known. His contributions to medical literature were numerous, extensive and valuable. In his practice he paid considerable attention to diseases of the eye, and in 1856 he edited the second American issue of T. Wharton Jones's *Principles and Practice of Ophthalmic Surgery* (Philadelphia, 1856).American Encyclopedia of Ophthalmology,Vol.8,p.5702-5703.

Hartsoeker, Nicolas (1656-1725) Dutch naturalist, of some ophthalmologic importance because of his *"Essai de Dioptrique"* (Paris, 1694; 1696; Dutch trans., Amsterdam, 1699). Born at Gouda, Holland, he studied chiefly mathematics, physics, and astronomy at Leyden and Paris. From 1704 till 1716 he was Professor of Mathematics and Philosophy at Düsseldorf. Later he lived at Utrecht, where he died Dec. 10, 1725.American Encyclopedia of Ophthalmology,Vol.8,p.5703. Albert

Harun, A Q S M (1936-) Bangladesh Ophthalmologist. Born in the district of Chittagong, he pursued his school education in Chittagong Muslim High School and

passed Matriculation examination in the year 1950. He passed Intermediate Science examination from Chittagong Government College in 1952 and in the same year he was admitted in to the Dhaka Medical College. He passed MBBS examination from the University of Dhaka in 1957. In 1958 he proceeded to Aden to join Aden Protectorate Health Service (at present Yemen). He continued to work in Aden till March 1963. For higher studies and training in Ophthalmology he went to the United Kingdom in 1963, and obtained the Diploma in Ophthalmology from London in 1965 and FRCS in Ophthalmology from the Royal College of Surgeons of England in 1970. He obtained the Certificate of Completion of Higher Surgical Training from the Royal College of Surgeons in 1973. He accomplished all of his training in Ophthalmology while working in the National Health Service of the UK at prestigious Institutions like Birmingham and Midland Eye Hospital and Moorfields Eye Hospital. There he worked in close association with famous people like Mr. Roper-Hall and Mr. Montague Ruben, Mr. Jameson-Devans to name a few. He climbed the ladder of the National Health Service in that country and became a Consultant Ophthalmologist in the UK in 1975. He decided to serve his country, and in September 1978 he resigned the Consultant post in the UK and returned to Bangladesh. In Bangladesh he served a short period as Associate Professor in Dhaka Medical College. When the National Institute of Ophthalmology (NIO) was established in November 1979, he joined that Institute in January 1980 as an Associate Professor. Along with the founder Director Professor M.Mabarak Ali he organized various post-graduate training and post-graduate courses in the said Institute. The University of Dhaka and Bangladesh College of Physicians and Surgeons recognized those training and the examinations conducted by the Institute. In 1983 he became Professor of Ophthalmology at the NIO. 1987 Government of Bangladesh deputed Professor Harun to the Bangladesh Institute for Research and Rehabilitation for Diabetic, Endocrine & Metabolic Disorders (in short BIRDEM). Prof Harun with his untiring effort organized the eye department of BIRDEM into one of the finest eye departments of the country. Post-graduate courses were established in that Institute from where many studies have completed training and have obtained their Diploma, Fellowship and Masters in Ophthalmology. He was appointed by the Government of Bangladesh as Director cum Professor of National Institute of Ophthalmology in 1993, and he retired from active Government service from that post in September 1995. On his return to Bangladesh in 1978, Prof Harun became an examiner of the various post-graduate examinations in ophthalmology conducted by the University of Dhaka and Bangladesh College of Physicians and Surgeons, and to date remains an active examiner. He is the pioneer in introducing newer diagnostic and therapeutic methods in the field of ophthalmology in the country namely IOL implantation, Fluorescent Angiography, Laser therapy, Pacoemulsification, etc. He has trained many of his students and colleagues in these fields, which has enriched the ophthalmology of Bangladesh. He was Secretary General of the Ophthalmological Society of Bangladesh (OSB) for three terms (six years) from 1979 and was elected President of OSB for two years in 1995. During his tenure as Secretary General he collected enough funds to pay for the land where OSB Bhavan stands today. He remains Life Member of both OSB and Bangladesh Academy of Ophthalmology (BAO). He is associated with many other organizations, e.g. He is an active member of the Rotary International, of the American Academy of Ophthalmology, life member of All India Ophthalmological Society and fellow of the Royal College of Ophthalmologists of the United Kingdom. He was awarded the Alim Memorial Gold Medal in 1997 by the Ophthalmological Society of Bangladesh for his distinguished work and contribution in the field of Ophthalmology of the country. Prof Harun took active part in the historical language movement (Bhasha Andolan which ultimately culminated in the creation of independent country of Bangladesh) and was imprisoned for this by the then Pakistan Government, while he was still a student of Dhaka Medical College. He has established a school and an Eye Hospital in his village home in Chittagong. Prof Harun has over twenty publications in National and International Transactions. His main interest is in the surgery of the anterior segment of the eye. Though retired from service he is actively involved in the training and education of the post-graduates and remains a guest teacher at the NIO. Prof Harun is married with one son who after his graduation from St. Bartholomew's Medical College in London is at present engaged in higher studies and training in ophthalmology in the United Kingdom. (AB)

Hasbrouck, Sayer (1860-1919) American homeopathic ophthalmologist and otolaryngologist. Born at Middletown, N..Y. Hasbrouck in 1875 entered Cook Academy, at Havana, N.Y. where he graduated in 1879. In the middle of that year he entered the Boston University School of Medicine, graduating in 1882. For a time Dr. Hasbrouck was physician to the New York Homeopathic Insane Asylum at Middletown. Then he went to Dublin, Ireland, and entered the Rotunda Hospital, at the same time studying the eye, ear, nose and throat at St. Mark's Ophthalmic Hospital. Receiving the degree of L. M., he was for a short time house surgeon in St. Mark's. After this he studied the eye, ear, nose and throat at Belfast, Glasgow, Edinburgh and London. At the Royal London Ophthalmic Hospital (Moorfields) he was assistant to Sir George Lawson, and at Gray's Inn Throat and Ear Hospital, to Dr. Hamilton. After a little study on the Continent he returned to America in 1894 and settled at Providence, R. I., as ophthalmologist and otolaryngologist. He was soon widely known in homeopathic circles. AJO 1919,2:705

Hasegawa, Eiichi (1936-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Kagawa Medical?University. He graduated from Okayama University in 1961, studied?Ophthalmology under Prof. →AKAGI Goro and Prof. →OKUDA Kanji and received his Doctor of Medical Sciences in 1969 (thesis: *Studies on the primary?lesion of experimental retinal siderosis*. No.1: Folia Ophthalmol. Jpn.?16: 636, 1965, No. 2: ibid. 20: 169, 1969, No.3: ibid.20:305, 1969,?No.4: ibid. 20: 421, 1969). He was then promoted to the Lecturer in?1967 and to the Assistant Professor in 1974 of Okayama University. He carried out research on vitreoretinal surgery, as a Research Fellow at the Research Institute of Retina Foundation in Boston with Prof.→Schepens C. and →Hirose T. (1981-1982). In 1983, he was appointed the Professor of Kagawa Medical University as above and he is in this position to the present. He is a Councillor of the Japanese Ophthalmological Society (JOS) and a member of the Committee for Continued Education of the Ophthalmology Board of the JOS. He is a member of Schepens International Society and also many Japanese professional Societies. His research interest has been in visual functions, strabismus, binocular vision and has published more than 100 original papers that include "*A new apparatus for visual field testing with binocular fixation*. Acta. Med.Okayama 32: 247, 1978", "*Developmental alteration of the expression and kinase activity of cyclin-dependent Cdk5/p35nck5a in the rat retina*. J. Neurochem.67: 2478, 1996" and "*The expression of Ca++/calmodulin-dependent protein kinase I in rat retina is regulated by light stimulation*. Vision Research 39:3165,1999". (Department of Ophthalmology Kagawa Medical University. 1750-1 Ikenobe, Kita Miki, Kagawa, Japan.: phone:81-87-891-2209, fax: 81-87-2212, e-mail: hasegawa@kms.ac.jp)(SM)

Hasner, Joseph, Ritter von Artha (1819-1892) Austrian Ophthalmologist, *discoverer* of "*the valve of Hasner*." He was born at Prague, and there, in 1840, received his medical degree. For the next two years he was "secundärarzt" in the General Hospital at Prague, where he succeeded →Arlt as first assistant in Fischer's eye clinic. In 1852 he was made extraordinary, and, in 1856, on Arlt's move to Vienna, ordinary, professor. This full professorship, in 1884, he resigned, though he had not quite reached the age limit, because, owing to the foundation of the Czech University, his clinic was divided, and half of it assigned to the newly established institution. The division of his clinic gave him, in fact, a deep offense, from which he never fully recovered. His more important publications are: 1. *Entwurf einer Anatomischen Begründung der Augenheilkunde* (Prague 1847). 2. *Physiologie und Pathologie des Thränenableitungsapparats* (Prague 1850). 3. *Klinische Vorträge über Augenheilkunde* 3 parts (Prague 1860-66). 4. *Beiträge zur Physiologie und Pathologie des Auges* (Prague, 1873). 5. *Die Grenzen der Accommodation* (Prague, 1875). 6. *Pharmakologische studien* (Prague, 1868). 7. *Das Mittlere Auge in seinen Physiologischen und Pathologischen Beziehungen* (Prague, 1879). 8. *Die Verletzungen des Auges in Forensischer Hinsicht* (1880).9. *Die neueste Phase der Staaroperation* Prag 1868.10. *Die Statopathien(?) des Auges* Prag 1869.11.*Tycho Brahe und Johann Kepler in Prag. Eine Studie.* Prag 1872. 12. *Über die Benützung foliirter Glaslinsen zur Untersuchung des Augengrundes*. Prag 1855. 13. *Filosofie des Rechts und seiner Geschichte in Grundlinien* Prag 1851 He also published a very large number of journal articles, and was for a long time one of the associate- editors of the *"Prager Medicinischen Vierteljahrsschrift*." American Encyclopedia of Ophthalmology, Vol.8, p.5703-5704. Albert.BMC

Bunpei Hata

Hata, Bunpei (1890-1964) Japanese Ophthalmologist. He graduated from Tokyo University in 1916, studied Ophthalmology under Prof. S. ISHIHARA and also studied ocular immunology in the Postgraduate School of Medicine. He was granted the degree of Doctor of Medicine in 1926. He was invited to Okayama University as Professor and Chairman of the Department of Ophthalmology in 1926 and the same year he attended the International Congress of Ophthalmology. He served for 21 years as the Professor; he also served as the Director of the University Hospital. In 1940 at the 44th Congress of the Japanese Ophthalmological Society, he delivered a special lecture "*Ophthalmological studies of Encephalitis japonica*". He retired from the University in 1947 and the next year he was granted the title Professor Emeritus of Okayama University. (SM)

Hauksbee *see* **Hawksbee**

Häuy, Valentin. (1745-1822) A French philanthropist who, about 1782, first made tangible letters practically available for the blind and, later, established schools for teaching and training the sightless. He devoted his life to the education of the blind, and in 1786 wrote *Essai sur L'Education des Aveugles* (1786). American Encyclopedia of Ophthalmology,Vol.8,p.5705.

Havers, Clopton. An English anatomist of the late 17th and early 18th centuries, of some slight ophthalmologic importance because of his "Extraordinary Bleeding at the Glandula Lacrymalis " *(Philos. Trans.*, 1694, Vol. III).American Encyclopedia of Ophthalmology,Vol.8,p.5705.

Hawksbee, *also* **Hauksbee, Francis (? – c.1713)** An English physicist who was already a well-known experimentalist when in 1705 he was admitted a Fellow of the Royal Society. (He should not be confused with Francis Hawksbee the younger, 1687-1763, apparently his son, who was also an electrical engineer and skilled instrument maker, and who, in 1723, was appointed clerk and housekeeper to the Royal Society.) Hawksbee the elder contributed forty-three memoirs to the *Philosophical Transactions*, chiefly on chemistry and electricity, between 1704 and 1713. His chief independent work, published in 1709, titled *Physico-Mechanical Experiments on Various Subjects touching Light,and Electricity producible on the Attrition of Bodies*. He is also well known as the improver of the earlier air-pumps of →Papin and →Hooke, and as the *first* who used glass in the electrical machine.American Encyclopedia of Ophthalmology, Vol.8,p.5705-5706

Hawley, Alanson Webster (1865-1920) American ophthalmologist of Seattle, born at Aurora. Ill., He received his degree at Rush Medical College in 1891, and practiced general medicine in Chicago for ten years. In 1901 he studied the eye, ear, nose and throat at the Royal London Ophthalmic Hospital, London, and the following year settled as ophthalmologist and oto-laryngologist at Seattle. He was attending physician to the Illinois Eastern Hospital from 1897-1901, oculist and aurist to the Chicago, Milwaukee and St.
Paul Railway and to the Children's Orthopedic Hospital, Seattle, from 1918 until his decease. He was a well known collector of rare books, and was one of the pioneer workers for medical inspection in the public schools, and in many other movements for the welfare of the community.

Hay, Gustavus (1830-1908) American ophthalmologist of Boston, Mass. He was born in Boston, and received the degree of Bachelor of Arts at Harvard in 1850, graduated from the Lawrence Scientific School in 1853, and then, for a year, was connected with the work of the U. S. Coast Survey in the South. Deciding to study medicine, he entered the Harvard Medical School in 1854, and there received his professional degree in 1857. At first he settled in Boston as a general practitioner. Soon, however, he decided to become an ophthalmologist, and, in order to prepare himself as thoroughly as, possible for the work of his new vocation, he studied for a time in Vienna. Here the teachers who chiefly influenced him were →Jaeger and →Arlt. Returning to Boston, he practiced ophthalmology and was very successful. From 1861-1873 he was one of the attending surgeons of the Massachusetts Charitable Eye and Ear Infirmary, and from 1873-1900 he was one of the consulting staff of the same institution. American Encyclopedia of Ophthalmology,Vol.8,p.5707-5708.

Hay, Percival John (1875-1943) British ophthalmologist of Sheffield born at Basle, Switzerland. His father was John Hay, a Scotsman, who became Professor of English in

Basle University. Hay was educated at Basle and before commencing Medicine at Edinburgh he was for a year an undergraduate at Basle University. He graduated M.B., Ch.B.Edin. in 1901, and M.D. with, high commendation three years later.He held Resident appointments at the Birmingham and Midland Ear and Throat Hospital and the Birmingham and Midland Eye Hospital, after which, in 1908, he started, practice in Sheffield as an Ophthalmic Surgeon, and for a time acted as Clinical Assistant to the late Simeon Snell at the Sheffield Royal Infirmary. He was appointed Honorary Ophthalmic Surgeon to the Beckett's Hospital, Barnsley, in 1910, Honorary Ophthalmic Surgeon to the Sheffield Royal Hospital in 1916, and at about the same time, Ophthalmic Surgeon to the Sheffield Education Committee. During the1914-18 War he served as Captain in the R.A.M.C and was for some time "Ophthalmic Specialist" to the Cambridge Hospital, Aldershot. At the commencement of the Second World War he immediately went back into hard hospital practice in order to relieve a colleague who had been mobilized. There is no doubt that the extra work which he put in during these three years contributed in no small measure to the illness which caused his death. It was just before the outbreak of War in 1914 that Hay, in association with the late Gray→Clegg, of Manchester, was instrumental in founding the North of England Ophthalmological Society ; he became its Honorary Secretary and remained so until his death, combining the office with that of President in 1931-32. It was as Secretary of the North of England Society, that Hay showed his genius for organization. Regular Clinical Meetings were instituted at Manchester, Bradford, Leeds, Newcastle, Liverpool and Sheffield, and a first class Pathological service established. The outstanding success on such occasions as the joint meetings with the Midland Ophthalmological Society, the Scottish Ophthalmological Club, and the Royal Society of Medicine, was entirely due to his untiring efforts. He was responsible for the annual lectures given to the North of England Society by men of the calibre of Van der Hoeve, Magitot, Gjessing, von Rohr, Ronne, Goulden, Ballantyne, Duke-Elder, Traquair and Roaf. Perhaps his most outstanding success was the organization of his famous tours -in 1935 it was Germany, Austria and Italy -in 1937 the Scandinavian countries, and in 1939 the U.S.A. and Canada. It can be truthfully said that Hay devoted his life to Ophthalmology. As Lecturer in Ophthalmology at the Sheffield University he was tireless in his efforts to improve the teaching facilities, both in the lecture room and at hospital, and he pressed hard for the founding of a Chair in Ophthalmology. He contributed widely to ophthalmic literature and in 1929, he delivered the Richard Middlemore Lecture on "*Astigmatism*". He was a Vice-President of the Ophthalmic Section of the Royal Society of Medicine; was a Past President of the local Division of the B.M.A., and a Past President of the Sheffield Medico-Chirurgical Society. In later years he achieved two of the highest honors which can come to a British Ophthalmologist: he became Master of the Oxford Ophthalmological Congress in 1939, and in 1942 was elected President of the Ophthalmological Society of the United Kingdom.BJO 27,140-142,1943

Ryuzo Hayano

Hayano, Ryuzo (1881-1961) Japanese Ophthalmologist who graduated from Tokyo University in 1907 studied Ophthalmology under Prof. →J.KOMOTO. He also studied in Wuerzburg under Prof.→Hess for one year 1912-1913. On his return, he was appointed the Head of the Eye Department of Keijo (now Seoul Korea) Hospital and the Professor of Ophthalmology of Keijo Medical School. In 1921 he submitted a thesis and received a Doctor of Medical Science from Tokyo University. On the basis of this Medical School, Keijo Imperial University was founded in 1926. He was promoted to the Professorship of the University and served as the first Director of the University Hospital. He served as the President of the 36th Congress of the Japanese Ophthalmological Society held in Seoul. He retired from the University in 1942, and subsequently he served as the Director of Keijo Public Hospital. During his tenure, he trained many Korean Ophthalmologists and they played key roles in eye public health in the postwar Korean Society. The University is the present Seoul National University, Korea. In 1942, he was invited to be the Director of Toyohashi National Hospital and he served until 1960. He was interested in hunting and was a winner at clay pigeon shooting. In 1961, the Second Order National Merit with Middle Cordon of the Rising Sun was conferred on him in recognition of this life time service. (SM)

Hayano, Saburo (1923-) Japanese Ophthalmologist, Professor Emeritus of Gifu University. Born as the son of HAYANO Ryuzo, he graduated from Nagoya University in

1946, studied Ophthalmology under Prof. →NAKAJIMA Minoru and was invited as the Lecturer to Shinshu University under Prof.→KATO Seiichi, and then promoted to the Assistant Professor in 1951. He submitted his thesis (*Studies of retinal amino-acids*. J. Jpn. Ophthalmol. Soc. 55: 191, 1951) to Nagoya University and received the degree Doctor of Medical Sciences in 1953. He was appointed the Professor and Chairman of the Department of Ophthalmology of Gifu University in 1970 and worked in this position until 1983: he served as the Dean of the Gifu University School of Medicine in 1981-1983. He was then elected to be the President of Gifu University and served until 1989. He is the pioneer of intraocular lens implantation in Japan and he designed various types of the intraocular lens. Two examples of his publications are "*Keratoprosthesis and intraocular lenses; artificial cornea implant*. J. Jpn. Ophthalmol. Soc. 69: 1871, 1965" and "*Intraocular lenses - on the basis of high polymers*. J. Jpn. Ophthalmol. Soc. 90: 25, 1986". He is an Honorary Member of Japanese Ophthalmological Society, Japan Contact Lens Society, Japanese Society for Cataract Research and Japanese Society of Cataract and Refractive Surgery. He is a Life Member of the International Intra-ocular Implant Club, and Emeritus Member of the Contact Lens Association of Ophthalmologists, and the Founding Member of the American Society of Cataract and Refractive Surgery. He is a recipient of Louis Emil Javal Silver Service Award(1978, 1986) and Asia-Pacific Intraocular Implant Association Medal(1991). In recognition of his meritorious service, the Government conferred on him The Second Order of the Rising Sun in 1996.(SM)

Hayasaka, Seiji (1944-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Toyama Medical and Pharmaceutical University. He graduated from Tohoku University in 1969, studied Ophthalmology under Prof.→MIZUNO Katsuyoshi at the Postgraduate School of Medicine of the University and received his Doctor of Medical Sciences in 1973 (thesis: *Control of ?-aminolevulinate synthetase activity in Rhodopseudomonas spheroides. III Partial purification of the fraction I activating enzyme and the occurrence of two forms of fraction II*, J.Biochem. 76: 157,1974). He carried out research on Lysosomes and the eye, as a Research Fellow at the Yale University with Prof.→SEARS, M. L. (1977-1978) (*Distribution of acid phosphatase, ?-glucuronidase and lysosomal hyaluronidase in the anterior segment of the rabbit eye*, Invest. Ophthalmol. Vis. Sci. 17: 982,1978). He is in the present position since 1994. His research interest has been metabolic and genetic eye diseases, and some examples of his many original publications are "*Lysosomes and the eye*. in Ed. Dingle, J. T. et al. *Lysosomes in Biology and Pathology*, Elsevier Sci. Publ. Amsterdam, Vol 7: 421, 1984" and " *Interferon associated retinopathy*. Br. J. Ophthalmol. 82: 3323, 1998". He is a Councillor of the Japanese Ophthalmological Society. (Department of Ophthalmology, Toyama Medical and Pharmaceutical University, 2630 Sugitani, Toyama,930-O152 Japan; phone: 81 -76-434-7363, fax: 81-76-436-0146,e-maiI:?ophthal@ms.toyama-mpu.ac.jp)(SM)

Yuzo Hayashi

Hayashi, Yuzo (1891-1991) Japanese Ophthalmologist, graduated from Kyoto University in 1917, studied Ophthalmology under Prof.I.→ASAYAMA, and was invited to Tohoku University, Sendai as a lecture then promoted to Assistant Professor in 1921. After having received the degree of Doctor of Medical Science from Kyoto University, he studied in Germany for one year in 1925. He was then appointed the Professor and Chairman of the Department of Ophthalmology of Nagasaki University in 1935 and served until 1942 when he moved to Tohoku University as the Professor after the retirement of Y.KOYANAGI. He was President of the 68th Congress of the Japanese Ophthalmological Society held in Sendai, and gave a special lecture on "Ocular allergy". In 1955, he retired from the University and served as the Director of Tohoku Kosei-Nenkin Hospital (a main Public Hospital in Sendai) for 9 years. He became Professor Emeritus of Tohoku University and Emeritus Member of the Japanese Ophthalmological Society. (SM)

Hayashi, Fumihiko (1925-) Japanese Ophthalmologist, Director of Hayashi Eye Hospital. He graduated from Kyushu University in 1948, studied Ophthalmology under Prof. →IKUI Hiroshi and received the degree Doctor of Medical Sciences in 1955 (thesis: *Experimental studies of the pathogenssis of papilloedema*. J. Jpn. Ophthalmol. Soc. 59: 1433, 1955). He is a *pioneer* of Microsurgery and Intraocular Lens Implantation in Japan. He delivered a Special Lecture "*Cataract surgery as a closed micro-surgery*" at the 20th Congress of the Japan Society of Ophthalmic Surgeons in 1997. He served as the

President of 5th Meeting of the Microsurgery Research Group (1972), 5th Congress of the Japan Society of Ophthalmic Surgeons (1982), 26th Congress of the Japanese Society of Cararact Research (1987), 2nd Congress of the Japanese Society of Cataract and Refractive Surgery (1987), 3rd International Congress of Intraocular Implant and Refractive Surgery (1989) and Japan-Korea Joint Meeting of Ophthalmology (1992). He wrote many books on microsurgery, e.g. "*Microsurgical Instruments, suture materials*, In *System of Ophthalmology*, Vol.9, Nakayama Publ. Co. Tokyo 1993" and "*Present state of Intraocular lens implantation*. Ophthalmology Mook, Kanehara Publ. Co. Tokyo, 1992". He served as the gracious host for the WHO Workshop for the Eye Care of the Elderly in 1998. He is a recipient of the Highest Honor Award of the Japan Medical Association. He serves many domestic organizations as an executive board member and is the President of Ophthalmologists Association of Fukuoka Prefecture. (Hayashi Eye Hospital, 4-7-13, Hakata-Ekimae, Hakata-ku, Fukuoka, 812-0011, Japan. phone: 81-92-431-1680, fax:81-92-441-5303, e-mail: fhayashi@po.iijnet.or.jp)(SM)

Hayden, Thomas (? -1881) An Irish physician, of some ophthalmologic importance because of his "*Function of the Yellow Spot of Soemmering Circular Vision*" (1858). He was born in Tipperary, became 1850, Licentiate of the Royal College Of Surgeons of Ireland very shortly afterward Instructor in Anatomy at the Ledwich of Medicine in Dublin. In 1855 he was appointed Assistant of Anatomy and Physiology at the Dublin (Catholic) University. American Encyclopedia of Ophthalmology, Vol.8,p.5706.

Hayreh, Sohan Singh (1927-) American Ophthalmologist of Indian Origin. Professor Emeritus (since 1999) and Director of Ocular Vascular Clinic and Ocular Vascular Research Laboratory (since 1973), University of Iowa, U.S.A. He graduated from the Panjab University (India) with M.D. degree in 1951. He was on the faculty and did teaching and research at one of the medical colleges of the Panjab University (1955-1961), and was granted a Master of Surgery in 1959 (Thesis: *A study of the central artery of the retina in human beings*). He was Beit Memorial Research Fellow at the Institute of Ophthalmology, University of London under Sir Stewart→Duke-Elder (1961-1964), and received Ph.D. (1965) (Thesis: *Pathogenesis of oedema of the optic disc (papilloedema)*, and later Doctor of Science (1987) (based on his original and seminal scientific contribution in the field of " Ocular Circulation in Health and Disease, and Optic Nerve Disorders") from the University of London. He became a Fellow of the Royal Colleges of Surgeons of Edinburgh (Ophthalmology) and of England (Ophthalmology) in 1969. He served on the faculty of the Institute of Ophthalmology, University of London (1965-1969) and later University of Edinburgh (1969-1973), and finally as a Professor of Ophthalmology, University of Iowa, U. S. A. (1973-1998). His major field of research has been ocular circulation, fluorescein angiography, retinal and choroidal disorders, optic nerve disorders, fundus changes in malignant hypertension, nocturnal arterial hypotension, ocular neovascularization, glaucoma, and Rheumatological ocular disorders. Since 1958, he has published many original and seminal papers, monographs and books in his field of research. Some examples are "*Anterior ischemic optic neuropathy*. Springer-Verlag, Heidelberg 1975" and "*Blood supply and vascular disorders of the optic nerve*. Anal. Instit. Barraquer 4: 7, 1963". He received many honors and gave named lectures including the Duke-Elder Medal and Lecture of the Royal College of Ophthalmologists (1995), von Sallmann Prize of the International Society for Eye Research (1994), William Mackenzie Medal and Lecture of University of Glasgow (1988), Morrison Lecture of the Royal College of Physicians of Edinburgh (1988), Alcon Recognition Award (1987), Edward Nettleship Prize of the Ophthalmological Society of the United Kingdom (1971), Middlemore Prize of the British Medical Association (1966), Norman McAlllister Gregg Prize from Australia (1963), Watumul Prize by Watumul Foundation Honolulu (1964), Arris and Gale Lecture of the Royal College of Surgeons of England (1963), International Institute Barraquer Barcelona Prize (1963) and Shakuntala Amir Chand Prize of the Indian Council of Medical Research (1961). (Department of Ophthalmology and Visual Sciences, University of Iowa Hospitals & Clinics, The University of Iowa, 200 Hawkins Dr. Iowa City, Iowa 5242-1091, U. S. A. phone: +1-319-356-2947; fax: +1-319-353-7996; e-mail: sohan-hayreh@uiowa.edu)

Hays, Isaac (1796-1879) American ophthalmologist, medico-economist, author and editor. Born at Philadelphia, Penna., he received his general education at the University of

Pennsylvania, obtaining the degree of A. in 1816. For a time, owing chiefly to the influence of his father, prominent merchant, he devoted himself to commercial pursuits. His natural tendencies, however, soon asserting themselves, he began to study medicine under the private instruction of Dr. Nathan Chapman. Later he entered the Medical Department of the University Pennsylvania, from which institution he received his degree in 1820. His thesis, on that occasion, was characteristically entitled "*Sympathy*." He then, for a time, devoted himself especially to the study of ophthalmology. In 1822 he became surgeon to the Pennsylvania Infirmary for Diseases of the Eye and Ear, and, beginning in 1834, he was surgeon to Wills Eye Hospital for twenty years. He reported the *first* case of astigmatism observed in America, and the fifth in all the world. He was also the *first* to report a case (that of Mary Bishop) of pathologic (not congenital) color-blindness. In February, 1826, he became one of the editors of the "*Philadelphia Journal of the Medical and Physical Sciences*." which had been established six years before. A few months later, Dr. Hays was made sole editor of this journal, and then it was that he exchanged its title for one much better known *"The American Journal of the Medical Sciences*." In 1869 he begun to be assisted in his work as editor by his son, Dr. I. Minis Hays, but continued to act as editor-in-chief until his death, over fifty-two years. Dr. Hays was never a teacher of medicine-a fact, no doubt, some part due to his natural timidity before an audience. Among the articles he wrote and the books which he either wrote or edited, are these. 1. *The Forces by which the Blood is Circulated.* (A leading article in *The Philadelphia Jour. of the Med. and Phys. Sciences*, 1826.) 2. *Purulent Ophthalmia*. *(Phila. Jour. of the Med. and Phys. Sciences*, 1827.) 3. Wilson's *"American Ornithology*." (Edited by Dr. Hays, 3 vols., 1828.) 4. Broussais' *"Chronic Phlegmasia*," (Trans. by Hays and Griffith; 2 vols., 1831.) 5. *Diseases of the Eye*. (A chapter in Dewees' *"Practice of Medicine*," 1833.) *6. The American Cyclopedia of Practical Medicine and Surgery: digest of Medical Literature*. (Only 2 vols. issued-from A to Axilla -Phila., 1834-36.) 7. Laurence's *"Treatise on Diseases of the Eye*." (New ed. by Dr. Isaac Hays, 1843.).American Encyclopedia of Ophthalmology, Vol.8, p.5708-5709.

Heath, Frederick Carroll (1857-1918) American ophthalmologist of Indianapolis, Ind., born at Gardiner, Me., where he received the A.B. at Amherst in 1878, the A.M. in 1886, and the M.D. at the Maine Medical College (Bowdoin) in 1884. Shortly afterward he studied the eye, ear, nose and throat, and settled in Indianapolis as a specialist in the diseases of these organs. Heath was assistant surgeon in the U. S. Marine Hospital Service for six years, Secretary of the Indiana State Medical Society for fourteen years, eye surgeon to the Indianapolis City Hospital and Dispensary, to The German Lutheran Orphan Asylum, and The Eleanor Hospital: also professor of ophthalmology at the Indiana University Medical College from 1905 until his death. AJO 1919,2:166

Heberden, William (1710-1801) British physician of London. Heberden received his M.D. in 1739 at Cambridge University; he practiced and lectured on materia medica in Cambridge for ten years before settling in London. In ophthalmology , he wrote: *Of the night blindness or nyctalopia* London 1768.

Hecht, Selig (? – 1947) American physiologist of New York, renown for his works on the physiology of vision and particularly on colour vision. His work in the field of vision is well known to all. No one in his time, has done more than he to put the duplicity theory on a sound basis, or to throw light on the factors concerned with the acuity of vision. He attended 1947 the International Physiological Congress at Oxford and the Conference on Colour Vision at Cambridge. Hecht devoted his life's work to biochemical problems (In the *Annual Review of Biochemistry*, Vol. XI, 1942, he has given a historical review of researches on the chemistry of visual substances, with a complete bibliography). BJO 32,62-63,1947

Hecker, Carl Friedrich Franz (1812-1878) German surgeon and ophthalmologist who was born near Heidelberg, where he received his M.D. in 1835. He taught surgery and ophthalmology at the University of Freiburg (1836-1871). He authored: *Erfahrungen und Abhandlungen im Gebiete der Chirurgie und Augenheilkunde*. Erlangen 1845 and *Die Elephantiasis oder Lepra Arabica* Lahr 1858.Albert.BMC

Hecquet, Philippe (1661-1737) French physician of but small ophthalmologic importance who was born at Abbeville, France, Feb. 11, 1661. He studied at first theology in Paris;

later, medicine at Rheims. Soon after leaving Rheims, he practised for a time in his native town. Tiring, however, of the uncongenial atmosphere of this place, he removed to Paris. Being there forbidden by the "Faculty"-to engage in practice, he accepted a position as medical attendant in a religious foundation at Port-Royal-des-Champs. When 33 years of age he attacked his medical studies anew, received his license in 1696 and his doctorate in 1697. So highly honored was he, after a time, by the Faculty, that, in 1712, he was elected Dean. In 1727 he withdrew to a Carmelite cloister, where he lived the ascetic life until his death. Hecquet wrote a large number of works, all of which were, at least in greater part, relevant to systematic medicine only. In one of his books (that entitled *Remarques sur l'abus des purgatifs et des amers ... et sur l´utilité de la saignée, dans des maladies des yeux* ... Paris 1729) he takes the ground that the lens is seated, not immediately behind the pupil, but in the middle of the eye, and, furthermore, that a cataract is a membrane lying between the pupil and the lens, and is formed of corrupted and inspissated "humor." These opinions, which had come down from the ancients, and were, even at the date of Hecquet's book, becoming decidedly antiquated, evoked from Petit three well-written letters, which are almost classics in the history of ophthalmology. American Encyclopedia of Ophthalmology, Vol.8, p.5729. Albert

Heed, Thomas D. (1875-1957) American businessman and benefactor, initiator of the Heed Ophthalmic Foundation. The foundation is a unique organization, conceived by Mr. Heed in conjunction with his wife, who survives him and who is dedicated to carrying on the activities and interests of the foundation. It was established in 1945, at which time a small board of men outstanding in the profession was created by them, and the First National Bank of Chicago was appointed trustee of the funds. It was Mr. Heed's joy to see some of the results of the fellowships which he made possible during his life time, rather than to provide for such a foundation after the death of himself and his wife. He, therefore, allocated certain sums of money throughout the intervening years, as a result of which 41 young men have been enabled to progress further with their careers and their studies and thus make greater contributions to ophthalmology than would otherwise have been possible. Heed was well known for his activities, other than those related to young students of ophthalmology. He was active and successful in the business world, both of Chicago and New York. He was born in Saint Louis, in 1875. From there he went to college in Emporia, Kansas, and entered the railroad service in the general auditor's office of the M. K. and T. Railroad. He then became cashier of the Southwestern Passenger Bureau and chief clerk of the treasury department of the St. Louis and San Francisco Railroad. He later became assistant secretary and treasurer of the same road, and still later held the same offices in the Chicago and Eastern Illinois Railroad. In 1913-15 he was president of the latter, and later became its receiver. From 1921 to 1931 he was a director of this road, and also of the St. Louis and San Francisco Railroad. He was president and director of many outstanding companies, with varying interests; especially was he associated with land and mining interests in the West. Still other interests were in the lumber business. One of the last of these was that of director of the Edward Hines Lumber Company, of Chicago. From 1942 to 1945, he served as chairman of the Chicago Division of the United States Navy Price Adjustment Board, in connection with which, in January, 1946, he received the Navy's highest civilian award for outstanding service with this board from October, 1943, to January, 1946. Mr. Heed was well known socially, both in Chicago and New York. He was a member of the Midday and Tavern Clubs of Chicago, and the Midday Club of New York. AJO 1957,43:801-802. see also http://www.heed.org .JPW

Heermann, G. (1807-1844) German ophthalmologist of Tübingen, Germany. He was born at Blomberg, Lippe-Detmold, and became an assistant at the Insane Asylum in Siegburg in 1833, and from 1835 to 1840 was privat docent and assistant at the Academic Hospital in Heidelberg. In 1840 he moved to Tübingen, where he became professor extraordinary. He was a brilliant diagnostician and therapeutist. His more important writings are as follows: 1. *Ueber die Bildung der Gesichtsvorstellungen aus den Gesichtsempfindungen.* (Hanover, 1835.) 2.*Über das Studium der Psychischen Medicin auf Universitäten, als das nächste Erforderniss ihrer Förderung (heidelberg 1837*) American Encyclopedia of Ophthalmology,Vol.8, p.5730-31.Albert.BMC

Hegar, Johann August (1794-1882) German surgeon, of some slight ophthalmologic importance because of his Göttingen dissertation, "*De Oculi Partibus Quibusdam*"

(Göttingen, 1818, 2 plates). Born at Darmstadt, Germany, in 1794, he received his medical degree at Göttingen in 1815, and, in the same year, as military physician, accompanied the English army on its expedition against France. Settling in Darmstadt, he there became, in 1817, Court-Surgeon, "with the character of a court-physician." He also became Privy Medical Advisor.American Encyclopedia of Ophthalmology,Vol.8,p.5732

Heiberg, Hjalmar (1837-1897) Norse microscopist and ophthalmologist. Born at Christiania, son of Prof. Christen Heiberg, he was from 1859 till 1863 assistant at the Imperial Hospital and Lying-in Asylum, and in 1863 and 1864 studied his profession abroad. Returning to Christiania, he devoted himself to microscopy and ophthalmology. His ophthalmologic writings are as follows: 1. *Periferien af Tunica Descemeti og dens Indflydelse paa Accomodationen*. 2. *Om Gliomets Malignitet*. . (In collaboration with J. →Hjort; also the same in von Graefe's Archiv, 1869.) 3. *Zur Anatomie der Zonula Zinnii*. *(Centratbl. f. d. Med. Wissensch.,* 1865.) 4. *Ueber die Neubildung des Hornhautepithels*. *(Med. Jahrb. der k. k. Gesellsch. der Aerzte* in Wien, 1871.) 5. *Ein Fall von Panophthalmitis Puerperalis bedingt durch Mikrokokken. (Centralbl. f. d. Med. Wissenschaften,* 1874.) 6. *Tilfaelde af Hemiopi og Afasi*. *(Norsk Mag. f. Laegev.,* 1874.) 7. *Cyclopische Missbildung bei einem Kalbe*. (Ibid, 1878.) American Encyclopedia of Ophthalmology,Vol.8,p.5732

Heidenreich, Friedrich Wilhelm (1798-1857) A distinguished German physician, who paid considerable attention to ophthalmology. Born at Rostall, he received the degree of Doctor in Medicine in Würzburg in 1821. After a year of further study, chiefly in Berlin, he settled in 1824 as general physician at Ansbach, where he practised until his death. His only ophthalmologic writing was "*Die Subcutane Blepharotomie gegen Subcuten Augenliderkrampf und Krankhafter Entropium*" (Ansbach, 1844). American Encyclopedia of Ophthalmology,Vol.8,p.5733.

Heineken, Philipp Cornelius (1789-?) German physician, who paid considerable attention to ophthalmology. Born in Bremen the son of Johann Heineken, he received the degree of Doctor in Medicine at Göttingen in 1811. After a scientific journey through Hungary, Italy and France, he settled in 1813 as general practitioner in Bremen. His only ophthalmologic writing was *"Ophthalmobiotik, Regeln und Anweigung, zur Erhaltung der Augen*" (Bremen and Leipsic, 1815).He also wrote: *Die freie Hansestadt Bremen und ihr Gebiet in topographischer, medizinischer und naturhistorischer Hinsicht geschildert*. (2 vols.) Bremen 1836. American Encyclopedia of Ophthalmology,Vol.8,p.5733.Albert.BMC

Heisrath, Friedrich (? -1904) German ophthalmologist of Königsberg, Germany. The date and place of his birth are unprocurable. He practised at Königsberg for many years, and was known as a dexterous operator. His contributions to ophthalmic science and literature are chiefly on the subject of the surgical treatment of trachoma. American Encyclopedia of Ophthalmology,Vol.8,p.5733-5734

Heister, Elias Friedrich. Born at Altdorf, Germany, the son of Laurent Heister, he studied medicine at Helmstädt, Berlin, and Leipzig, received his professional degree at Helmstädt in 1738, and died a little over two years later, while traveling in Holland. He wrote a diatribe against the great English oculistic charlatan John Taylor.American Encyclopedia of Ophthalmology, Vol.8,p.5734

Heister, Lorenz (1683-1758). A celebrated German surgeon and a noted ophthalmologist. Born, the son of an innkeeper at Frankfort a. M., he studied medicine at Giessen, Leyden and Amsterdam. He finally received his professional degree at Harderwyk, May 31, 1708, and, following year, was made superior physician of the Dutch Army. In 1710 he became professor of botany at Altdorf. In 1720 he was called to the chair of surgery at Helmstädt, and here he worked for many years until his death.Not strikingly original, he nevertheless deserves his title of "*father of scientific surgery in Germany*" because of his open mind, his sound judgment, his numerous writings and the excellence of his literary style. He knew in great detail all the surgical literature which had been composed until his day, and, from this, he selected with wellnigh unerring accuracy whatever was really practical and valuable and set it forth so beautifully and charmingly, that it found at once a numerous body of readers. Heister's "*Surgery*" appeared first in 1718. Other editions (all German) followed in 1724, 1731, 1745, 1747, 1770, 1779. Latin editions appeared in 1739, 1750 and 1759. The work appeared also various times in Dutch, Italian, French, Spanish, and

English. Heister was a man of unflagging industry and well-nigh infinite scholarship. He read, wrote and fluently spoke a number of foreign languages, and, merely as incidental aids to the art of exposition, acquired a pretty thorough knowledge of glass-cutting and of engraving on copper. Ophthalmologically, Heister possesses importance because of his adoption and introduction into Germany of the (then) new and startling doctrine that a cataract is not, as had been taught by the ancients and those of mediaeval days, a deposit of inspissated "humor" in a (wholly imaginary) space between the pupil and the lens, but hardening and clouding of the lens itself (*Vindicae sententiae suae de cataracta, glaucomate et amaurosi* Altorf 1719; *De cataracta glaucomate et amaurosi* Altorfi 1720, Italian edition: *Trattato della cataratta, del glaucoma, e dell'amaurosi* Venezia 1770, *Compendio anatomico La dissertazione intorno la membrna coroidèa dell' occhio* Venezia 1772). A memorial-tablet and effigy of Heister were erected in 1869 in the Frankfort tavern in which the great man was born, and these strange mementos (unusual indeed in the case of physicians) are still to be observed in the old 17th century inn. American Encyclopedia of Ophthalmology,Vol.8, p.5734-5735.Albert.BMC

Heitz, Robert Fernand (1932-) French ophthalmologist and historian. Heitz was born in Haguenau, Alsace, France. He went to Strasbourg and received his MD in 1960. His internship was served at the Hôpitaux de la Région Sanitaire de Strasbourg from 1956 to1960 and he became ophthalmologist under Jean→Nordmann in 1963. Heitz was assistant at the Institut de Parasitologie of the Strasbourg University from 1961 to 1962, Director of Clinical Education at the Strasbourg Louis Pasteur University from 1983 to 1997. He was Head of the Ophthalmic Clinic at the Centre Hospitalier de Haguenau and expert to the Head of the Hospitals at the Minister of Public Health in Paris and to the French Agency of Health Products (as President of the Commission for Homologation and Material Control in Ophthalmology). He is a member of the Société Française d'Ophtalmologie; Deutsche Ophthalmologische Gesellschaft, Société d'Ophtalmologie de l'Est de la France, Société française des Ophtalmologistes adaptateurs de Prothèses de Contact, European Contact Lens Society (ECLSO),(Founder, then treasurer). Société d'histoire de la médecine, Société francophone d'histoire de l'ophtalmologie, Julius Hirschberg Gesellschaft fuer Geschichte der Augenheilkunde. Heitz received the *Fick-Kalt-Müller* Medal from the ECLSO in 1983 and the Louis Emile Javal Silver Service Distinction from the International Contact Lens Council of Ophthalmology in 1986. He was the founder, then from 1979 to 1991, Editor in Chief of both , the French and the German edition of the international medical journal *Contactologia* (Enke Stuttgart) and co-author, with G. Elie of *Guide de Contactologie Médicale* 1988. He has authored more than 150 publications mainly in French, but also in German and English, about ophthalmic clinical aspects in relation to contact lenses, to the history of contact lenses and to public health. Heitz attained his PhD (Paris, École Pratique des Hautes Études) after presenting a thesis on the *History of Corneal Neutralization and of Contact Lenses* (*Étude historique des principes et des applications des systèmes de contact oculaire dans le contexte des connaissances du XVIe siècle à la première moitié du XXe siècle*). This thesis is the base of his monumental 3-volumes set History of Contact Lenses, published as part of Hirschberg History of Ophthalmology vols.11/3a,b & c (2003-2014). Robert Heitz received the French *Ordre National du Mérite.* JPW.

Helfgott, Maxwell A. (1947-) American ophthalmologist, Chairman, Department of Ophthalmology Washington Hospital Center;President, Washington National Eye Center.Dr. Helfgott received his MD from George Washington University School of Medicine in 1972. He served his internship at St. Vincent's Hospital in New York from 1972-73. He is a 1976 graduate of Washington Hospital Center's ophthalmology residency program, and served as Chief Resident during his senior year. He has been a member of the active attending staff since 1978, after serving for two years as a staff ophthalmologist with the rank of major at the Malcolm Grow United States Air Force Medical Center.He has been responsible for the surgical training and education of more than 90 residents. He initiated the monthly Morbidity Rounds while chief resident, and has conducted this activity ever since. He is a co-founder of the Washington National Eye Center, a member of the Medlantic Healthcare Group Board of Trustees, and co-founder and chairman of the Board of the Hospital Center's Physician Hospital Organization. In addition to publishing several articles and book chapters, Dr. Helfgott has won the ophthalmology Golden Apple

Award for excellence in teaching, and currently has four patents for ophthalmic surgical equipment.He received American Board of Ophthalmology certification in 1977, having distinguished himself as one of the few to receive a 99th percentile on the written Board exam. For more than 20 years, Dr. Helfgott has done all of his teaching and performed most of his surgery at Washington Hospital Center. As chairman, he continues his personal commitment to educational excellence by supervising and assisting on 40-50 resident surgical cases per year, attends in the general clinic, and conducts chairman's rounds monthly. He also maintains his private practice in downtown Washington, DC. (AB)

Helling, Georg Lebrecht Andreas (1763-1840) German ophthalmologist. Born at Gross-Salze, near Magdeburg, he received his medical degree in 1801 at Frankfort-on-the-Main. He settled in Berlin, where, after years of constant effort, he succeeded in securing a practice. In 1804 he delivered a course of private lectures on diseases of the eye. He invented a number of plastic operations on the eye, as well as several ophthalmic instruments. His ophthalmologic writings are as follows: 1. *Beobachtung eines Nachstaars.. (Jour. Chir., 1800.)* 2. *De Fistula Lacrymalis*. *(Dissertation,* 1801.) 3.*Merkwürdige Erfahrung an einem am Grauen Staare Blindgeborenen*. *(Hermstädt's* Bulletin, Vol. II, 1803.) 4. *Beobachtung über die im letzten Kriege 1813 and 1814 bei den Preussischen Soldaten gleichsam Epidemisch gewordene Augenkrankheit*. (Berlin, 1815.) 5.*Heilung der Umkehrung der Augenlider nach innen mit Concentrirter Schwefelsäure. (Hufelands Jour.,* 1815.) 6. *Über die Augenkrankheit der Preussischen Soldaten* (Berlin, 1816.) 7. *Krankheits-und Heilungs-Geschichte einer Ungewöhnlich Grossen Exophthalmia Fungosa. (Rust's Mag.,* 1817.) 8. *Guter Rath über die Beschaffenheit, Auswahl der Brillen, etc*. (Berlin, 1819.) 9. *Ueber die Anwendung des Kadmii Sulfurici gegen Hornhautverdunkelungen. (Rust's Mag., 1820,)* 10. *Praktisches Handbuch der Augenkrankheiten nach Alphabetischer Ordnung.* (2 vols., 1821-1822 with 2 copper plates.) .American Encyclopedia of Ophthalmology,Vol.8,p.5743-5744. Albert. BMC.

Hellman, Johann Caspar (1736-1793) German ophthalmologist. Born at Halle, County Minden, in Westphalia, he seems to have studied, for a time at least, in Magdeburg. At all events, he became official physician to that city, and there died. He is said to have had an enormous practice, and to have been a remarkably skilful operator. He wrote but a single work, *"Der Graue Staar und dessen Herausnehmung, nebst Einigen Beobachtungen"* (Magdeburg, 1774). This was highly prized by numerous contemporaries. American Encyclopedia of Ophthalmology, Vol.8, p.5744

Hermann von Helmholtz in 1868

Helmholtz, Hermann Ludwig Ferdinand von (1821-1894) German physiologist, inventor of the ophthalmoscope, and, thereby, though not an ophthalmologist, the most important personage of all the ages in ophthalmology. He was born at Potsdam, Germany thirty years before the publication of the *"Augenspiegel"* and only twenty-nine years before the discovery of the instrument itself. As a youth he was strong in mathematics, stronger still in physics, and strongest of all, it is interesting to know, in optics, whose problems were never hard enough to suit him. In fact the lad had fully decided to become a physicist when his father (on account, as it seems, of the family poverty) declared for medicine instead. After a severe competitive examination, he entered the Royal Medico-Chirurgical Friedrich-Wilhelm Institute in October, 1838, being seventeen years old. To Surgeon-General von Wiebel his father wrote: "*I recommend this good boy, my dearest treasure, on whose education I have expended my best energies, to the fatherly care of one who is so valued for his goodness.*" At the Friedrich-Wilhelm Institute young Helmholtz received a medical education gratis, with the understanding that, after his graduation, he was to serve as surgeon in the Prussian Army. While at the Friedrich-Wilhelm Institute, Hermann Helmholtz formed a remarkable friendship with E.W.von→Brücke and du Emil →Du Bois-Reymond, each of whom was two years older than himself. Both these friendships were maintained until, many years after, they were broken by the hand of death. He also here became acquainted with Johannes Müller, Gustav Magnus, Kirchoff and R.Virchow. In 1842 Helmholtz received his degree, his dissertation being "*De Fabrica Systematis Nervosi Vertebratorum*." Some four weeks earlier he had been appointed house-surgeon at the Charité. The following year he was military physician at Potsdam, and, in 1848, instructor in anatomy at the Academy of Art and the Anatomical Museum in Berlin. In 1849 he was made professor of physiology and general pathology at Königsberg (during his residence at which place he discovered the ophthalmoscope) and in 1855

professor of anatomy and physiology in Bonn. Three years later he was called to the chair of physiology at Heidelberg. In 1871 he moved to Berlin in order to accept the chair of physics and the directorship of the Physical Institute, as well as the title of " Geh. Regierungsrath. " For the first few years of his residence in Berlin, he was assistant physician at the Charité and assistant surgeon in the Red Hussars Regiment at Potsdam. He never had a private medical practice, and he never practised ophthalmology as a speciality. In 1877, when the Physico-Technical Institute was founded by von Siemens at Berlin, Helmholtz was chosen as its first director. In 1883, because of his many astounding discoveries in physical science, he was ennobled. Eight years later, the 70th anniversary of his birth was made an occasion for international rejoicing. Honorary degrees were conferred upon him by many universities; a Helmholtz medal was founded in his honor; the German Kaiser sent to him an autograph letter of congratulation, and the Kings of Sweden and Italy, and other countries conferred upon him the insignia of numerous high orders. Von Helmholtz it was who secured the acceptance by the scientific world of the doctrine of the conservation of energy (" *Über die Erhaltung der Kraft*, " 1847) ; who discovered a way to measure the angle of aperture in a microscope; who *first* declared that electricity consists of atoms-a theory of most enormous consequences; whose *"Die Lehre von den Tonempfindunen* Braunschweig 1863 *(Sensations of Sound)"* and *"Physiologische Optik* Leipzig 1867 (Physiological Optics)" altered forever the subjects of optics and acoustics; who gave to Hertz the inspiration to find experimental proof of Maxwell's electric waves, a proceeding which led to the invention of wireless telegraphy; and, finally, who, by his own unaided invention of the ophthalmoscope, opened radical new ways to ophthalmology. In 1893 von Helmholtz, at the earnest request of Hermann →Knapp, of New York, attended the World's Fair at Chicago, and made a number of journeys to the western portions of the American continent. On his way back to Bremen, he met with a painful accident, from which, as it seems, he never recovered completely. A bibliography of Helmholtz's ophthalmologic writings is as follows:1.*Beschreibung eines Augenspiegels zur Untersuchung der Netzhaut im lebenden Auge*.(Berlin, Förster, 1851.) 2. *Theory of Compound Colors. (Poggendorff* Annal., LXXXVI, 1852.) 3. *On Brewster's New Analysis of Solar Light. (Berl. Monatsb.,* Poggend. Annal., LXXXIX;, (Trans.) *Phil. Mag.* [4], IV, 1852.) 4. *On the Scientific Researches of Goethe.* (Lecture at Königsberg, 1853. Eng. Trans. Of *Pop. Sci. Lect.,* Series I, 1853.) 5.*On a Hitherto Unknown Alteration in the Human Eye During Accommodation. (Berl. Monatsb., 1853.)* 6. *On the Composition of Spectral Colors. (Poggend. Annal.,* XCIV, 1855.) 7. *On the Sensibility of the Human Retina to the most Refrangible Rays of Solar Light.* (Ibid., XCIV, 1855.) 8.*On the Accommodation of the Eye*. (Graefe's *Archiv, 1855.)* 9.*Ueber das sehen des Menschen; ein populär wissenschafflicher Vortra* Leipzig 1855(*On Human Vision.*).10.*On the Explanation of Lustre*. *(Nieder-Rh. Sitzungsber.,* 1856.) 11.*The Telestereoscope. (Poggend.* Annal., 1856.) 12. *Handbuch der Physiologischen Optik* (Textbook of Physiological Optics.) Part I. (1856.) 13.*On the Subjective After-Images of the Eye*. *(Nieder-Rh. Sitzungsber., 1858.)* 14.*On After-Images*. *(Karlsruhe, Naturf.-Versammlung,* 1858.) 15.*On Color Blindness*. (Heidelberg Society, 1858.) 16.*On Contrast Phenomena in the Eye*. (Heidelberg Society, 1860.) 17. *Handbuch der Physiologischen Optik* (Textbook of Physiological Optics.) Part II. (1860.) 18.*On the Horopter*. (von Graefe's *Archiv, 1864.)* 19.*Remarks on the Form of the Horopter*. *(Poggend. Annal.,* 1864.) 20. *Handbuch der Physiologischen Optik* (Textbook of Physiological Optics.) Part III (final). (1867.) 21.*The Alore Recent Developments in the Theory of Vision. (Preuss. Jahrb.,* XXI, 1868. Eng. Trans., *Pop. Sci. Lect.,* Series II.) 22.*The Relation of Optics to Painting.* (Eng. Trans., *Pop. Sc. Lect.,* Series II. 1868.) 23.*On the Signification of the Convergent Position of the Eyes for the Purpose of Determining the Distance of Objects seen Binocularly.* (Berlin *Physiol. Soc.,* 1878 24. *Handbuch der Physiologischen Optik* (Textbook of Physiological Optics.), (2nd Edition 1885-1895). 25.*On the Intrinsic Light of the Retina*. *(Physical Society,*1888.) 26.*An Attempt to Extend the Application of Fechner's Law in the Color System*. *(Zeitsch. f. Psychol. u. Physiol. d. Sinnesorgane,* ii, 1891.) 27.*An attempt to Apply the Psycho-Physical Law to the Color Differences of Trichromatic Eyes*. *(Zeitsch. f. Psychol. u. Physiol. d. Sinnesorgane,* III, 1891.) 28. *Shortest Lines in the Color System*. (Berlin Academy, 1891.) 29.*Electromagnetic Theory of Color Dispersion*. (Wiedemann's Ann., XLVIII, 1892.) 30.*Additions and Corrections to the Essay: Electro-Magnetic Theory of*

Color Dispersion. (Ibid., XLVI.II, 1892.) American Encyclopedia of Ophthalmology, Vol.8, p.5744-5755.Albert.BMC

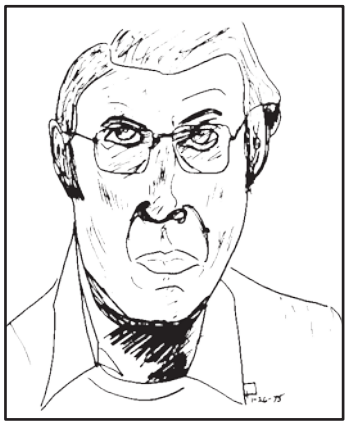
Helveston, Eugene McGillis (1934-) American Ophthalmologist, born in Detroit Michigan. Helveston received his B.A. in history at the University of Michigan (1956), his M.D. at the University of Michigan (1960), completed a residency in ophthalmology (interrupted by service in the U.S. Army Medical Corps) (1966), and served a fellowship in Pediatric ophthalmology and strabismus under Gunter K. von →Noorden (1967). Helveston founded the Pediatric Ophthalmology and Strabismus Service at the Indiana University School of Medicine where he is Professor Emeritus. He wrote "*Surgical management of Strabismus*"1973-1993 (four editions), and co-authored "*Pediatric Ophthalmology Practice*" (1980), and "*Strabismus a Decision Making Approach*" (1997). Helveston is a founding member and past president of the American Association for Pediatric Ophthalmology and Strabismus, past secretary-treasurer of the International Strabismological Association, and was presented a lifetime achievement award by the American Academy of Ophthalmology. His papers have been published widely in ophthalmic journals since 1967. Today Helveston works in Indianapolis, Indiana. His current professional activities include directing a volunteer telemedicine ophthalmic consulting program for under-served areas, and publishing a bimonthly lecture, "*The Strabismus Minute*" available on the internet. Address: Eugene M. Helveston, M.D., Indiana University School of Medicine, 702 Rotary Circle, Indianapolis, Indiana 46202, e-mail <ehelveston@msn.com>.

Henderson, Edward Erskine (1870-1929) British ophthalmologist. The eldest son of Edward Henderson, M.D., of Shanghai, he was born in China 18 February 1870, and was educated at Cheltenham College, where he gained a junior classical scholarship in 1882. Two years later he. entered Harrow School, when Dr Butler was head master, and remained there until 1887. He then proceeded to St John's College, Cambridge, and graduated B.A. in 1891, after he had been placed in the second class of Part 1 of the Natural Sciences Tripos. Proceeding to Guy's Hospital he served as house surgeon to C. H. Golding Bird, and obstetric assistant to Peter Horrocks. He married Hester F. Sharpe on 12 January 1897 and returned to Shanghai, where he joined his father in practice and wasat once appointed assistant surgeon to the Hospital and to the Shanghai police force. He came back to England in the following year and studied ophthalmology at Moorfields under Sir John Tweedy and William Lang. For fifteen years Henderson worked as clinical assistant at Moorfields and became assistant surgeon in charge of out-patients and pathologist to the Royal Eye Hospital at St George's. Circus, Southwark. He was also ophthalmic surgeon to the West Ham Hospital. Henderson suffered throughout his life from incurable deafness, and it was probably for this reason that his father had him transferred from the low-lying Cheltenham College to the school at Harrow which is situated on a hill. He retired from practice and left London in 1920. For twenty years he held a unique position in the world of English ophthalmology. He was appointed editor of the Ophthalmic Review in 1910, and whilst it was under his direction an amalgamation was arranged with the Ophthalmoscope,in 1916 and with the Royal London Ophthalmic Hospital Reports in the following year to form the *British Journal of Ophthalmology* and of this journal he was senior editor from 1923. After his retirement from London, Henderson lived at Thackham, Hartley Wintney, Hants. Henderson did much good work in spite of his deafness and utilized his knowledge of the classics to the advantage of his colleagues in the profession. He earned following titles: M.R.C.S. 12 June 1902; F.R.C.S. 12 June 1902; M.B., B.Ch. Cambridge 1895. LFRCSE. Brit. J. Ophthal. 1929,13:522

Henderson, John Woodworth (1916-) American ophthalmologist, Professor Emeritus University of Michigan. Henderson was born Iowa,USA. He earned his MSc (Anatomy) in 1941and received his MD degree in 1942 from Northwestern University followed by a PhD (Neuro-ophthalmology) from the University of Michigan in 1948. His Internship was spent at the University of Michigan Hospital from 1942 to 1943, his residency in ophthalmology, also at University of Michigan, from 1943 to 1946. He became Instructor in 1948 and Associate Professor in 1952. Henderson was named Professor of ophthalmology in 1962. He became Professor Emeritus in 1980 at University of Michigan. Henderson authored: *The Mysteries of the Orbital Mass* Los Angeles 1958; *Orbital Tumors*, Philadelphia 1973 and *The University of Michigan Department of*

Ophthalmology. A Proud Heritage Ann Arbor 1986. He was Chairman, Department of Ophthalmology, University of Michigan from 1968-78. Henderson created, with the Lions Club, the *Michigan Eye Bank*. He joined the American Ophthalmological Society in 1955, presenting a thesis on *intracranial arterial aneurysms*. Henderson was President of the Ophthalmological Society in 1980. He joined the American Academy of Ophthalmology, in 1947, and was its 1st vice-president in 1970 and council, 1971. He was in 1976, President of the Association of University Professors of Ophthalmology and also President, in 1963 of the American Orthoptic Council; President, in 1968, of the Michigan Ophthalmologic Society; he was on the Editorial boards of: *Archives of Ophthalmology* and *American Journal of Medical Sciences*. Special interests focused in corneal transplantation and neuro-ophthalmology. JPW

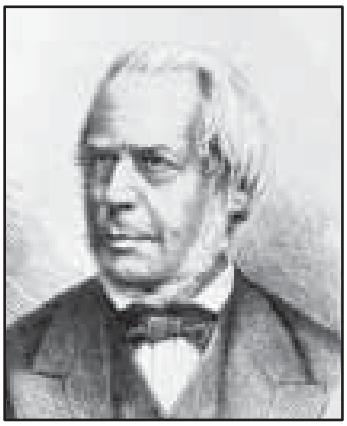
Henderson,Thomson (1877-1960) British ophthalmologist, formerly senior surgeon of the Nottingham and Midland Eye Hospital. Thomson Henderson was born at Leghorn, and went to George Watson's College, Edinburgh, and thereafter to Edinburgh University, where he graduated M.B. Ch.B., at the age of 21. For some time he was demonstrator of anatomy in the Royal College of Surgeons of Edinburgh and after qualification he became ophthalmic house surgeon in the Edinburgh Royal Infirmary. He set up practice in Nottingham in 1904 and for nearly half a century lived and practised at the Ropewalk. In 1909 he was appointed honorary surgeon to the Nottingham and Midland Eye Infirmary. In 1910 he was awarded the gold medal offered by the XI International Congress of Ophthalmology in Naples for the best paper on the treatment of hardening of the eye. In 1926 he gained the Doyne Memorial Medal at the Oxford Ophthalmological Congress, and for several years his main research work was directed towards discovering the cause of glaucoma and its treatment. In 1950 he published his *Principles of Ophthalmology* .Henderson was president of the Nottingham Medico-Chirurgical Society in 1922-23 and of the Midland Branch of the B.M.A. in 1935-36. BJO 1960,44:512



Paul Henkind (self portrait)

Henkind, Paul (1932-1986) American ophthalmologist. Paul Henkind was born in New York, New York. Except for a brief interval for internship at the Henry Ford Hospital in Detroit and two years at the Institute of Ophthalmology in London, he spent his life in the city of his birth. He began his scholastic career in the grade schools of New York and from his education at the Bronx High School of Science, that mother of Nobel Prize winners, we can deduce that even at an early age he showed outstanding promise and not only solely as a future scientist. He continued his scholar career at Columbia University. In 1955, after graduation from Columbia, he matriculated at the Medical School of New York University and here a new talent emerged. He became photographic editor of the Medical School magazine, "*Violet*." While in medical school, he received a National Council to Combat Blindness Student Fellowship and also *I Fight for Sight* Fellowship. After internship Henkind returned to New York in 1960 to start a residency in ophthalmology at New York University. On completion of his residency he received a fellowship from the National Institutes of Health that allowed him to spend the next two years at the Institute of Ophthalmology of the University of London where he earned a Ph.D. in pathology. (Twenty years later the same institution awarded him a Doctor of Science degree.) In 1965 Henkind returned to New York to a teaching and research career at New York University. In 1970 he was recruited by the Albert Einstein College of Medicine of Yeshiva University and became the Frances Dejur Professor and Chairman of the Department of Ophthalmology. By that time he had already published some 70 papers, but by the next 10 years he published some 200 papers, book chapters, and textbooks. he served on numerous advisory boards and he was invited to give named lectures all over the world: the G. Victor Simpson Lecture in Washington, D.C., the University of Chicago Alex Krill Lecture, the Royal College of Surgeons of Canada Lecture, the Paul Chandler Lecture at Harvard University, the Alan Firmin Lecture in England, the Abraham Ticho Lecture in Israel, and many others. He served on the editorial boards of most of the prestigious ophthalmic journals; *Ophthalmic Literature*, *Investigative Ophthalmology*, *Survey of Ophthalmology*, the *American Journal of Ophthalmology*, and the *Archives of Ophthalmology*. His greatest contribution, however, was undoubtedly as editor of *Ophthalmology*, the journal of the American Academy of Ophthalmology. This publication prior to Henkind's editorship was the *Transactions of the American Academy of Ophthalmology and Otolaryngology*. It was devoted primarily to reporting the activities of the various committees of the Academy and the publishing of

papers given at the annual meeting. After the division of the original Academy into two separate academies, the Transactions continued as a transcript of the annual meeting. Paul Henkind changed all that. He transferred the publication to Lippincott, changed its format and size, changed its name to *Ophthalmology*, added numerous black-and-white and color illustrations, and converted what was essentially a meeting transactions into a world-class publication. Paul insisted on the privilege of rejecting papers that were read at the annual meeting if he did not believe them suitable for publication. He demanded the right to publish significant outside material that had not been given at the annual meeting. Further, he wrote vigorous, often biting editorials that commented not only on articles in a particular issue of the magazine but also on what he perceived to be the ethical shortcomings of some of the members of our specialty. By a combination of judicious editorial judgment and perceptive editorials, Paul made Ophthalmology into a journal of record of general ophthalmology for the entire English speaking ophthalmologic community. This, however, was only one side of Paul Henkind. He had many interests other than ophthalmology. He used to make rapid sketches at meetings; he was adept at catching the essence of a face by emphasizing a single feature. He usually gave these drawings to the models at the end of the meeting and many ophthalmologists treasured these sketches, usually slightly derisory, but never mean. A series of such drawings were used to illustrate K.Shimizu´s book: *Ganka no Hon no Hon* (A book on books on ophthalmology) Japan 1982.AJO 1986,102:413-414. JPW



Hermann von Helmholtz in 1868

Henle, Friedrich Gustav (1809-1885) German anatomist, physiologist and, pathologist, who devoted considerable attention to the anatomy and physiology of the eye. Born at Fürth he received his medical degree at Bonn Apr. 4, 1832, presenting as dissertation "*De Membrana Pupillare, Aliisque Oculi Membranis Pellucentibus*." After further study at Paris and Berlin, he became docent in the latter university from 1838 till 1840. In the last-named year he was called to Zürich as Professor of Anatomy and Physiology. From 1852 until his death he was Professor of Anatomy and Director of the Anatomical Institute at Göttingen. Henle's chief ophthalmologic writings were: 1. *Bemerkungen zur Anatomie der Retina*. (Müller's *Archiv*, 1839.) 2. *Zur Anatomie der Thränenwege und zur Physiologie der Thränenbildung*. *(Zeitschr. f. rat. Med.*, 1865.) 3. *Zur Anatomie der Krystallinse*. *(Göttinger Nachrichten*, 1878.) 4. *Zur Entwicklung der Krystallinse und zur Theilung des Zellkerns*. *(*Archiv für mikrosk. Anatomie, Bd. XX, 1883.) American Encyclopedia of Ophthalmology,Vol.8, p.5808. Albert.BMC

Henning, Friedrich (1767-1840) Swedish physician, who devoted considerable attention to ophthalmology. Born in 1767 at Woten, he received the medical degree in 1788 at Greifswald. In 1799 he settled at Barth, in Swedish Pomerania, and was made assessor at the Royal Swedish Sanitary College. Henning's only ophthalmologic writing is *"Commentatio MedicoChirurgica de Ptosi"* Leipzig, 1788. American Encyclopedia of Ophthalmology,Vol.8,p.5809

Henry the Minstrel (1361-?) He was also called "*Blind Harry*" and "*The Northern Homer*." His surname is not known. He was born blind about A. D. 1361, but became a very learned man, traveled about the country as a beggar, reciting his own poems, and was very well known all over Scotland. His most important composition is "*The Battle of Beggar*" The place, date, and cause of his death, are alike unknown.American Encyclopedia of Ophthalmology, Vol.8, p.5809

Henry, Thomas (1734-1816) A British apothecary and physician, who devoted considerable attention to ophthalmology. Born at Wrexham, North Wales, he practised at Kentsford, in Cheshire, later at Manchester. He was a Fellow of the Royal Society and of the Medical Society in London. Henry's only ophthalmologic writing is "*Case of a Person Becoming Short-Sighted in Advanced Age*" *(Mem. Manchest. Soc.*, V, 1790).American Encyclopedia of Ophthalmology,Vol.8,p.5809

Hensen, Victor (1835-1924) German physiologist, born in Schleswig, Germany, who received his M.D. in 1859 at Kiel (his doctoral thesis being: *De Urinae excretione in epilepsia*), where he became professor and director of the physiological institute. Hensen's research focused on embryology, the microscopic anatomy of the sense organs, and the antomy of microscopic marine animals. He wrote two books about hearing and with Carl Voelckers: *Experimentaluntersuchung ueber den Mechanismus der Accommodation*. Kiel 1868. Albert.BMC

Hentschel Klaus (?) German scientist, assistant professor for the History of Sciences. Currently assistant professor (Oberassistent) at the Institut für Wissenschaftsgeschichte, University of Göttingen CV: 1995: Habilitation in History of Science at the Institut für Geschichte der Naturwissenschaften, Mathematik und Technik, University Hamburg, 1991-95: Position (wissenschaftlicher Assistent) at the newly founded Göttingen Institute for History of Science, 1990/91: Researcher in an interdisciplinary DFG project on epistemic systems headed by Gerd Grasshoff, 1989/90: Fellow at the Verbund für Wissenschaftsgeschichte, Berlin, 1989: Ph.D. thesis (Promotion) in History of Science at the Institut für Geschichte der Naturwissenschaften, Hamburg, 1987: Master's thesis (Diplom) in high energy physics at the 2nd Institute for Theoretical Physics, Univ. Hamburg, 1985: Magister in philosophy at the University of Hamburg with a double-major in physics and philosophy. Main Research Interests: Mapping the Spectrum: Techniques of Representation in Research and Education (book project) Interplay of Instrumentation, Experiment and Theory (with case studies on redshift in the solar spectrum, 1880-1960): Habilitation Thesis 1995 and various papers, *Physics and National Socialism: An Anthology of Primary Texts*, 1996, *Philosophical Interpretations of Relativity Theory*: Dissertation 1989, History of Philosophy of Science, esp. Berlin and Vienna Circle as well as Ernst→Mach and Pierre Duhem Klaus Hentschel received following prizes and awards: 1999: Leopoldina-Prize for History of Science, issued by the German Academy of Scientists Leopoldina, Halle, 1998: Prix international d'histoire des sciences Marc-Auguste-Pictet, issued by the Societe de Physique et d'Histoire Naturelle de Geneve, 1997: Grant by the American Institute of Physics for research at the Niels Bohr Library and Archive; 1996/97: Fellowship at the Dibner Institute for History of Science and Technology, Cambridge, Mass. 1993: Paul-Bunge-Prize of the Hans R. Jenemann Stiftung, issued by the Deutschen Bunsen-Gesellschaft and the Gesellschaft Deutscher Chemiker; 1992: Heinz-Maier-Leibnitz Prize of the German Federal Ministry for Education and Science (Bundesminister für Bildung und Wissenschaft); 1990: Kurt-Hartwig-Siemers Prize of the Hamburger Wissenschaftliche Stiftung; 1987: Grant from the Deutscher Akademischer Austauschdienst (DAAD) to do research on the Collected Papers of Albert Einstein . Klaus Hentschel is a member of the History of Science Society, Philosophy of Science Association, Deutsche Physikalische Gesellschaft (Fachverband History of Physics) Deutsche Gesellschaft für Geschichte der Medizin, Naturwissenschaften und Technik (Arbeitskreis History of Astronomy), Deutscher Hochschulverband. Published Books and Editions: 1) (with John T. Blackmore): *Ernst Mach als Aussenseiter. Machs Briefwechsel über Philosophie und Relativitätstheorie mit Persönlichkeiten seiner Zeit. Auszug aus dem letzten Notizbuch (Faksimile) von Ernst Mach*, Vienna: Braumüller, 1985 (214 pp., 37 figs.). 2) *Interpretationen und Fehlinterpretationen der speziellen und der allgemeinen Relativitätstheorie durch Zeitgenossen Albert Einsteins*, Basel: Birkhäuser, 1990 (*Science Networks* Series, Vol. 6; 700 pp., 18 figs., 3200 bibl. refs.). 3) *Die Korrespondenz Petzoldt — Reichenbach: Zur Entwicklung der wissenschaftlichen Philosophie in Berlin*, Berlin: Sigma, 1990 (= Berliner Beiträge zur Geschichte der Naturwissenschaften und der Technik, vol. 12; 91 pp.). 4) *Der Einstein-Turm, E.F. Freundlich und die Relativitätstheorie: Ansaetze zu einer "dichten Beschreibung" von institutionellen, biographischen und theoriengeschichtlichen Aspekten*, Berlin, Heidelberg and New York: Spektrum Akademischer Verlag, 1992 (see also no. 8 for English translation). 5) *Physics and National Socialism.An Anthology of Primary Sources*, Basel: Birkhäuser, 1996 (= *Science Networks* Series, Vol. 18; ci, 406 and CIV pp., 121 docs., 31 figs., 969 refs.). 6) (with Matthias Doerries): Edition of Heinrich Kayser*: Erinnerungen aus meinem Leben* [1936], Munich: Deutsches Museum, 1996 (= *Algorismus Series*, Vol. 18; 46+313+102 pp.). 7) *Zum Zusammenspiel von Instrument, Experiment und Theorie:Rotverschiebung im Sonnenspektrum und verwandte spektrale Verschiebungseffekte von 1880 bis 1960*, (Habilitation thesis, 1995,) Hamburg: Verlag Dr. Kovac, 1998 (28+755+248 pp.). 8) *The Einstein Tower:An Intertexture of Architecture, Astronomy, and Relativity Theory*, Stanford: Stanford Univ. Press, 1997 (= expanded Engl. translation of No. 4 by Ann M. Hentschel; 226 pp.). 9) (with Renate Tobies): editor of *Brieftagebuch zwischen Max Planck, Carl Runge, Bernhard Karsten und Adolf Leopold*, Berlin: ERS-Verlag (273pp., 5 pl.). 10) *Mapping the Spectrum. Techniques of Representation in Research and Teaching* (in preparation). Mail: Institut für Wissenschaftsgeschichte, Univ. Göttingen, Humboldtallee 11, D-37073 Göttingen,

Germany. Telefon: ++49-551-39-8412; Fax: ++49-551-39-9748.
E-Mail: khentsc@gwdg.de (JPW)

James Curtis Hepburn

Hepburn, James Curtis (1815-1911) American Ophthalmologist and missioner of the Presbyterian Church. He graduated from Pennsylvania University in 1836, and worked as a Presbyterian Mission for 5 years in South Asia. He practiced Ophthalmology in the United States for 13 years, 1846-1859, and became a famous Eye Surgeon. In 1859 he came to Yokohama as a Presbyterian Missioner, but the Christian Church was not officially permitted at that time. He then started practice in Yokohama on a charitable basis; many patients visited him and he had to spend busy days seeing patients and also teaching eye surgery to Japanese students. Many Japanese studied Ophthalmology under him and they made great services for the public in the early times of Meiji Era. His student, G. KISHIDA assisted Dr. Hepburn to translate Japanese and learned the production of Zinc Sulphate eye drops. This eye drop became very popular as the first modern eye drops in Japan. Hepburn closed his Clinics in 1876 and invented the expression of the Japanese Language in Roman Letters, edited a Japanese-English *Dictionary* and translated the *Bible* into Japanese. He founded the Meiji Gakuin (a college of literature) in 1887: the College is the present Meiji Gakuin University in Tokyo. He left Japan in 1892. He had conferred on him the National Order of Merit by the Emperor Meiji in 1905 for his contribution to the cultural evolution of modern Japan. (SM)

Hepburn, Malcolm Langton (1866-1942) British ophthalmologist. Hepburn was educated at Uppingham and entered St.Bartholomew's Hospital in 1885, where he gained the Foster Prize in anatomy and qualified in 1892, taking the Conjoint Diploma and the M.B., B.S. degree in the University of London. He then served for a year as house-surgeon to his uncle Mr.Langton and added the F.R.C.S.(Eng.) and the M.D.(London) to his qualifications. In 1895 he began general practice in Lowestoft where he later was appointed Assistant Surgeon and afterwards Surgeon to the Hospital. Returning to London in 1904 he took up the special study of Ophthalmology and joined Moorfields as a student, where he worked under Sir Arnold→Lawson and the late Mr. Holmes Spicer, eventually becoming Chief Clinical Assistant to Sir John Parsons. During the same period he attended St. Bartholomew's Hospital and was appointed Chief Assistant in the Ophthalmic Department. His first Staff Appointment was that of Assistant Surgeon to the Central London Ophthalmic Hospital, and soon afterwards he became Assistant Ophthalmic Surgeon to the Hampstead General Hospital. These appointments were followed by his election to the Staff of Moorfields in 1910, and in 1913 he was appointed Ophthalmic Surgeon and Lecturer to the Royal Free Hospital. At Moorfields he served as Sub-Dean of the Post-Graduate School from 1913 to 1920 and after that date as Dean, until his retirement from the active Staff in 1926. In addition to his other activities he examined for the D.O.M.S. Diploma, and occupied the Presidential Chair for two years at the Section of Ophthalmology of the Royal Society of Medicine. He also delivered the Doyne Memorial Lecture at the Oxford Congress in 1935. He wrote: *The Ophthalmology of General Practice*, London 1922 and a chapter on Conjunctiva, on Cornea and on Refraction in *Dictionary of Practical Medicine*, 1921. At the time of his death, Hepburn was a member of the Consulting Staff of Moorfields and of the Royal Free Hospital and was also Hon. Secretary to the Council of British Ophthalmologists, a post which he had filled for a number of years.BJO 26,332-334,1942; LFRCS 1930-1951:382-383

Herbert, Herbert Lieut.-Colonel I.M.S. (1865-1942) British ophthalmologist. As an ophthalmic surgeon Herbert achieved very much more than a purely British reputation. His work at Bombay, both in the clinical and pathological field, was of outstanding value and was conducted in a truly scientific spirit. His description of the "pits," since known as *Herbert's pits* in the cornea of trachomatous patients was the *first* of its kind. In this, as in much else he was a pioneer; and it should be emphasized that he did all the microscopical work on his cases in his spare time. The other subject on which Herbert was brought into prominence was glaucoma. In varying parts of the world surgeons were engaged on devising some operation for types of glaucoma, which it was agreed, did not always do well on the classical iridectomy of von→Graefe. Thus →Lagrange, in France, Freeland Fergus, in Glasgow, Holth, in Scandinavia, Herbert, in Bombay and Elliot, in Madras were all at work on this subject in the early years of the 20th century. It was a great pity that Herbert's description of his first, or wedge-shaped, sclerotomy was so involved as to be

difficult to understand from the verbal account ; and he never found much support in England. But his later, or trap-door, sclerotomy has been extensively used and has a permanent place in operative procedures in selected cases. Besides his work on glaucoma he wrote a good deal on cataract. Herbert joined the Ophthalmological Society in 1897 and served a term as vice-president. He qualified from Leeds in 1886 and took the F.R.C.S. (Eng.) in 1891. At Bombay he was ophthalmic surgeon to the Sir C.J. Ophthalmic Hospital from 1895 to 1907. He was also a Fellow of Bombay University. On retirement Herbert settled at Nottingham and was surgeon, and later consulting surgeon, to the Nottingham and Midland Eye Infirmary. Later on he moved to Worthing where he was ophthalmic surgeon to the Worthing Hospital and Pathologist to the Sussex Eye Hospital. He contributed many papers to the Transactions of the Ophthalmological Society, to the Ophthalmic Review and to the British Journal of Ophthalmology.BJO 26,238-239; Arch Ophthal 1942,28:339; Brit med J.1942,1:627;LFRCS 1930-1951:384-385

Hering, Ewald (1834-1918) German physiologist who made researches on sensory physiology. Hering was born in Alt-Gersdorf, Germany, and received his M.D. in 1860 at Leipzig. He lectured in physiology at Leipzig from 1862 to 1865 and later became professor of physiology at the military Medico-Surgical Academy of Vienna (1865-1870), the University of Prague (1870-1895), and the University of Leipzig (1895-1918). Among his studies was color and binocular vision. He wrote: *Beiträge zur Physiologie*. (5 parts) Leipzig 1861-64, *Die Lehre vom binocularen Sehen*. Leipzig 1868, *Zur Lehre vom Lichtsinne* Wien 1878. *Kritik einer Abhandlung von "Donders: Über Farbensysteme."* Prag 1882, *Raumsinn des Auges* (vol.3 in Hermann *Handbuch der Physiologie*) 1879, translated by Carl A. Radde: *Spatial Sense and Movements of the Eye*, Baltimore 1942. Albert. BMC.JPW

Hermann, Ludimar (1838-1914) German physiologist, born in Berlin, who received his M.D. there in 1859 and became professor of physiology at the Universities of Zürich (18681884) and K6nigsberg (1884-1914). Hermann's research chiefly concerned the electrophysiology and metabolism of muscle and nerve; the author of numerous textbooks and journal articles, he was also active as an editor of a medical journal: Centralblatt für die medicinische Wissenschaften 1863. About vision he wrote: *Über schiefen Durchgang von Strahlenbündeln durch Linsen und über eine darauf bezügliche Eigenschaft der Krystallinse*. Zürich 1874. He edited the Handhuch der Physiologie in which the third volume is devoted to the physiology of senses (written by Ewald →Hering: *Handbuch der Physiologie*. Band 3:*Raumsinn des Auges* Leipzig 1879. Albert.BMC

Hermans, Georges (1939-) Belgian ophthalmologist. Hermans was born in Uccle (a suburb of Brussels). He is the son of René→Hermans, also an ophthalmologist. He obtained the M.D. degree in Brussels in 1963 and specialized in ophthalmology under Pierre→Danis at the same University until 1973. During the same time he did research work in pharmacodynamy and obtained in 1972 a special degree in insurance medicine with a thesis on *traumatic unilateral cataract and aphakia*. He teaches industrial ophthalmology at the School of public health since 1971 and became full professor in 1978. His papers concern mainly neuro-ophthalmology (from 1964), squint (from 1966), ocular allergy on cosmetics (1973), nystagmography in dyslexia (1975) and visual aspects of VDU work (from 1978). He made for the Belgian Ophthalmological Society reports on ophthalmological side-effects of general medications (1972), visual aptitudes (1975) and visual aspects of work at VDUs (1985). (Verriest).

René Hermans

Hermans, René (1905-1982) Belgian ophthalmologist. Hermans obtained the M.D. degree in Brussels in 1931. He specialized in ophthalmology in Paris (under →Morax and →Poulard) and in Bordeaux (under Teulières). He has been general secretary of the Professional association of the belgian ophthalmologists from 1945 to 1953, and chairman of the Commission on Physiological optics of the Belgian National Committee on Illumination from 1960 to 1978. He published on clinical ophthalmology, *prescription of glasses, illumination problems, visual performance* (with Jules→Zanen in 1963) and *history of ophthalmology* (a.o. an excellent booklet on *military ophthalmia*, 1960). (Verriest)

Herophilus (c.300 B.C.) Greek anatomist, the first to perform a dissection of the human cadaver, and the first to dissect the living human subject (condemned criminals), whose

name has been perpetuated in the "torcular Herophili." He wrote a large number of works, chiefly on anatomical subjects, but of these only fragments survive in the writings of Celsus, Galen, Rufus, and Theophilus. Of chief importance to ophthalmologists was his *"Peri Ophthalmon."* He described distinctly the sclera, the choroid, the retina, and the vitreous humor.American Encyclopedia of Ophthalmology, Vol.8,p.5880-5881

Herschel, Caroline Lucretia (1750-1848) British lady astronomer, sister of Sir Frederick William →Herschel. She lived in Hanover, Germany, until 1772, when she went to England to live with her brother at Bath. When William turned astronomer she became his constant helper, and on his being appointed private astronomer to King George the Third she acted as his assistant. While discharging her duties in this position she discovered several comets and several remarkable nebular and clusters of stars included in William's catalogues were described from her original observations. In 1798 she published at the expense of the Royal Society, *A Catalogue of Stars taken from Mr. Flamsteed's Observations*, which contained five hundred and sixty-one stars omitted in the British catalogue. In 1828 the Astronomical Society conferred on her their gold medal. American Encyclopedia of Ophthalmology, Vol.8,p.5902-5903.

Herschel, John (Sir John) Frederick William (1792-1871) British astronomer, the only son of Sir William Herschel, was born in Slough, England, and educated at Eton and St. John's, Cambridge, where, in 1813, he was senior wrangler and first Smith's prize-man. His first publication was "*A Collection of Examples of the Application of the Calculus of Finite Differences"* (1820). In 1822 he applied himself especially to astronomy and for a time he worked with Sir James South in re-examining the nebular and clusters **of** stars described in his father's catalogues. The results of the examination were given in 1833 to the Royal Society in the form of a catalogue of stars in order of their right ascension. His treatises on Sound and on the Theory of Light appeared in the *Encyclopedia Metropolitana* (1830-31) ; his treatise on Astronomy (1831) and the *"Preliminary Discourse on the Study of Natural Philosophy"* in Lardner's Cyclopedia not to mention his papers in the *Transactions of the Astronomical Society*. In January, 1834, Herschel arrived at the Cape of Good Hope, with the intention of completing the survey of the sidereal heavens, by examining the southern hemisphere as he had done the northern. Here he established his observatory at Feldhausen, six miles from Table Bay; in four years working all the time at his own expense he completed his observations; in 1847 he published a volume of *Astronomical Observations made at the Cape; being the Completion of a Telescopic Survey of the Whole Surface of the Visible Heavens commenced in 1825*. On his return to England honors were showered on him: he was made D. C. L. of Oxford and on Queen Victoria's coronation a baronet. He was president of the Astronomical Society and in 1849 became master of the Mint. His articles on Meteorology, Physical Geography and the Telescope, contributed to the Encyclopedia Britannica, were published separately; and his *Popular Lectures on Scientific Subjects* (new Ed. 1880) and *Collected Addresses* are well known works. Herschel was also a distinguished chemist, and attained important results in photography independent of Fox →Talbot. His researches on the undulatory theory of light were very valuable. He had also a profound interest in poetry and made translations from Schiller and from the Iliad. He was buried in Westminster Abbey near Sir Isaac →Newton. See Agnes M. Clerke, *The Herschel and Modern Astronomy (1896).*American Encyclopedia of Ophthalmology, Vol.8, p.5903

Sir William Herschel

Herschel, William (Sir William) (1738-1822) British astronomer, born at Hanover, the son of a band-master and educated as a professional musician. In 1757 he established himself in England, becoming a teacher of music in the town of Leeds, whence he went to Halifax as organist, and subsequently (1766) in the same capacity to Bath. Here he would seem to have first turned his attention to astronomy. Wanting a superior telescope and unable to afford to buy a good reflector he made one for himself a Newtonian of five foot focal length and with this applied himself to study the heavens. In 1781 he made his first discovery, a new planet, which he at first took for a comet. The result of his discovery was his appointment to be private astronomer to George III. He then went to live at Slough near Windsor, where, assisted by his sister Caroline, he continued his researches. Herschel married a Mrs. Mary Pitt and left one son. He was knighted by George III. He greatly added to our knowledge of the solar system; he discovered Uranus (called by him Georgium Sidus) and what he took for its six satellites and two satellites of Saturn.

Besides this he detected the rotation of Saturn's ring, the period of rotation of Saturn itself and that of Venus the existence of the motions of binary stars, the first revelation of systems beside our own. His catalogue of double stars, nebulae, etc., and tables of the comparative brightness of stars and his researches in regard to light and heat would have in themselves entitled him to the first rank as an astronomer and natural philosopher. He erected a famous monster telescope of forty feet in length. It was begun in 1785 and finished in 1789, in which year he by means of it detected the sixth satellite of Saturn. See *Herschel's Life and Works* by E. S. Holden (1881) and *William Herschel and his Work*, by J. Sime (1900).American Encyclopedia of Ophthalmology, Vol.8,p.5906

Hersing, Friederich Wilhelm (? -?) German physician who wrote: *Compendium der Augenheilkunde* Erlangen 1873., 3rd.edition Stuttgart 1881. An italian edition *Compendio di oftalmiatria* was published in Napoli 1888.Albert.BMC

Hertz, Heinrich Rudolf (1857-1894) German scientist, born in Hamburg, and who studied at Berlin. In 1880 he became assistant to Hermann von→Helmholtz, in 1885 was called to the technical school at Karlsruhe and in 1889 succeeded Clausius as Professor in Bonn. He greatly advanced the science of electricity, was the continuator of the work of Faraday and Clerk-Maxwell and was a singularly ingenious experimenter. He demonstrated the existence of electromagnetic waves of comparatively slow frequency. "Hertzian" waves are propagated through space, and can be reflected, refracted and polarized like light. Wireless telegraphy is the practical development of his discoveries. Three volumes of his collected works appeared in 1894 and have been translated into English by D. E. Jones (1893-99).American Encyclopedia of Ophthalmology, Vol.8,p.5906-5907.

Hess, Carl von (1863-1923) German ophthalmologist, director of the Munich Eye Klinik. He was the only son of Wilhelrn Hess, the well-known ophthalmologist, a close friend of Albrecht v. Graefe, and for many years secretary of the Heidelberg Ophthalmological Society. Great pains were taken with the early education of Carl, and especial attention was paid to the acquisition of foreign languages, in which he became remarkably proficient. Carl v. Hess acted as assistant to Hering, the physiologist, and to →Sattler, the ophthalmologist, both of Prague, and as might be expected from this conjunction, v. Hess became the happiest combination of physiologist and ophthalmologist that it is possible to imagine. He studied also in Heidelberg, Bonn, and Strasburg. For a short time he assisted in the Schoeler Klinik in Berlin.. In 1891 he was first assistant and Privatdozent in the University Eye Klinik, of Leipzig. In 1896 he was appointed extraordinary professor as successor to →Uhthoff and nominated ordinary professor and director of the University Eye Klinik in Marburg. Shortly after this he was awarded for his work upon accommodation the von Welz-Graefe Prize by The Heidelberg Congress. As, successor to J. von→Michel, in 1900 he was called to Würzburg, where he lived for twelve years and where he reached the summit of his career. During this period he wrote his two famous textbooks, namely, " *Anomalies of Refraction and Accommodation* " and "*The Pathology and Therapy of the Lens System*," and published most of his investigations on the light and colour sense, as well as treatises dealing with comparative accommodation. It is of interest to recall the fact that in pursuit of his favorites studies he passed nearly every spring at the Zoological Station at Naples. In 1912 he was called to Munich as successor to →Eversbuch. In 1922 the German Ophthalmological Society presented v. Hess with the Graefe Medal, the highest distinction within its gift, and this gave Hess the greatest pleasure, since only men of, the calibre of Leber, Helmholtz and Hering had been its recipients. BJO 1923,7:541-542

Hess, Wilhelm (1831-1905) German ophthalmologist. Born at Giessen, he was a student at Giessen, Würzburg, Heidelberg, Vienna, and Prague. In 1853 he began to study ophthalmology under Albrecht von →Graefe, whose close personal friendship he enjoyed. In 1857 he settled for practice in Mainz. He possessed remarkable executive, as well as operative, ability. He was one of the founders of the (Heidelberg) *Ophthalmologische Gesellschaft* and was for a long time its permanent secretary. American Encyclopedia of Ophthalmology,Vol.8,p.5907

Hesselbach, Adam Kaspar (1788-1856) German surgeon and anatomist who wrote: *De tunica retina et zonula ciliari* Würzburg 1820 ; *Die Erkenntniss und Behandlung der*

Eingeweide-Brüche durch naturgetreue Abbildungen erläutert Nürnberg 1840; *Handbuch der gesammten Chirurgie für praktische Ärzte und Wundärzte* (3 parts) Jena 1844-1846. Albert.BMC

Heuermann, Georg (1723*-1768) Danish Copenhagen surgeon, who devoted much attention to ophthalmology. Born at Oldesloe, Holstein, he studied for a time at the Copenhagen University, and, in 1749, received from that institution his medical degree. In 1750 he became prosector at the University, and eight years later "physician and chief surgeon to the mobilized army." He was appointed professor of surgery at the Copenhagen University in 1763, but did not begin to lecture till three years later. In 1768 he died. His medical writings are as follows: 1. *De Lingua Humana*. (Diss., 1749.) 2. *Physiologie*. (In four parts; Copenhagen and Leipzig, 1751-55. According to Hirschberg, more than 200 pages of this work are devoted to the eye.) 3. *Abhandlung der Vornehmsten Chirurgischen Operationen am Menschlichen Körper*. (3 parts; Copenhagen, 1754-57. Especially rich in the surgery of the eye.) 4. *Vermischte Bemerkungen und Untersuchungen der Ausüben,den Arzneiwissenschaft*. (2 parts;,Copenhagen; 1765, 67.)*According to Hirschberg, but the *"Biographisches Lexikon der Aerzte"* says born in 1722. American Encyclopedia of Ophthalmology, Vol.8,p.5913-5914.Hirsch.

Heurne, Johan (Jan) van (1543-1601) Dutch physician, advocate of bedside teaching, was born in Utrecht and studied medicine at Louvain, Paris, and Padua; he practiced in Utrecht for ten years before becoming professor of medicine at Leiden (1581-1601). Van Heurne wrote: *De morbis oculorum, aurium, nasi, dentium et oris* Leiden 1602.Albert. BMC.

Heusinger, Johann Christian Friedrich Karl (1792-1883) German natural historian and physician, who devoted some attention to ophthalmology. Born at Farnroda, he received his medical degree at Jena in 1812, and, after a year of further study at Göttingen, became a military physician in active service in the Prussian army. Returning to civil life, he became an assistant to von →Himly at Göttingen, then professor at Jena, then at Würzburg, and, finally at Marburg, where he spent the remainder of his days. In 1876 he was ennobled. Heusinger's chief ophthalmologic writing is "*Untersuchung der Augen eines Amaurotischen*" *(Rust's Mag. f. d. Ges. Heilk.*, Bd. I).American Encyclopedia of Ophthalmology,Vol.8, p.5916

Hewkley, Frank (1861-1942) British ophthalmologist. Hewkley was educated at the City of London School and was a student of the London Hospital. He qualified in 1881 proceeding six years later to the fellowship. He was also M.B. Durham. An old Moorfields student he was later Ophthalmic Surgeon to the Westminster General Dispensary and to the St.Pancras Infirmary, to which in due course he became consulting ophthalmic surgeon. He joined the OSUK in 1905. BJO 1944; 28:103.

Hewson, Thomas (1783-1831) British physician, son of the famous London anatomist William Hewson and father of the American surgeon Addinell H. Hewson. He wrote: *Observations on the history and treatment of the ophthalmia accompanying the secondary forms of lues venerea*. London 1824 and *Practical observations on the history, nature, and treatment of the venereal disease of the eye*. London 1836.Albert.Hirsch.

Hey, William (1736-1819) English surgeon of Leeds, England, who devoted some attention to ophthalmology, especially to comparative ophthalmology. Born at Leeds, the grandson of a well-known surgeon, he lost the sight of his right eye in early childhood as the result of a wound made by a penknife. He studied at Leeds and in London, returning to Leeds as a general practitioner of medicine. He founded the Leeds General Hospital, in which institution he practised with much success for more than forty-five years. He became a Fellow of the Royal Society. Hey's only strictly ophthalmologic writing was "*A Description of the Eye of the Seal*" *(Memoirs of the Philos.Soc.*, 1790). However, in his "*Practical Observations on Surgery*" (London 1803) he treats in a general way of a number of eye diseases.American Encyclopedia of Ophthalmology,Vol.8,p.5920

Heydt, Robert von der (1875-1946) American ophthalmologist who was born in Wiesbaden, Germany, and who came to the United States at the age of six. He received education in the Chicago schools and was sent to Germany at the age of 16. In early manhood, he studied watch making and always carried a watch he himself had made.

Working with his father on return from Germany, it became his duty to keep the large clock at Rush College in good order. It was here that he began to wish for a medical education and for a teaching position at Rush. This wish was fulfilled through his own efforts. He received his medical degree at the University of Illinois in 1903 and practiced ophthalmology in Chicago until his death. Von der Heydt was Professor of Ophthalmology at the Chicago College of Medicine and Surgery from 1909 to 1917, Associate Professor at Rush Medical College from 1926 to 1940, and at the University of Illinois from 1940 to 1943. From 1943 until his death, he was Professor Emeritus of Ophthalmology at the University. He was ophthalmologist at the Illinois Charitable Eye and Ear infirmary from 1905 to 1943 and attending ophthalmologist at Michael Reese Hospital and West Suburban Hospital. Von der Heydt was a member of the American Ophthalmological Society to which he was elected in 1930.

Heyfelder, Johann Ferdinand (1798-1869) German ophthalmologist of Petersburg, Russia. Born at Küstrin, Germany, he studied medicine at Berlin, Jena, Würzburg, Tübingen and Breslau. At the last named institution he received his degree in 1820, presenting as dissertation "*De Prosopalgia Fothergilli*." After a year or more spent in travel, he settled in Trier, where he became a very successful practitioner. In 1831 he was sent to Berlin to investigate a terrible epidemy of cholera raging there. The result was a work entitled *"Beobachtungen über die Cholera Asiatica"* (Bonn, 1832). With a similar purpose he went to Paris in 1832, and again the result was a book, *"Die Cholera in Frankreich*" (Bonn, 1832). In 1841 he became professor of surgery and ophthalmology and director of the Surgical Clinic at the University of Erlangen. Here he was known as a daring operator, a careful and critical editor, and a brilliant teacher. Dissent arising, however, between himself and his colleague, he resigned his position as professor, and joined the Russian army. In his capacity of army surgeon, he was present at the bombardment of Sveaborg. At the close of the war, he settled in Petrograd (St.Petersburg). Here he resided for fifteen years, honored, and admired by all. To the industry of Hirschberg in his *History of Ophthalmology*, we owe the following bibliography: 1.*Das Chirurgische und Augenkranken-Clinicum der Universität Erlangen von 1. Oktober 1841 bis zum 30. September 1842 von Prof. Heyfelder (Heidelberger Med. Annalen*, 1842). 2.*Das Chirurgische und Augenkranken-Clinicum zu Erlangen von 1. Oktober 1842 bis zum 30 September 1843, von Dr. Heyfelder* (Erlangen, 1843). 3.*Das Chirurische und Augenkranken-Clinicum der Universität Erlangen,. vom 1 Oktober 1843 bis zum 30 September 1844, von Dr. Heyfelder* (Berlin, 1845). 4.*Sur l'Influence de la Commotion sur I'Oeil.* Par le Dr. Heyfelder, etc. Traduit de l'Allemand, sur le Manuscrit de l'Auteur, par le Dr. Ph. van Meerbeek d'Anvers. (*Annal. d'Oculistique*, xiii, S. 145-157, 1845.) 5. *Mikroskopische -Untersuchungen über die Krankhaften Geschwülste (HeideIberger Klein.Annalen* 1845). 6. *Anatomische Untersuchung eines Auges mit Koloboma Iridis.* (Ammon's Z., Ill, 467, 1833.) American Encyclopedia of Ophthalmology,Vol.8, p.5918-5919.

Heyfelder, Oscar (1828-1890) German ophthalmologist. Son of Johann Ferdinand →Heyfelder. Born at Trier, he studied at the Universities of Heidelberg and Erlangen, at the latter institution receiving his degree in 1851. For a number of years he was chief of the surgical and ophthalmological clinic at Erlangen. American Encyclopedia of Ophthalmology,Vol.8,p.5919

Heyl, Albert Gallatin (1847- ?) American ophthalmologist. Born at Philadelphia, he studied in both the academic and the medical departments of the University of Pennsylvania, receiving his professional degree in 1870. After a period of special study in Vienna, London, and Heidelberg, he returned to Philadelphia, and, for the remainder of his life, practised ophthalmology exclusively. He is said to have been a brilliant operator. Among his more important writings are: 1. *A Case of Uremic. Amblyopia*. (Am. Journ.of the Med. Sc., 1874.) 2. *A Case of Hypemia following Lens Discision.* (Phila.Med.Times, 1875.) 3. *Coloboma of the Crystalline Lens.* (Int.Oph. Cong., N. Y., Sept., 1876.) 4. *Metastatic Tenonitis in Diphtheria.* (Med. Jour., 1880.) 5. *Remarks on Lipemia Retinalis Occurring in a Case of Diabetes Mellitus.* (Phila. Med. Times, 1880.) 6. *Thermometric Observations in a Case of Traumatic Diphtheria of the Orbit.* (Phila. Med. Times, 1882). 7.*Acute Glaucoma Induced by Duboisin.* (Am.Jour., 1882.) American Encyclopedia of Ophthalmology, Vol.8, p.5919

Heymann, Friedrich Moritz (1828-1870) German ophthalmologist. Born at Schneeberg, in Saxony, he received the degree of Doctor in Medicine at Leipzig in 1850, and pursued the study of ophthalmology at Prague, Vienna, Paris and London. In 1851 he settled in Dresden as ophthalmologist, and eight years later was placed in charge of the Division for Eye-Patients at the Deaconness Institution. He was a very skilful operator, and a clear and forceful writer. Heymann's ophthalmologic writings are as follows: 1. *Exposer l'Influence Respective des Divers Nerfs sur le Mouvement de I'Iris*. (Awarded a gold medal by the Belgian Academy of Medicine at Brussels.) 2. *Ueber die Beziehungen der Erkrankungen der Versehiedenen Gebilde des Auges zur Sogenannten Amaurose*. (Prager Vierteljahrschrift, XIII.) 3. *Zur Sclerotico-Chorioiditis Posterior*. (Graefe's Archiv.2) 4. *Ueber Amaurose bei Bright'scher Krankheit und Fettdegeneration der Netzhaut.* (Ibid., 1I, 2.) 5. *Frische Netzhauthämorrhagien*. (Ibid., VIII.) 6. *Ueber Glaucom in Aphakischen Augen.* (Klin.Monatsbl.für Augenheilk., V.) 7. *Ein Fall von Netzhautgliom mit Zahlreichen Metastasen*. (v. Graefe's Archiv, XV.) 8. *Krankheiten der Orbita.* (v. Graefe's Archiv, VII.) 9. *Die Autoskopie des Auges und eine neue Methode derselben.* (1863.) 10. *Ueber Künstliche Beleuchtung.* (Prager Viertetjahrschr., C.) *Die empfindende Netzhautschicht* Dresden 1863? American Encyclopedia of Ophthalmology,Vol.8,p.5919-5920.

Heymans, Corneel (1892-1968) Belgian pharmacologist at the Institute of pharmacodynamy and pharmacotherapy. He was the son of Jan-Frans Heymans, the founder of the Institute. He won the Nobel prize for physiology and medicine in 1939. He made some contributions to the *pharmacology of the pupil* and reported on this for the Belgian Ophthalmological Society in 1949. He trained the ophthalmologists Antoon Hoorens (1884-1960) and André Philips (1921-1968) (Verriest)

Hida, Tetsuo (1948-) Japanese Ophthalmologist, Professor of Ophthalmology of Kyorin University. He graduated from Keio University in 1973, studied Ophthalmology under Prof.→UEMURA Yasuo and received his Doctor of Medical Sciences in 1982 (thesis: *Hyaloid Vascular System of the Rat: A Study on its Topography Examined by Plastic Cast*: Acta Soc. Ophthalmol. Jpn.?86: 315, 1982). Subsequently, he spent 2 years as a research fellow at Duke University Eye Center (1984-1986) (*Experimental transvitreal cyanoacrylate retinopexy in a primate model*. Am. J. Ophthalmol. 103:782, 1987). He is in the present position as above since 1994. He is a member of the Board of Trustees of the Japan Vitreo-Retina Society, of the Japan Society of Ophthalmic Surgeons, and of the Japanese Society of Ophthalmic Diabetology, and a Councillor of the Japanese Ophthalmological Society. He is also a member of the Club Jules Gonin, of Association for Research in Vision and Ophthalmology and is a fellow of American Academy of Ophthalmology. His main interest has been vitreoretinal diseases, ocular surgery, diabetic retinopathy etc. and has many publications. Some examples are "*Clinical features of a newly recognized type of lattice corneal dystrophy* - Am. J. Ophthalmol. 104:241, 1987" and?"*Classification of the stages of proliferative vitreoretinopathy in a refined experimental model in the rabbit eye* - Graefe's Arch Clin Exp Ophthalmol. 225:?303, 1987. He organized the 37th Meeting of Japan Vitreo-Retina Society as the president in 1998. (Department of Ophthalmology, Kyorin University School of Medicine, 6-20-2, Shinkawa, Mitaka, Tokyo 181-8611, Japan. Phone: +81-42-247-5511, fax: +81-422-76-6316)(SM)

Akira Hidaka

Hidaka, Akira (1862-1927) Japanese Ophthalmologist graduated from Tokyo University in 1885, studied Ophthalmology under J. SCRIBA. He was then invited as the Professor of Ophthalmology to the Medical School of Akita, Sendai. Subsequently, he was appointed the Professor of Ophthalmology at Jikei Medical College in 1891. He studied at the University of Halle in Germany for 2 years from 1896 and received the degree, Doktor Medicine. He stayed as the Professor till 1921. He served the Jikei University as Member of the Executive Council. After retirement, he was made a Professor Emeritus of Jikei University. (SM)

Higgins, Charles (1846-1920) British ophthalmic surgeon. He was appointed assistant ophthalmic surgeon to Guy´s Hospital in 1873, ophthalmic surgeon in 1882 and consulting ophthalmic surgeon 1906. He performed his last operation in November 1920, a few weeks before he died, aged 75. He wrote little and published *Hints on Ophthalmic out-*

patient practice (1877); *Handbook of ophthalmic practice* (1882) ; A *Manual of Ophthalmic Practice* (1888). BJO 1921,5:138-142.Albert.

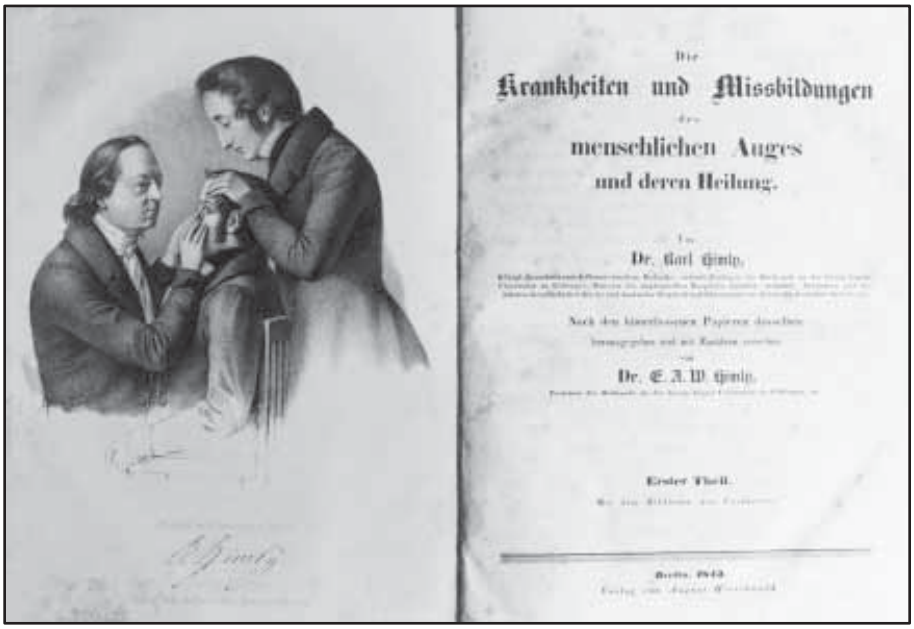
Highmore, Nathaniel (1613-1685) English anatomist, who discovered the accessory nasal sinus which bears his name today. Because of the important pathological relations which this large, but imperfectly drained, cavity bears, directly and indirectly, to the eye, its discoverer should be remembered by ophthalmologists. Highmore was born at Fordingbridge, England. He received his medical degree at Oxford in 1642, and at once proceeded to the practise of medicine and surgery at Sherborne, in Dorsetshire. In this little place he continued to practise for the remainder of his days, becoming celebrated not only as an anatomist, but also as a general practitioner of both medicine and surgery. His most important works are: *"Disquisitio Corporis Humani Anatomica*" (Hague, 1651) and *"The History of Generation, Examining the Opinions of Divers Authors and chiefly of Sir K. Digby, and Concerning the Cure of Wounds by Sir Gibbert Talbot's Sympathetic Powder"* (London, 1651).American Encyclopedia of Ophthalmology,Vol.8,p.5921

Hildreth, Joseph Sullivan (1832-1870) American ophthalmologist was born at Cohassett, Norfolk County, Massachusetts. Nothing concerning his family is known other than the 'Suggestion that it was the same as that of Richard Hildreth, the historian. He went to Chicago from Paris, France, where he was superintendent of Desmarres' Eye and Ear Institute, under its famous founder. He also studied two years in Berlin under R. Virchow. He was appointed surgeon of United States Volunteers in 1863, stationed at Chicago, and honorably mustered out of the service, December 10, 1-865. In the summer of 1863, the Chicago City Hospital was occupied by the United States military authorities, and in July, 1865, surgeon J. S. Hildreth took charge. The scope of treatment was limited to diseases of the eye and ear, and the hospital was termed the *Desmarres Eye and Ear Hospital*. Its location was at the corner of 18th and Arnold streets; capacity, 130 patients, and it boasted forty attendants. In 1866 it became the Cook County Hospital, and Dr. Hildreth became a consultant on its medical staff. Dr. Hildreth was a pioneer in ophthalmology, the *first* professor of ophthalmology and otology in the Chicago Medical College, and held that position at the time of his death. He contributed papers on ophthalmology to the Chicago and Illinois state medical societies.American Encyclopedia of Ophthalmology,Vol.8,p.5921.

Hilliard, Walter (1845-1915) American ophthalmologist and oto-laryngologist of Denver, Colorado. Born at Oxford, N. C., he received his medical degree at Tulane University, New Orleans, in 1869, and, for twenty-six years, practised at Denver as a specialist in diseases of the eye, ear, nose and throat. Hilliard was a man of high ideals and of great public spirit. He was very helpful to the younger men in his profession.American Encyclopedia of Ophthalmology,Vol.8,p.5922-5923.

Hillmer. A German quack, who flourished about the middle of the 18th century. He was a very rough and careless operator, who boxed his patients jaws, even while the point of his cataract-needle lay within their eyes. It is said that, immediately after a cataract operation he would not infrequently permit the patient to walk to his own home, and would even advise him to drive, or else to ride about on horseback. Hillmer, as might have been expected, had but few successes. He worked, or, rather, blundered and plundered, chiefly in Paris, Lyons, Dijon, Montpellier, Madrid, Lisbon, and numerous towns and cities in Germany. His exact life dates are unknown. He was, however, at Lyons in June, 1749, and in the *Courrier d'Avignon* for Aug. 17, 1756, we read as follows: "Doctor and Professor Hillmer, adviser to his majesty, the King of Prussia, arrived in this city the third of this month, coming from Lisbon via Madrid. From the fifth until now, he has not discontinued his operations, and the success which they have had have merited for him the eulogies of many physicians and surgeons, and of numerous persons of distinction who have been eye witnesses to the cure of several blind persons, one of whom had been blind from birth. The success of these operations has justified the high idea which had been formed of the talents of Dr. Hillmer, for the patients who were cured during the first days go about and do as they like without the assistance of guides, as if they had never been deprived of vision. "M. Hillmer will return in a short time to the Court of Berlin." American Encyclopedia of Ophthalmology, Vol.8,p.5923; see also the monograph A.Henning "*Die Affäre Hillmer"* Franfurt 1987

Himly, Carl (1772-1837) German ophthalmologist, re-discoverer of artificial mydriasis for use in ophthalmology, co-founder (with Adam Schmidt) of the first ophthalmologic journal, and one of the earliest teachers of ophthalmology as a specialty. Born at Braunschweig, he studied both there and at Göttingen. His thesis was *Dissertatio inauguralis ... observationes quasdam circa epidemiam, hujus anni dysentericam sistens* Göttingen 1794. In 1795 he became professor in the Medico-Chirurgical Klinik at Braunschweig, a position which he resigned in 1801 in order to accept the chair of internal medicine at Jena. In 1803 he removed to Göttingen, in order to become Director of the Academic Hospital in that city. In the same year he began to give instruction in a course devoted exclusively to ophthalmology. Himly at the same time, founded, together with Adam Schmidt, the first ophthalmologic periodical, *Die Ophthalmologische Bibliothek.* This journal became defunct in 1807, but, in 1816, was revived by Himly alone, under the slightly altered title, *Bibliothek für Ophthalmologie*. This journal, like its predecessor, was short-lived, passing away in 1819. Himly has been said to have been the first to make use of artificial mydriasis in ophthalmology. This, however, is a mistake. The first was undoubtedly Reimarus, of Hamburg, and the second, Loder, of Jena. Himly was only a slow third. Himly's chief ophthalmologic writings are as follows: 1. *Ophthalmologische Beobachtungen und Untersuchungen* (Bremen, 1801). 2. *Einleitung in die Augenheilkunde*. (Göttingen 1820, 3rd ed.1830) 3. *Die Krankheiten und Missbildungen des Menschlichen Auges und deren Heilung*. (2 vols., Berlin, 1842-43; edited and much improved and enlarged by the author's son, E. A. W . Himly.) 4.*De la paralysie de l'iris occasionnée par une application locale de la belladonna* Paris 1802 ; Himly was drowned in the Leine Mar. 22, 1837.American Encyclopedia of Ophthalmology, Vol.8,p.5923-5924.



Karl Himly

Hine, Montague Leonard (1883-1967) British ophthalmologist. Hine was born at Leytonstone and studied medicine at the Middlesex Hospital where he had a brilliant academic career, qualifying in 1901. He took his M.D. in 1907 and became F.R.C.S. in 1908. After a professional journey to Singapore and the Cocos Islands he occupied junior posts at the Royal Westminster Ophthalmic Hospital and in 1915 was appointed a consulting surgeon and became Dean of the Medical School (1920-1946). In 1934 he was appointed ophthalmic surgeon to Charing Cross Hospital. He served during both world wars, in the first as ophthalmic specialist in the army and in the second in the Emergency Medical Service. He was a past president of the Ophthalmological Section of the Royal Society of Medicine and Secretary of the Ophthalmological Society of the United Kingdom from 1927-1930, and a Member of Council 1926-1927 and 1930-1933. Hine was a first-class operator and a shrewd and accurate diagnostician; as a teacher he was so lucid and interesting that he attracted a very large following from the post-graduates at the Royal Westminster Ophthalmic Hospital and the students at Charing Cross Hospital. BJO 1968,52:287-288

Hioki, Ryuuichi (1910-1987) Japanese Engineer, graduated from the Faculty of Science of Tokyo University in 1931, was appointed the Professor, at the Department of Physics of Tokyo University in 1950. After retirement in 1969 he was invited to Chiba University where he retired in 1974. He was made Professor Emeritus of Tokyo University. He specialized in colorimetry, ophthalmic optics, and optical design: he developed the Hioki anomaloscope and adaptometer which were widely used in ophthalmic research. He completed a "*Handbook of Color Science*" and served as the President of the Society of

Ryuuichi Hioki

Ophthalmic Optics and Society of Color Science. He was a member of the Optical Society of America. (SM)

Hippel, Arthur von (1841-1916) German ophthalmologist born in Fischhausen, Germany, who received his M.D. at Königsberg (1865) and who, influenced by Arlt in Vienna, decided to specialize in ophthalmology after doing there postgraduate study. He held professorships at Königsberg (1874-1879, 1890-1892), Giessen (1879-1890), Halle (1892-1900), and Göttingen (19001914), where he was succeeded by his son Eugen. He made important contributions to corneal transplantation. He wrote: *Ueber totale angeborene Farbenblindheit*. Berlin 1894; *Über die Wirkung des Strychnins auf das gesunde und kranke Auge* Berlin 1873; *Über den Einfluss hygienischer Maßregeln auf die Schulmyopie Giessen* 1889. Albert. see Mannis/*Corneal Transplantation-A History in Profiles*.Hirsch.Fischer.

Hippel, Eugen von (1867-1939) son of Arthur von Hippel, was born in Königsberg and received his M.D. at Göttingen in 1889. Von Hippel worked as assistant to Theodor→Leber before becoming professor of ophthalmology at the universities of Heidelberg (1897-1909), Halle (1909-1914), and Göttingen (1914-1939). Hippel's chief contributions were his researches on papilledema, sympathetic ophthalinia, tubercular infection of the eye, diseases of the optic nerves, and angiomatosis retinae-the latter now known as "Hippel's disease." Hippel's doctoral dissertation was *Ueber Siderosis bulbi und die Beziehungen zwischen siderotischer und Mimotogener Pigmentirung*. Leipzig 1894; *Über die palliativtrepanation bei Stauungspapille* Leipzig 1909 and *Die Krankheiten des Sehnerven* (in Graefe-Saemisch *Handbuch der Augenheilkunde*, 2nd. Edition, Vol.7, part 2.Albert. Fischer.

Hire, P. de la (1640-1718) French ophthalmologist, who, in 1709, repeated the submersion experiment of Jean Méry on the eye of a cat, and first furnished the correct solution of the most important question raised by that experiment. Méry's experiment (1704) was this: He submerged a cat under water, and then beheld in all its glory the animal's fundus oculi-the entrance of the optic nerve, the vessels and all the various hues of the brilliant choroid coat. Méry's explanation of his own experiment, however, was very erroneous. He believed that the reason why the fundus could be observed in the submerged, but not in the unsubmerged eye, was that the water "evened over" the various tiny "inequalities" which must exist on its anterior corneal surface. De la Hire, two years later, came forward with the correct explanation. He made it entirely clear that the reason why the fundus of the submerged eye could be perceived was that the water did away with all the corneal refraction of the light, so that all the light-rays leaving a given point upon the fundus, emerge from the eye not as a parallel, but as a strongly divergent, pencil. He also observed incidentally that all the disturbing light-reflexes which appear on the cornea *in aero* are done away with by submersion. American Encyclopedia of Ophthalmology,Vol.8,p.5942

Makoto Hiroishi

Hiroishi, Makoto (1925-1991) Japanese Ophthalmologist, Former Assistant Professor of Kyushu University, Director of Hiroishi Eye Hospital, Fukuoka. He graduated from Kyushu University in 1949, studied under Prof. TAMURA Shigemi and received the degree Doctor of Medical Sciences in 1954 for his work on the Electro-oculogram (EOG). In collaboration with the Faculty of Engineering of Kyushu University, he built a new direct current amplifier whereby he recorded the EOG. This was probably the first in the World to record EOG and to study eye movements. The thesis consisted of 6 papers (*Studies of Electro-oculogram*. No.1: J. Jpn. Ophthalmol. Soc. 57: 55, No.2: ibid. 57: 68, No.3. ibid. 57: 71, No.4. ibid. 57: 607, 1953, No.5. ibid. 58: 1601, 1954; No. 6. Ibid. 59: 169, 1955). He was promoted to the Assistant Professor of Kyushu University in 1957. He was one of the leaders in the research of eye movements and strabismus, and he delivered a Special Report "*Various aspects of strabismus*" at the 62nd Congress of the Japanese Ophthalmological Society in 1958 (J. Jpn. Ophthalmol. Soc. 62: 2100, 1958). He was one of the Founders of the *Japanese Association of Strabismus and Amblyopia* in 1961, and he delivered the Special Lecture "*Classification of Strabismus*" at the 2nd Meeting of the Society in 1964. On the basis of his donation, the Society created the "HIROISHI AWARD" to be granted to those who accomplished excellent works in the field. He left the University in 1988 and founded Hiroishi Eye Hospital in the city of Fukuoka and worked as the Director.[SM]

Hirosawa, Kazushige (1938-) Japanese Cell biologist. He graduated from Tokyo University, Faculty of Medicine in 1963, and carried out postgraduate research at the Anatomy Department of Tokyo University and the Jules Stein Eye Institute UCLA. He was granted Doctor of Medical Science in 1968 from Tokyo University (thesis: *Electron microscopic study of the substantia nigra of the Japanese monkey*). He was promoted to Professor at the Department of Fine Morphology of the Institute of Medical Science of Tokyo University in 1984, and he worked in this position until retirement in 1999, whereupon he is entitled the Professor Emeritus of Tokyo University. During his tenure he served as the Director of the Institute 1992-1996. He published many scientific articles that include "*Monoclonal antibodies which recognize endoplasmic reticulum in the retinal pigment epithelium*. Exp Eye Res. 60:765,1991, and "*A novel member of the Ig superfamily, RPE7, expressed in the bovine retinal pigment epithelial cells*. Exp. Eye Res. 67:31,1998". He served as the Executive Director of the Japan Society of Anatomists and the President of Japan Society of Electron Microscopy. He was awarded "Distinguished electron Microscopist year 1983". He is a member of Association for Research in Vision and Ophthalmology, New York Academy of Science and also Emeritus member of the Society of Neuroscience. Currently, he works as a Professor at Waseda University to establish a new Institute of Public Health. (Faculty of Public Health, Waseda University, e-mail: YQC01006@nifty.ne.jp)(SM)

Kinnosuke Hirose

Hirose, Kinnosuke (1896-1996) Japanese Ophthalmologist, graduated from Kyushu University in 1924, studied Ophthalmology under Prof. Y.OHNISHI. He received the degree Doctor of Medicine from Kyushu University in 1931. He was made the Professor and Chairman of the Department of Ophthalmology of Nagasaki University, the position he held until retirement in 1962. During his tenure, he gave a special lecture "*Anatomy and Pathology of the Eyelid* " in the Japanese at the 61st Congress of the Japanese Ophthalmological Society in 1957. He served as the President of the 64th Congress of the Society held in 1960, also as the Director of the University Hospital and Member of Japanese Academy of Science. (SM)

Hirose, Tatsuo (1936-) American Ophthalmologist of Japanese origin, Clinical Professor of Ophthalmology of the Harvard Medical School (1993-present) and Senior Clinical Scientist of the Schepens Eye Research Institute, Boston, U.S.A. (1995-present). He was born in Kanazawa Japan and graduated from the Faculty of Medicine of Kanazawa University in 1961. He then studied Ophthalmology in the Graduate School of Medicine of the University under Prof. KURACHI Yoshi and received the degree Doctor of Medical Sciences in 1969 (thesis: *The on-and–off effect in pigeon's ERG.* No. 1, J. Jpn. Ophthalmol. Soc. 68: 1485, 1964 and No. 2, ibid. 69: 1196, 1965). At the 4th year of his Course of the Graduate School, he was granted Fulbright Fellowship that allowed him to study at Cornell University School of Medicine in 1965-1968. He came back to the United States in 1969 and became a Research Fellow of the Eye Research Institute of Retina (now Schepens Eye Research Institute). He was promoted to Clinical Professor as above in 1993 and to Senior Clinical Scientist in 1995. He has been working on development of new surgical techniques for severe retinal detachment, such as open-sky vitrectomy, on retinopathy of prematurity and electrophysiology of vision. He published 143 scientific original papers, contributed chapters to 22 books and co-edited a book: "*Vitreous surgery and advances in fundus diagnosis and treatment*" with Freeman HM and Schepens, Ch (Appleton-Century-Crofts, New York, 1977). Some examples of his original articles are "*Snowflake degeneration in hereditary vitreoretinal degeneration*. Am. J. Ophthalmol. 77: 143, 1974", "*Vision in Stage 5 retinopathy of prematurity after retinal reattachment by open-sky vitrectomy*. Arch. Ophthalmol.111: 345. 1993" and "*Surgical advances in retinopathy of prematurity*. International Ophthalmol. Clinics, 39:275, 1999". With his expertise, he has given many teaching courses and served as Visiting Professor at Kansai Medical University, Osaka, Japan (1983), at Tokyo Women's Medical College (1988) and at Sankara Nethralaya, Madras, India (1995). He is a recipient of Honor Award of American Academy of Ophthalmology (1983), Senior Honor Award of the Academy (1994), The best Doctors in America (1996-1997) and Paul Kayser International Award of Merit in Retina Research (1999). He is on the Executive Committee of the Harvard Department of Ophthalmology and on the Promotion Committee of the Schepens Eye Research Institute since 1993. (Schepens Eye Research Institute, Harvard Medical School.

Kyoemon Hirota

Toshio Hirota

Julius Hirschberg

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Hirota, Kyoemon (1860-1923) Japanese Ophthalmologist, graduated from the Medical School of Tokyo University, studied Ophthalmology under J. SCIBA, K. UME and T.→SUDA. He was the *first* Japanese Ophthalmologist who used cocaine as a surface anesthetic in 1885, shortly after the report of Carl→Koller in 1884. He studied in 1900 at the University of Halle under von→Hippel, received the degree Doktor Medicine, and returned home in 1902. He practiced In Tokyo and taught Ophthalmology at Jikei Medical College, as the Clinical Professor until retirement in 1922. (SM)

Hirota, Toshio (1891-1972) Son of Kyoemon. He graduated from Tokyo University in 1919 and studied Ophthalmology under Prof. J. KOMOTO. He worked as the Head of the Eye Clinic of Yokohama Juzen Hospital (now Yokohama City University Hospital) from 1923 to 1925, and then was appointed the Prof. of Ophthalmology at Nihon University, the position he held until 1938. He then practiced in Tokyo at the Clinic that his father founded. (SM)

Hirsch, August (1817-1894) German hygienist and famous medical historian. Born at Danzig, he studied at Leipzig and Berlin, at the latter institution receiving his medical degree in 1843. His dissertation was "*De Laryngostasi Exsudativa Vulgo Croup Vocata*." He settled for a time at Elbing, later moving to Danzig. Here he wrote *"Ueber die Geographische Verbreitung von Malaria Fieber und Lungenschwindsucht and den Räumlichen Antagonismus dieser Krankheiten"* (1848), as well as a number of other articles. In 1863 he became professor of Medicine at Berlin, to which city he then removed. In 1873 Pettenkckfer and he secured the appointment by the Government of the "Cholera Commission for the German Empire." He himself, as a member of this commission, investigated the cholera in West Prussia and Posen. The result of this investigation was *"Das Auftreten uncl der Verlauf der Cholera in den preussischen Provinzen Posen und Preussen, May-Sept., 1873*" (Berlin, 1874; 2d ed., 1875). In 1874 he attended the International Cholera-Conference at Vienna, as a delegate from the German government. In 1879 he investigated the pestilence in Russia, and wrote upon this subject *"Mittheilungen über die Pest-Epidemie im Winter 1878-79 in dem russischen Provinz, Astrachan"* (Berlin 1880). One of the most important of all his writings was the *"Handbuch der Historisch-Geographischen Pathologie"* (2 vols., Erlangen, 1859 to 64; 2d ed. 1881 to '86; English trans. by the New Sydenham Society, 1883). His most important ophthalmologic writing was the well known *"Geschichte der Augenheilkunde"* (Leipsic, 1877)**,** which formed the seventh volume of the first edition of the Graefe-Saemisch *Handbuch der Gesamten Augenheilkunde*. This monumental work was of vast importance in its day, but has now been wholly superseded by the voluminous *"Geschichte der Augenheilkunde" by H*irschberg (presently in English translation[in progress] by Frederick C.→Blodi and Donald L.→Blanchard) completed by a supplementary series "*The Monographs*" edited by J.-P.Wayenborgh (in progress). Of almost equal importance, however, in the history of ophthalmology, are the *"Geschichte d. Medicinische Wissenschaft in Deutschland*" (Munich and Leipzig, 1893) and the *"Biographisches Lexikon der Hervorragenden Aerzte Aller Zeiten und Völker*" (6 vols.) Vienna and Leipsig, 1884-1888, of which he was chief editor.A two-volumes supplement was edited in 1962 by I.Fischer (Vienna). American Encyclopedia of Ophthalmology, Vol.8,p.5943-5944.JPW

Hirschberg, Julius (1843-1925) German ophthalmologist and historian. Hirschberg was born in Potsdam and received his M.D. in 1866 at Berlin, where he became assistant to von Graefe. Hirschberg established his own clinic in 1869, and from 1870 lectured at the University of Berlin, becoming professor in 1879. He wrote a vast history of ophthalmology (1899-1918); founded and edited the *Centralblatt für Augenheilkunde* (Vols.1-43, 1877-1919). He was particularly interested in the ophthalmic effects of syphilis and devised a magnet for the extraction of foreign bodies (*Über die Magnet-Extraction* etc.Berliner klin.Wochenschr.1883,209-213). He authored: *Der Markschwamm der Netzhaut* Berlin 1869; *Beiträge zur praktischen Augenheilkunde* Leipzig 1877; *Der Electromagnet in der Augenheilkunde* Leipzig 1885; *Eine Woche in Tunis; Tagebuchblätter*. Leipzig 1885; *Wörterbuch der Augenheilkunde* Leipzig 1887. *Aegypten: Geschichtliche Studien eines Augenarztes* Leipzig 1890; *Einführung in die Augenheilkunde* (2 vols.)


WÖRTERBUCH

DER

AUGENHEILKUNDE.

Von

Prof. Dr. J. HIRSCHBERG.

Leipzig 1892-1910. *Fünfundzwanzigjähriger Bericht über die Augenheilanstalt*. Berlin 1895; *Hilfswörterbuch zum Aristophanes* Leipzig 1898. *Die Augenheilkunde des Aetius aus Amida* Leipzig 1899.(English translation by Richey L.Waugh, Jr. *The ophthalmology of Aetius of Amida* Oostende Wayenborgh 2000) ; *Die Magnet-Operation in der Augenheilkunde* Leipzig 1899; *Geschichte der Augenheilkunde*. Leipzig & Berlin 1899-1918. 25 parts and index. Forms the last part of the second edition of the Graefe-Saemisch *Handbuch der Gesammten Augenheilkunde*. Translation by Frederick C.Blodi: *The History of ophthalmology* (21 vols.) Bonn-Oostende 1982ff. Hirschberg´s huge library was sold by Hirschberg himself to Professor →Komoto in Tokyo. Albert.Fischer.BMC.JPW

Hirschler, Ignacz (1823-1891) Hungarian Ophthalmologist. Ignacz Hirschler was born in Stomfa. He studied in Pest, and completed his medical education in Vienna. He graduated in 1846 with the Diploma of the Medical Faculty of Vienna and began clinical work in the Municipal Hospital of Vienna under Dr. Rosas. A year later (1847-1848) we find him in Paris as Assistant of Professor Desmarres until his return to Hungary in 1849. In Pest he began ophthalmic practice.Hirschler was a clinician with keen diagnostical ability and a meticulous and talented eye surgeon. From 1859 he worked as Ophthalmologist in the Hospital for Poor Children. Rivalry hindered him from obtaining a University appointment, for which he had ambitions and had the ability of doing it with recognition. From a Hungarian point of view, his chief merit to be acknowledged is the founding of the Journal 'Szemeszet' ('Ophthalmology'), in 1864, which first appeared as a supplement of the 'Medical Weekly' but from 1904 it became an independent Journal. In the sixties Hirschler not only did the Editor's work but wrote all the articles. It was only after 1870 that a group of young trained ophthalmologists also contributed. His book, the '*Autobiographisches Fragment*' appeared in 1859, an excellent survey on the medical conditions of the West-European countries, with lively descriptions of the work in progress in the University Hospitals of Rosas and Desmarres. Dr. Hirschler made many study trips. He visited hospitals for eye diseases in Prague, Berlin, Paris and London. He was most impressed by the Moorfields Eye Hospital, London, and felt that, as far as medical teaching and treatment were concerned, it was the best in Europe. From the eighties he gradually retired from medical practice, partly because of the diminution of his vision (→Schulek performed a successful cataract operation in 1882) and partly because his public activities were claiming more and more of his time. He was chairman of the Medical Society of Hungary and a member of the Upper House of Parliament.[Magda Radnòt: *Famous Hungarian Ophthalmologists* Budapest 1970] American Encyclopedia of Ophthalmology,Vol.8,p.5944

Hirtenstein, Arnost (1909-1986) Czech ophthalmologist. Arnost Hirtenstein was born in Slovakia in 1909 and qualified MD in Prague in 1934. After military service during which he developed an interest in ophthalmology he entered general practice in a small town in Northern Bohemia but after three years, in 1939, he was arrested by the Gestapo and forced to leave the country. He reached France and on the outbreak of war joined the Czechoslovak forces. On the collapse of France he was evacuated to England and trained in ophthalmology at Oxford and Wolverhampton. In 1943 he joined the RAF as a graded ophthalmologist. After the war he returned to Czechoslovakia to find that his parents and elder brother had died in concentration camps and his youngest brother had been killed while a partisan. He returned to England in 1946 and became senior registrar and chief assistant at Moorfields and consultant to Selly Oak Hospital, where he set up an eye department. Two years later he was appointed to Wolverhampton Eye Infirmary, where he stayed until his retirement in 1974. From 1950 he developed an interest in corneal grafting. He pioneered this procedure in the Midlands and lectured in the United Kingdom and abroad. He had a large series of successful cases and was an excellent teacher and diagnostician. He earned following titles: MRCS and FRCS 1950; MD Prague 1934; DO Oxford 1943; DOMS 1944. Brit. med. J. 1986, 292:905. LFRCSE

His, Wilhelm (1831-1904) Swiss anatomist of Basel, investigator of histogenesis. His received his training in physiology under Müller, Remak, Virchow, and Kölliker. Having

earned his M.D. (1854) at Basel, he became professor of anatomy and physiology there (1857-1872) and later at Leipzig (18721904). Of his many achievements in histology, the greatest are his embryologic studies tracing the origin of tissues. His invented a microtome allowing him to produce serial sections from the same embryo, with which he presented graphic reconstructions of embryonic development in two and three dimensions. (see *Beschreibung eines Mikrotoms* in *Arch f.mikr Anatomie* 1870, 6: 229-232). He wrote:*Beiträge zur normalen und pathologischen Histologie der Cornea* Basel 1856; *Die anatomische Nomenclatur* Leipzig 1895; *Die Häute und Höhlen des Körpers* Basel 1865; *Anatomie menschlicher Embryonen* (3 parts) Leipzig 1880-1885.Albert.BMC

Hiwatari, Shogo (1916-) Japanese Ophthalmologist, Professor Emeritus of National Defense Medical College. He was born as a son of a scholarly Ophthalmologist in Kagoshima, and he graduated from Tokyo University in 1943. He was drafted to the Navy during the World War II and after its termination, he returned to the University and studied Ophthalmology under Prof.→SHOJI Yoshiharu. He submitted thesis to Tokyo University and received his Doctor of Medical Sciences in 1950 (thesis: *Studies of retinal arteries of the aged*. No.1. Jpn. J. Clin. Ophthalmol. 6: 466, 1952; No.2, ibid. 7: 238, No.3, ibid. 7: 267; 384, No.4, ibid. 7: 305, No.5 ibid. 7: 318, No.6 ibid. 7: 499, No. 7 ibid. 7: 499, No.8 ibid.7: 566, 1952, No. 9: J. Jpn. Ophthalmol. Soc. 57: 479, 1953). He served as the Professor and Chairman of the Department of Ophthalmology of Nippon Medical College (1960-1970), and then worked as the Professor of Ophthalmology at University of Teheran, Iran (1971-1976). He came home to be the Professor and Chairman of the Department of Ophthalmology, National Defense Medical College in 1977 and worked until retirement in 1982. He served as a member of many key committees of the College and in professional Societies: they are Councillor of the Japanese Ophthalmological Society (JOS)(1963-1968), of Japanese Diabetes Society (1958-1999), of the Japanese Society of Gerontology (1959-1999), Japanese Society of Vascular Organs (1962-1999), Executive Director of the Japanese Society of Cancer Therapy (1966-1973) and its Councillor (1977-1981). He is named the Prominent member of Iranian Ophthalmological Society and was also a member of Italian, Finnish and Portuguese Ophthalmological Societies. He published 139 original papers, delivered 75 lectures at Overseas Congresses, 15 special lectures at National Congresses. His research interest has been mainly in aging problems of the ocular vascular system: some examples of his papers are "*Investigations on the retinal blood vessels and blood pressure in the aged Japanese and their prognosis.* XVII Concilium Acta, Vol. 1:469, 1959", "*Intravitreal Urokinase in the treatment of vitreous hemorrhage*, Ber. Deutsch Ophthalmol. Ges. 78: 917, 1981", "*An electron microscopic study of the human iris vessels, with special reference to the vascular changes on aging*. Jpn. J. Ophthalmol.13: 79, 1969" and "*An electron microscopic study of the conjunctival vessels. Analysis of the vascular pathology with PAM impregnation technique*".

Hjort, Johan Storm Aubert (1835-1905) Norwegian surgeon, who devoted much attention to ophthalmology. Born at Christiania (now Oslo-JPW), Norway, the son of Jens Johan Hjort, a prominent general surgeon, he received his medical degree at Christiania. In 1864 he accompanied the Danish army on a military expedition and spent the year 1865 in travel. In 1873 he was made Professor of Medicine at the University of Christiania and Chief physician to the Surgical Division of the Royal Hospital. He wrote a large number of journal articles on ophthalmologic subjects: keratitis, glaucoma, the visual purple, coloboma of the iris, etc. American Encyclopedia of Ophthalmology,Vol.8,p.5968

Ho, Chi-Kin (1953-) Chinese Ophthalmologist, Chief of Service, Department of Ophthalmology, Tuen Mun Hospital, Adjunct Assistant Professor, Chinese University of Hong Kong. He graduated from the University of Hong Kong in 1978 and studied further in Ireland (Diploma of Ophthalmology, 1985), Edinburgh (FRCS, 1987), FRCOphth. (UK, 1989) and FHKAM (Ophth. 1993). He has held many professional positions, e.g. President, Hong Kong Ophthalmological Society (1993-1999), Councillor and Medical Advisor of Hong Kong Society for the Blind (1996-), Supplementary Medical Professions Council (1997-) and he served as the Hong Kong Representative to the International Council of Ophthalmology (1993-1999). His publications embrace "*Eccentric photorefraction; a new method for refractive error in very young children*. HKJ. Paediatr. 12: 68, 1995" and "*Current trends in paediatric Ophthalmology in Hong Kong, the First*

35 years, Hong Kong Paediatric Society, 1997". He is the author of "*The Past and the Present of Ophthalmology in Hong Kong*, in: Ed. Lim, A.S.M. et al *Ophthalmology Awakens in Asia – 40 years of the Asia-Pacific Academy of Ophthalmology*, Singapore Eye Centre 1999". (Tuen Mun Hospital, Tsing Chung Koon Road, Tuen Mun, New Territories, Hong Kong, China. phone +852-2468-5400, fax: +852-2403-1491, e-mail: ckho@ha.org.hk)

Hobbs, Henry Edwin (1910-1990) British ophthalmologist. After qualification in l938, he did house jobs, then took the FRCS in 1941, proceeding to the DOMS and the Oxford DO in 1942, and entered the Royal Air Force as an ophthalmic specialist with the rank of squadron leader. He was particularly to the fore in advances in glaucoma. Glaucoma work inevitably involved study of visual field anomalies which served him well in his subsequent appointment to the Maida Vale Branch of the National Hospital, where he developed a useful device for fixation of an eye with a central scotoma during →Bjerrum screen examination, He was registrar and chief assistant at the Holborn Branch of Moorfields. Apart from his early glaucoma work he will be remembered for the original observation of chloroquine retinopathy documented and jointly written with Sorsby and Freedman and published in the Lancet in 1959. He was concerned for leprosy sufferers: he was honorary consultant ophthalmic surgeon to the Hospital and Homes of St Giles, East Hanningfield. Leprosy work was regarded as particularly important to the Hospital of St. John of Jerusalem. In recognition of this and other Christian acts he was appointed first an officer and subsequently, in 1970, a commander of the order of St. John. Hobbs authored *Principles of Ophthalmology*, published in 1965. BJO 1991,75:321 Brit med J. 1991,302:405.JPW

Hock, Jakob (1831-1890) Austrian ophthalmologist of Vienna. Born at Prague, he received his medical degree at Vienna in 1861, and then, for a time, pursued the study of ophthalmology under Ed.→Jaeger. In 1866 he settled in Vienna for the practice of ophthalmology, and was almost immediately successful. In 1879 he qualified as privat docent at the University, and seven years later established a private eye infirmary. He was also ophthalmic surgeon at the Rothschild Hospital and at the Blinden Institut auf der Hohen Warte. Among his more important writings are: 1. *Ueber Scheinbare Myopie* (Vienna, 1872). 2. *Ueber Syphilitische Augenkrankenheiten* (Vienna, 1876). 3. *Ueber die Function der Längsfasern des Ciliarmuskel* (Vienna, **1878).** 4. *Propaedeutik zum Studium der Augenheilkunde* (Vienna, 1887) American Encyclopedia of Ophthalmology, Vol.8, p.5968-5969.

Hocken, Edward Octavius (?-?) An ophthalmologist of Exeter, England, whose life dates are unknown. A pupil of Barnes and de la Garde, he was surgeon to the West of England Eye Infirmary from 1836 to 1839. His writings are as follows: 1. *A treatise on Amaurosis.* (London, 1840.) 2. *Injuries of the Eye*. (Lancet, XXXVIII,, p. 282, 1840.) 3. *Classification of Ulcers of the Cornea*. (Lancet, XXXVIII, p. 934, 1840.) 4. *Amaurosis from Hysteria*. *(Edin. Med. Jour.,* 1842, pp. 49-69.) 5. *Hyperaemial Amaurosis.* (*Edin. Med. Jour.,* 1842, pp. 324355.) 6. *Essays on Diseases of the Eye.* (Lancet, XLV, 678, 721, 1847.) American Encyclopedia of Ophthalmology,Vol.8,p.5968.Albert.BMC

Hodgson, Joseph (1788-1869) English surgeon of Birmingham, England, who devoted considerable attention to diseases of the eye. Born of indigent parents at Penrith, Cumberland, in 1788, he proceeded to London at a very early age, and there began to study medicine at St. Bartholomew's. Pagel relates that, on a very eventful evening, Hodgson lost at cards twenty pounds out of a hundred which had been presented to him by an uncle. Seeing the error of his ways, he afterwards became a most diligent student and highly moral man. In 1811 he won the Jacksonian prize for his "*Essay on Diseases of the Arteries and Veins*," which was in 1815 published in London in book form. Later, it was published at Hanover in Germany (1817), at Paris in French (1819), and at Milan in Italian (1823). At first Hodgson practised in Chelsea, then at Cheapside. In 1818, however, he settled in his native city, as surgeon to the Birmingham General Hospital and the Birmingham Eye Infirmary. In the former institution he was active for thirty years, in the latter for a short time only. He seems to have written nothing on the eye, although he devoted much attention to ophthalmic diseases in his practice. Because of failing health, including the blindness of one eye, Hodgson retired in 1848 from active work of every

kind, and moved to London, where he lived in retirement. He never ceased, however, to take an interest in the progress of ophthalmology.American Encyclopedia of Ophthalmology,Vol.8,p.5969

Hoeve, J. van der (1878-1952) Dutch ophthalmologist. Van der Hoeve was one of the leading figures in ophthalmology during the first 50 years of the 20th century. He graduated at Leyden University in 1900 when he became assistant to Professor Koster. In 1913 he was appointed Professor of Ophthalmology at the University of Groningen, and in 1918 he assumed the Chair of his old school in Leyden where the greater part of his life's work was done. His original contributions to ophthalmology during his long professional life were immense and continuous, and were recognized not only in his own country but throughout Europe. In Great Britain he held an honorary degree of the University of Edinburgh and was a recipient of the Sir William Mackenzie Medal for ophthalmic research. His Bowman Lecture in 1932 on *Ocular Movements*, a subject on which he wrote his doctorate thesis in 1902, will always remain classical. The breadth of his clinical interests and his unique ability to co-ordinate scattered observations were demonstrated by the fact that in the same year, in delivering the Doyne Memorial Lecture, he introduced the conception of "*phakomatosis* ", thereby integrating a number of syndromes characterized by their congenital origin, their hereditary incidence, and their widespread symptomatology in various parts of the body. His erudition outside the confines of his specialty was recognized by his being elected President of the Physical Section of the Royal Dutch Academy of Science in 1932. Van der Hoeve was probably known best for his influence in the international aspects of ophthalmology. A traveller to many lands and a welcome visitor in each, he was mainly responsible for the re-establishment of international relationships in ophthalmology after the disruption of the first World War, so that it was natural that in 1929 the first post-war International Congress should have been held in Holland under his chairmanship. At that time he was in the prime of his life and with his facility in languages, his genial courtesy, his unusual erudition, and his organizing ability, he stood out among his contemporaries as the universally acclaimed leader of his profession. Since that time his activity in international affairs and his immense capacity for making and maintaining friendships, as well as his professional excellence, progressively endeared him to a multitude of friends throughout the world, and these qualities were reflected in his being received into the honorary membership of some twenty national societies. In his later years, when physical frailties curbed his activities, he lost none of his endearing qualities. BJO 1952,36:399-400

Hofmann, Moritz (1622-1698) German anatomist, surgeon and botanist chiefly remembered as the discoverer of the pancreatic duet, and of some (slight) ophthalmologic importance, because of his "*Diss. de Lacrymis*" (Altdorf, 1662). Born in Mark, Brandenburg, he studied at Altdorf, Padua, and again at Altdorf, where, in 1645, he received the degree of Doctor in Medicine. Settling in Altdorf, he there became, in 1648, Professor Extraordinary for Anatomy and Surgery and, in the following year, Full Professor of Medicine. In 1653 he was given also the chair of Botany. American Encyclopedia of Ophthalmology,Vol.8,p.5969-5960.

Hogan, Michael John (1907-1976) American ophthalmologist, professor of ophthalmology emeritus at the University of California, San Francisco. Born in Kemmerer, Wyoming, Michael Hogan spent most of his early life in Wyoming and Utah. He received his bachelor's degree from the University of Utah in 1930 and his medical degree from Cornell University in 1932. Following an internship in Patterson, New Jersey, and a general surgery residency at Bellevue Hospital, New York City, Hogan entered the practice of general surgery in San Diego in 1935. Three years later he closed his practice and began an ophthalmic residency at the University of California under the late Professor Frederick C.→Cordes whose guidance and encouragement in the field of academic ophthalmology were to be important factors in Hogan's later life. Following his residency, Michael Hogan took additional fellowship training at the Illinois Eye and Ear Infirmary in Chicago and at Columbia University's Institute of Ophthalmology in New York City. Returning to the University of California, San Francisco, in 1941 as a clinical instructor of ophthalmology, Hogan began what was to become one of the most significant ophthalmic careers in American history. His interest in pathology put him on the pathway to important discoveries in the fields of uveitis and ocular oncology. Particularly significant are his

contributions to studies of ocular toxoplasmosis, chronic cyclitis, and uveitis associated with inflammatory joint diseases. His interest in anatomy led him to pioneering studies on the ultrastructure of the eye in both health and disease. His book, "*Histology of the Human Eye*," has now become one of the classics in ophthalmology. It is, however, no less important than his earlier textbooks, "*Ocular Pathology*," which had three editions, and Ocular Toxoplasmosis (1951). Of the many positions that he held, his directorship of the Francis I. Proctor Foundation for Research in Ophthalmology from 1951 to 1959 and his chairmanship of the Department of Ophthalmology at the University of California from 1959 to 1975 are probably the most significant. He served on the editorial boards of *American Journal of Ophthalmology*, *Archives of Ophthalmology*, and *Investigative Ophthalmology*. He contributed greatly to the activities of the American Ophthalmological Society, the Association for Research in Ophthalmology, and the Association of University Professors of Ophthalmology, on whose Board of Trustees he served as chairman in 1970. He was a member of Verhoeff Society (formerly the Ophthalmic Pathology Club) and a trustee of both the →Heed Foundation and the Ophthalmic Publishing Company. AJO 1977,83:133-135

Hogg, Jabez (1817-1899) British ophthalmologist of London, England. He studied at Charing-Cross Hospital, London, and became a member (M.R.C.S.) of the Royal College of Surgeons of England in 1850. He was, for a long time, Consulting Surgeon to the Royal Westminster Ophthalmic Hospital, Surgeon to the Bloomsbury Eye Hospital, and to the Royal Masonic Institution. His chief ophthalmologic writings are: 1. *The Ophthalmoscope; its mode of application explained* London 1858, 2nd edition 1859 (The *first* monograph on ophthalmoscopy inEnglish language). 2. *A Manual of Ophthalmoscopic Surgery* London 1863. 3. *A Parasitic or Germ Theory of Disease: the Skin, the Eye, and Other Affections* (1876). 4. *Cure of Cataract and Other Eye Affections* (1878, 3rd edition 1882).5.*Cataract and its treatment* etc. London 1869.6.*Impairment, or loss of vision from spinal concussion, or shock* London 1876.7.*The microscope, its history, construction, and applications* London 1854, 6th edition 1867, new edition 1883.8. *A practical manual of photography*, 5th edition was 1856.9.*Skin diseases, an inquiry into their parasitic origin, and connection with eye affections*, etc London 1873, 2nd edition under altered title in 1876 (Nr.3).American Encyclopedia of Ophthalmology,Vol.8,p.5970. Albert.BMC

Hoin, Jean Jacques Louis (1720-1772) French surgeon of considerable importance in ophthalmology. Born at Dijon, he became surgical externe at the Dijon Grande Hopital and a Fellow of the Dijon Academy. He contributed much to our knowledge of after-cataract, of the structure of the crystalline lens, and of cataractine pathology. His chief ophthalmologic writings are: 1. *Lettres Concernant quelques Observations sur Diverses Espèces de Cataractes*. (*Mercure de France,* August, 1759.) 2. *Seconde Lettre A M. Daviel sur la Cataracte Radiée, la Convexité du Chaton du Crystallin, etc.* (Ibid. March, 1760.) 3. *Essai Historique sur les Différentes Opinions Concernant la Nature de la Cataracte. (Ibid,.* Dec., 1764.) 4. *Observ. sur l'Extirpation de l´oeil*. (Mem. *de l´Acad,. Royale de Chir.,* T. III) American Encyclopedia of Ophthalmology, Vol.8, p.5971

Holden, Brien Anthony (1942-) Australian Optometrist, Professor of Optometry at the University of New South Wales, founder and Director of the Cornea and Contact Lens Research Unit (CCLRU) at the School of Optometry, University of New South Wales, and Director of the Cooperative Research Centre for Eye Research and Technology (CRCERT). He graduated Bachelor of Applied Science from the University of Melbourne in 1964 and gained his PhD from CityUniversity (London) in 1971. He was awarded the Honorary Degree of Doctor of Science, honoris causa by the State University of New York in 1994, and a further Honorary Degree of Doctor of Science in 1999 by the Pennsylvania College of Optometry for his outstanding contributions to science and education. He was appointed Lecturer in the School of Optometry, University of New South Wales in 1971, and promoted to Senior Lecturer in 1975, Associate Professor in 1985 and Professor in 1990. In 1976 he founded the Cornea and Contact Lens Research Unit which has developed into the world's largest contact lens research centre. He was instrumental in the conception of the Cooperative Research Centre for Eye Research and Technology, and in 1991 was appointed foundation Director of CRCERT. He has held numerous academic, professional and university appointments. He was a co-founder of the International

Association of Contact Lens Educators (IACLE) in 1979, Vice-Chairman in 1979-1991 and President from 1991-1999. He was the Founding President-elect at the establishment of the International Society for Contact Lens Research (ISCLR). He served as President of the Society in 1982-1984 and continues as an Executive Member. He is a co-founder and Member of he Management Committee of the International Centre for Eyecare Education (ICEE). He is Founder of the Optometric Vision Research Foundation, being President from 1973-1982 and Founding Director of the Institute of Eye Research, Foundation Chairman of the International Centre for Eye Care Education and Chairman of the Board of Management of Vision Care NSW. He is a member of the Editorial Board of a number of scientific publications including Cornea and Ophthalmic and Physiological Optics. He is active in international education and research. His research has been in the area of ocular health with contact lenses and other forms of vision correction. His research showed that long term hypoxia caused by contact lenses resulted in corneal damage, and set the benchmark for the oxygen permeability of lenses to maintain ocular health. He is the author of over 150 refereed papers, including: Holden BA, Mertz GW, McNally JJ, *Corneal swelling response to contact lenses worn under extended wear conditions*, Invest Ophthalmol Vis Sci 24: 218-226, 1983; and Holden BA, Mertz GW, *Critical oxygen levels to avoid corneal edema for daily and extended wear contact lenses*, Invest Ophthalmol Vis Sci 25: 1161-1167, 1984. He has also made major contributions to international eyecare education through IACLE and ICEE. He has received two major Australian awards (the HB Collin Research Medal and the Kenneth W Bell Medal), and three prestigious international awards, (the Ruben Gold Medal, the Glenn A Fry Award, and the British Contact Lens Association Medal), for his outstanding contribution to optometric research and education. He received the Fulbright Senior Scholar Award in 1982 and was a Foundation Member of the Australian Fulbright Association. He received the Medal of the Order of Australia from the Australian Government for contributions to eyecare research and education in 1997. (SM)

Holland, Henri (Sir Henry) Tristram (1875-1965) British physician, one of the great medical missionaries of all time. It is said that more than 100,000 natives from India and Pakistan have had their sight saved or restored by means of his skill and devoted attention, during his long life. He had numerous American friends and admirers, many of whom have had the privilege of visiting and working in his eye hospital at Shikarpur, Sind, once India now Pakistan. Here, for a period of about six weeks in January and February since 1911, when the "hospital" was built by a wealthy Hindu banker, Seth Hiranand, for Sir Henry, ophthalmic and often other forms of surgery, were performed by him, his assistants and about 150 visiting ophthalmologists from many parts of the world. During the "season" more than 1,200 cataract operations were performed, often a hundred a day, sometimes even two hundred. Sir Henry derived from a long line of churchmen on both sides. He was born in his grandfather Tristram's house, in Durham, England. His grandfather was a residentiary canon of Durham. Sir Henry says in his autobiography *Frontier Doctor*, (Hodder and Stoughton, 1958) "*His dignified house in the quiet cathedral close came to have a very special flavour for me*." While still an infant, Sir Henry was taken to Riga in Lithuania, where his father was the English chaplain. When he was five his family returned to England and his father was appointed to the living of Cornhill-on-Tweed, Northumberland. His formal schooling began at the age of 11 years when he went to Durham school for one term. At the end of this time he entered his uncle's school, Loretto near Edinburgh. Here he said "the boys were trained in a Spartan régime." The windows could not be shut. "*Under each bed was what we called a 'sparrow' bath, a flat bath of cold water; each morning the boys had to sponge in that water, which in winter was icy cold*.". Sir Henry decided to become a doctor. (As he says, 'to avoid going into the Church.") He wanted to *serve God* whether in a profession or in business so he went up to Edinburgh University in 1894 to study medicine. His years here were happy and fruitful ones. His reminiscences of these days are delightful and often humorous. During his first year, however, and following a severe bout of influenza, he was advised to drop medical studies and take a long holiday. He went with his father to Nervi on the Riviera for six weeks. He was then surprised but delighted to be invited to accompany as his guest a rich Liverpool merchant, Mr. Stead, to America. His travels took him to New York, Charleston, South Carolina, Savannah, Gainesville and even to an Indian village called Hornosassa on the Gulf of Mexico, all places where Mr. Stead had business enterprises. On the way home

he was invited by Mr. Stead to become his American agent at a "staggering" salary. He turned this down to the chagrin of Mr. Stead, by saying "*I am sorry, but I am pledged to go abroad as a medical missionary.*" He returned to his medical studies and threw himself into all of the evangelistic and missionary activities of the University. He became secretary and later president of the Christian Union. In 1899, he was graduated from Edinburgh and, instead of taking a house appointment (internship) in the Edinburgh Royal Infirmary (a decision that he always regretted), he became the travelling secretary of the *Student Volunteer Mission*. More or less pledged, by his membership in the Church Missionary Society, to go abroad as a medical missionary, sooner or later. The call came sooner than he expected and in March, 1900, he abruptly was on his way to his station in Quetta on the northwest frontier of India. He was often asked if he had done much ophthalmic work or any form of surgery before going out to the East. "*I have to confess*," he says in his book, "*that I had no practical experience of any kind in any hospital! As a senior medical student I had hardly even pulled out a tooth or opened an abscess, for I could not bear doing anything which caused pain, and in those days most minor operations were still performed without an anesthetic. "I therefore arrived in Quetta with no practical knowledge beyond that which I had acquired through my obstetric cases.... In fact I had to teach myself to a large extent, though for some months Dr. Summerhayes was able to help me before he left for furlough. I spent two or three hours a day working along side him in the hospital, learning something of surgical practice and technique*." The C.N.I.S. hospital in Quetta had been organized by Dr. S. W. Sutton in 1885. Dr Sutton was an ophthalmologist, a Moorfields' man, and soon the mission hospital was lopsided with eye patients. Holland through his predecessor, Summerhayes, was quickly initiated into eye surgery, and learned to perform the extracapsular cataract extraction. Then very soon, he heard of the work of "*Jullundur*" Smith of the Inthan Medical Service. Holland visited Smith and quickly determined to do the Smith technique of intracapsular cataract surgery from then on. "*My meeting with him in 1908 coincided with my first term in full charge of the hospital*," he says. A year later Sir Henry was invited to meet with Seth Hiranand of Shikarpur at that place. This philanthropic Hindu banker had been paying the railway travel expenses of the poor eye patients of his area to Quetta and, because of the large number of these, had the idea of asking Holland to come to Shikarpur and work for a time there with all expenses paid.

Shikarpur, a bigoted, almost fanatic and mostly Hindu city, lies about 200 miles south of Quetta in the Sind Desert and is on an old and formerly great caravan road from Central Asia through Afghanistan. In summer it is the hottest place in all of old India, the temperature during May and June may reach to 126' F. in the shade but, during the winter months, it can be dry, windy, dusty and very cold, particularly at night. The Seth put his private house, just outside the gates of the city, at Sir Henry's disposal, On December 5, 1909, Sir Henry came to Shikarpur with two companions. In three weeks they saw about 4,000 patients and performed over 500 operations, of which 203 were cataract extractions. When the time came to return to Quetta, the Seth begged them to return every year in the future. Sir Henry, fed up with having to operate "*in an open veranda filled with dust, often thoroughly dirty people, stirring up the dust as they came, to the accompaniment of the buzzing of swarms of flies*," told Seth Hiranand that the place was not fit for eye surgery. If, however, the Seth would build a small hospital with two operating rooms, out-patient waiting-room, etc, Sir Henry would return. The Seth agreed to build the hospital and, to pay all expenses for a period of 10 years even under the condition that Sir Henry and his staff were "*free to make known the, Christian message, to sell gospels-to use the evangelistic methods of a mission hospital*." This was a difficult decision for the orthodox Hindu to agree to. It was a courageous act, for he knew that the citizens of Shikarpur would be hostile to this evangelism. He refused to be intimidated and went on to build the hospital, having told his people, that "*if you can find someone who will do what this doctor can do for our People, without preaching, show me the man. If you cannot, why should you prevent this good work from being done among our people?*" So in January, 1911, fearful of a boycott by the Hindu natives, which did not materialize, Sir Henry and his team arrived in Shikarpur, formally opened the new hospital, preached the gospel, admitted the first patient and in two months had performed 1,320 surgical operations of which 563 were for cataract. Some 10,000 people listened, more or less respectfully, to the Word and nearly 1,000 copies of the gospels were sold. From then on, the Shikarpur eye hospital has functioned during its winter season every year except for one year when an outbreak of

plague hit Shikarpur. With the outbreak of World War I, Holland acted as chief medical officer for Baluchistan with the rank of lieutenant colonel in the Indian Medical Service after having served as civil surgeon in Sibi and Hyderabad. These posts were not so far away from Quetta and Shikarpur as to keep Sir Henry from doing some of his own mission work at both places when on leave, and with government permission. When the war ended in 1918, Sir Henry and his family (except for Harry who was sent to boarding school in England) moved to Kashmir where they stayed for two happy years. In the Mission Hospital at Srinagar, Sir Henry worked alongside of Ernest and Arthur Neve who had "*built up the reputation of the hospital in a wonderful way*." Patients crowded into the hospital, coming from the entire Kashmir valley and beyond. In 1920, Sir Henry was called suddenly to operate on the Rajah of Shigar at his capital in Lesser Tibet. The trip was an arduous seven days journey on foot from Srinagar, through the "*Roof of the World*." Shigar "*lies in the shadow of K? the second highest mountain of all*." The description of this journey is a true medical saga and forms a most delightful chapter of wonderful adventure in Sir Henry's book. Both of the Rajah's eyes were operated upon at the same sitting, and everything went well. As was his custom, Sir Henry offered a prayer before the operations to which the Rajah assented, "*I am glad to say*," Holland modestly remarked, "*that thanks to the prayers offered, he had a very successful result*." One of the proudest accomplishments of Sir Henry was the establishment of a nurses training school, which began with great difficulty in getting recruits, both male and later female, because of religious differences. But these problems were in time surmounted and Sir Henry lived to see his dreams of numbers of trained nurses spread throughout all India and Pakistan. He received the Kaisar-i-Hind Silver Medal (1910), and the Gold Medal (1925) with a bar (1931): he was appointed a Companion of the Order of the Indian Empire in 1929 and a Knight Bachelor in 1936; finally in 1960 he (with his son, Dr. Ronald Holland) was awarded the Ramon Magsaysay Award in Manila, presented to those who have served their fellow men with distinction. Never was an award more merited. AJO 1966,61:806-814; BJO 1965,49:608

Holloway, Thomas B. (? –1936) American ophthalmologist of Philadelphia, Professor at the University of Pennsylvania. After an academic course Holloway entered medical studies at the University, receiving his degree in 1897. After serving an internship in the Philadelphia General Hospital he assisted in various departments of several other hospitals until 1902, when he became associated with the Ophthalmological division at the University Hospital, and from that time onward he devoted himself to that branch, working in company with Dr. →de Schweinitz, whose office-assistant he was for a number of years, and with whom he collaborated in several important papers and reports. He early sought opportunities to serve in important hospital positions, which included the Infirmary for Nervous Diseases, and the Wills Eye Hospital. From 1909 onward he contributed many papers and reports to the proceedings of the numerous societies and fellowships of which he was a member. On the retirement of Professor de Schweinitz in 1924, Holloway was elected to succeed him in the Medical School and served as Ophthalmologist to the University Hospital, which position he filled with distinction till his last illness. His membership included local, State, and National Medical Associations; the Ophthalmological Society of the United Kingdom and the Société Française d' Ophtalmologie. For a number of years he was occupied with the affairs of the American Ophthalmological Society: Secretary, Editor, member of Council, and, in 1932, President. His activities as an Ophthalmologist extended to the School for the Blind at Overbrook: the Society for the Conservation of Vision and that for the Prevention of Blindness; in the Councils of which his advice was sought and followed, as well as it was on the Committee for the International Congress held in Washington in 1922. BJO 1937,21:106-107

Hollows, Frederick Cossom (1929-1993) Australian ophthalmologist, born in Dunedin New Zealand. Hollows got training in New Zealand and in Wales under Archie Cochrane (a famous epidiologist and political radical). Professor Hollows became famous for his early engagement for the Aborigines (these being recognized by the white community as being of the human race only in the 1960s) and for his creation of the first *Aboriginal Medical Service*. With the support of his professional colleagues and of Aboriginal activists he undertook the *National Trachoma and Eye Health Programme* to address the eye-health problems of Aborigines. That programme visited over 900 Aboriginal

communities, examined over 100.000 people and treated tens of thousands of them over four years. The collected datas provided the basis for one of the largest most detailed and authoritative public-health studies ever done.He was promoted *Australian of the Year 1990.* He wrote, co-authored by Peter Corris, an auto-biography *Fred Hollows*, published in 1992. This book became a bestseller in Australia. NZ Med J. 1993, 106:168 ; Daily Telegraph 12 Nov 1993; MJA 1994, 160:7 ; JPW

Holmes, Christian Rastus (1857-1920) American ophthalmologist of Danish birth. Holmes was first mechanical draughtsman in Syracuse, N.Y. and later in Vincennes, IN., before studying medicine. He received his degree of M.D. at the Miami Medical College in 1886. He was first engaged in a general practice, but soon was employed as assistant by Dr.Joseph Aub. One year later Dr.Aub died, and Holmes took over the greater part of the practice of his former employer. Holmes was an excellent operator. He was ophthalmologist to the Cincinnati Hospital from 1888-99, Professor of Otology at the Miami Medical College from 1890-1904, Professor of Ophthalmology to the Laura Memorial Medical College and Presbyterian Hospital from 1892 until 1903, Professor of Otology in the College of Medicine of the University of Cincinnati from 1904 until 1920.AJO 3:307-309.

Holmes, Edward Lorenzo (1828-1900) A famous Chicago ophthalmologist. Born at Dedham, Mass., he received the degree of Bachelor of Arts from Harvard University in 1849. For a time he taught in the Latin School at Roxbury. In 1854 he received his medical degree at Harvard, and spent the following year as interne in the Massachusetts General Hospital, making a specially of ophthalmology and otology. For further study in these subjects he proceeded to Europe, where he remained for a year and a half. Returning to America, he settled in Chicago, where he was almost immediately successful. Hardly a medical movement occurred in the State of Illinois in which, up to the time of Dr. Holmes's death, he had not a guiding hand. In 1858 he founded the Illinois Eye and Ear Infirmary at Adams and Peoria streets. In 1884 he was one of the founders of the Presbyterian Hospital. He was a trustee of Lake Forest University, a director in the Central Free Dispensary, a life member of the Illinois State Medical Society, and an honorary member of the Ophthalmological and Otological Societies. In 1860 he was appointed lecturer on ophthalmology and otology in the Rush Medical College. In 1867 he received the full professorship, a position which he filled with distinguished ability until his resignation in 1898 (31 years). He was President of the school from 1890-98, for a time he was editor of the *Chicago Medical Journal.* His contributions to ophthalmology and otology, both in that publication and in others, are numerous and valuable. American Encyclopedia of Ophthalmology,Vol.8,p.5980

Holmes, Gordon (Sir Gordon) Morgan (1876-1965) Irish neurologist who qualified in medicine in Dublin. He started research in neurology with Ludwig Edinger of Frankfurt, and throughout a full and busy life maintained that habit with a brilliance that has greatly enriched both neurology and ophthalmology. His professional life was spent primarily at the National Hospital for Nervous Diseases, Queen Square, London, but he was on the medical staff of Moorfields Eye Hospital and was Secretary of the Ophthalmological Society, (1912-15) and later its President (1936- 8). During the years between the two world wars he was one of the greatest clinicians and teachers in the English-speaking world. He maybe said to have been the last of the great succession of neurologists at the National Hospital who, starting front Jackson and Ferrier, established English neurology, and ten of whom, including Holmes, became Fellows of the Royal Society. His research work, undertaken (as was most at that time) on his own resources and without financial support, included much of ophthalmological interest, particularly the effects of injuries to the visual pathways as observed during the First World War, and the role of the cerebral cortex in visual sensations.Brit.J.ophthal.1966,50:224

William Holmes

Holmes, William John (1911-1989) American Ophthalmologist of Hungarian origin. He immigrated to the United States in the 1920's and he received his MD degree from Ruch Medical Center, and completed his Residency training at the Presbyterian Cook County Hospital in Chicago. He conducted research during the World War II and completed his thesis "*Night Vision Tests, Clinical Applications*." He practiced Ophthalmology in Honolulu and served as a consultant for Tripler Army Hospital and for Hansen 's Disease

settlements in Hale Mahalu and Molokai. In 1958, he felt the need of an organization that united Ophthalmologists in the Asia-Pacific Region and founded together with Prof. G. deOcampo of Manila, the Asia-Pacific Academy of Ophthalmology in 1956 and served as the Secretary General until 1976. The Academy is now one of the major organizations of the International Federation of Ophthalmology, and serves for promotion of knowledge and skill of Ophthalmologists, for prevention of blindness and education of people. For his distinguished service, Dr. Holmes was granted the Jose Rizal Medal from the Academy in 1982. Holmes wrote: *Geographic Ophthalmology: Asia, Australia and Africa*, Springfield 1959. For the memory of his distinguished service, the Academy founded the HOLMES LECTURE to be delivered by an Ophthalmologist who conducted outstanding service for the prevention of blindness. (SM)

Holmgren, Alaric Frithiof (1831-1897) Swedish physiologist, of considerable importance in ophthalmology. He was born at Asen, Sweden and began the study of medicine at Upsala in 1850. His medical progress seems to have been considerably interrupted for, between 1850 and 1861, he became, successively, a teacher of the natural sciences at a school in Norrköping, a cholera physician, an assistant physician in a hydropathic institute at Söderköping, etc. In 1861 he received his medical degree at Upsala. He was at once appointed adjunct professor of theoretical and practical medicine in his alma mater. The next year, however, he received a commission to continue his education in experimental physiology in foreign countries, and, upon returning, to found a physiologic laboratory at Upsala. In accordance with this commission he studied from 1862-64 with →Brücke, →Ludwig, and →du Bois-Reymond. In 1864 he returned to Upsala and organized the physiologic laboratory above referred to the first of its kind in Sweden. In the same year he was appointed to the full professorship of physiology in Upsala University. In 1869 he studied for a time with →Helmholtz. Among his books, the following are of special ophthalmologic interest: 1. *Om färgblindheten i dess förhallande till jernvägstrafiken och sjöväsendet*. Upsala 1877. French edition:*De la cécité des couleurs dans ses rapports avec les chemins de fer et la marine* Stockholm 1877. German edition : *Die Farbenblindheit in ihren Beziehungen zu den Eisenbahnen und der Marine* (Leipsic, 1878), American edition *Colour-Blindness in its Relation to Accidents by Rail and Sea*, Washington 1877. 2. *Metod att Objectivera Effekten af Ljnsintryck pa Retina*. 3. *Om Retinaströmunen*. 4. *Om fdrgblindheit och den Young-Helmholtz'ske Färgteorien*. 5. *Om Förster's Perimeter och Färgsinnets Topografi.* The Holmgren test for color-blindness became known all over the world. Holmgren died Aug. 14, 1897, at Upsala, of heart disease. *See* H.Cohn *Die Arbeiten des Herrn Professor Holmgren über Farbenblindheit* 1879 and Charles Roberts *The detection of Colour-blindness and imperfect Eyesight by the methods of Prof. Holmgren* 1881. Holmgren also edited *Skandinavisches Archiv für Physiologie*. American Encyclopedia of Ophthalmology, Vol.8, p.5981-5982.BMC.Albert.JPW

Holth, Soren (1863-1937) Norwegian ophthalmologist. Holth passed his medical qualification in 1891, and his M.D. degree in 1896, after having practised as an ophthalmologist in Drammen for about four years. His thesis: " *Die indirecte Starrblindheit des normalen Sehorgans und die Bedeutung derselben bei Gesichtfeld-untersuchungen* " and his deductions were based on the material he had collected in Drammen. He then settled down in Oslo after having passed about one year abroad at different European eye clinics. In this town he had his practice till he retired in 1934. For a period of six years he was first assistant at the University eye clinic and acted as *locum tenens* for Professor Hjalmar Schiötz when he was absent. When Professor Schiötz resigned, his chair was offered to Holth but this, he declined for health reasons. Through many repeated visits to foreign clinics Holth continued -even to his last years-at his studies. He also was invited to other Universities and clinics to demonstrate his own new methods of operating or to read papers about them. In this manner he went to Oxford, Helsingfors, Stockholm and, as late as 1932, to Budapest. His power of work was phenomenal. More than 110 of his scientific publications cover all branches of ophthalmology but his chief interest was his study of glaucoma. Here he has, in his iridencleisis operation, left himself a *monumentum aere Perennius*. As a curiosity of his immense operative practice may be cited the fact that, as far as is known, he was the only ophthalmological surgeon who had ever -with good result- performed a reclination operation for cataract on a living lioness. BJO 1937, 21: 669-670. AJO 21:79

Holthouse, Carsten (1810-1890) British London surgeon of considerable importance in ophthalmology, father of Edwin H. →Holthouse. Born in London, he studied first under a Yorkshire surgeon, then at St. Bartholomew's Hospital, and, in 1834, in Paris. In 1836 he settled as surgeon in London, where he resided and practised until his death. From 1840 till 1870 he was Instructor in Anatomy, Physiology, and Surgery at the Aldersgate Medical School and at the Medical School of Westminster Hospital. Holthouse's ophthalmologic writings are as follows: 1. *Six Lectures on the Pathology of Strabismus, and its Treatment by Operation, etc.* (London, 1854.) 2. *On Squinting, Paralytic Affections of the Eye and Certain Forms of Impaired Vision*. (London, 1858.) American Encyclopedia of Ophthalmology, Vol.8, p.5983

Holthouse, Edwin Hermus (1855-1949) British ophthalmologist. Born at Smyrna on 18 November 1855, the second son of Carsten Holthouse, F.R.C.S., and Agnes Cowcher Kent his wife. Carsten Holthouse was serving in the Civil Hospital there during the Crimean War; he was then assistant surgeon, and afterwards surgeon and consulting surgeon to the Westminster Hospital. He was educated at Westminster School and Trinity College, Cam. bridge, of which he was an exhibitioner, and took second class honours in the Natural Sciences Tripos 1878. He received his medical training at King's College Hospital, served as house surgeon there, and was clinical assistant at Moorfields. He qualified in 1881, and took the Fellowship in 1884 on the same day as John Bland Sutton, William Job Collins and R. Lawford Knaggs. He was surgeon to the St Pancras and Northern Dispensary, and later to the Western Ophthalmic Hospital, to which he was elected consulting surgeon on his retirement. Holthouse wrote *Convergent strabismus and its treatment, an essay*. London, 1897. After retiring he became an authority on medieval history. One of his published papers was *The Emperor Henry II, 1002-1024 A.D.* Cambridge Medieval History, 1922, 3, 215-252: Chapter 10.He earned following titles: M.R.C.S. 21 January 1881; F.R.C.S. 12 June 1884; B.A. Cambridge 1878; M.A. 1882; M.B. 1883. The Times, 5 January 1949

Homans, John (1836-1902) American general practitioner of Boston, Mass., who paid considerable attention to ophthalmology. Born in Boston he received the degree of Bachelor of Arts at Harvard University in 1858, and his medical degree from the same institution in 1862. Serving for a time in the Civil War as assistant surgeon, he settled for practice in Boston and was very successful. He devoted much attention to ophthalmology, but at no time wholly relinquished general practice. He was president of the Massachusetts Eye and Ear Infirmary, and a member of numerous medical societies, both general and special.American Encyclopedia of Ophthalmology,Vol.8,p.5985

Home, Everard (1756-1832) British anatomist and surgeon, born at Hull, England. Home studied under John Hunter at St. George's Hospital, London, succeeding there Hunter as lecturer on anatomy from 1792 to 1827. From 1827 until his death he was surgeon to Chelsea Hospital. He wrote: *The Croonian Ucture on the adjustment of the eye to see objects at different distances*. London 1796, *An account of the orifice in the retina of the human eye, discovered by Professor Soemmerring* London 1798.

Honda, Yoshihito (1939-) Japanese ophthalmologist, Professor and Chairman of the Department of Ophthalmology and Visual Sciences of Kyoto University, Graduate School of Medicine. He graduated from Kyoto University in 1965, studied ophthalmology in the Graduate School of Medicine of the University under Prof.→KISHIMOTO Masao and completed its course in 1973. He submitted his thesis that year to Kyoto University (*Studies on the electrical activity of the mammalian retina and optic nerve in vitro I. Factors affecting activity of the retina*. J. Jpn. Ophthalmol. Soc. 73: 1865, 1969; II: *The mode and site of action of iodoacetic acid upon the in vitro preparation of rabbit's retina*. ibid. 74: 302, 1970; III: *The effects of acetylcholine upon the ERG of rabbit's retinas in vitro*. ibid. 75: 1164, 1971), and he received his Doctor of Medical Sciences. For the excellence of these research works, he received the Shimizu Prize from the Japanese Ophthalmological Society (JOS) in 1970?He extended his research as a Research Associate and then as an Assistant Professor at Washington University, St. Louis, MO, U. S. A. during 1971-1973, and he published "*The effects of diphenylhydantoin on the electroretinogram of rabbits*. Invest. Ophthalmol. Vis. Sci. 12: 567, 1973". On homecoming, he was promoted to the Lecturer (1974), and then he was promoted to the

Professor and the present position in 1985. He serves also as the Professor of the Graduate School of Medicine since 1995 and the Director of the University Hospital since 1997. He has served the Japanese Ophthalmological Society (JOS) as a Councillor (1985-), Chief-Editor of the JOS Journal (1987-1989), Board of Directors (1987-1999) and the President of the JOS (1999- present). He also serves as Director of Vitreoretinal Society of Japan (1985-), Executive Directors of Japanese Society of Neuro-ophthalmology (1985-), Japanese Society of Ophthalmic Surgeons (1985-), Japanese Society of Clinical Electrophysiology of Vision (1987-), Japanese Society of Ocular Pharmacology (1987-). For International Organizations, he is the Vice-President of the International Society for Eye Research (ISER) (1996-), and a member of the Association for Research in Vision and Ophthalmology, International Society for Clinical Electrophysiology of Vision.He has been interested in the development of biomaterial in Ophthalmology, pathophysiology in retinal ischemia, growth factors in the eye and many fields in Ophthalmology, and some examples of recent publications are "*Dual actions of nitric oxide in N-methyl-D-aspartate receptor-mediated neurotoxicity in cultured retinal neurons*. Brain Res. 711: 93, 1996" and " *Hypoxia and vascular endothelial growth factor selectively up-regulate angiopoietin-2 in bovine microvascular endothelial cells*. J. Biol. Chem. 274: 15732, 1996". He also received the *JOS Award* and delivered the Award Lecture to the 100th Congress of the JOS in 1996 (*Cellular and molecular biology of ischemic retina*. J. Jpn. Ophthalmol. Soc. 100: 937, 1996). (Department of Ophthalmology, Kyoto University Graduate School of Medicine, Syogoin Kawaramachi, Sakyo-ku, Kyoto 606-8507, Japan. phone: +81-7-5751-3248, fax: +81-7-5752-0933, e-mail: yhonda@kuhp.kyoto-u.ac.jp)(SM)

Hong, Soon Kak (1921-) Korean Ophthalmologist and Professor of the Department of Ophthalmology, Yonsei University College of Medicine. He graduated from Severance Medical College in 1944 and served as the Chairman of the Department of Ophthalmology, Yonsei University College of Medicine during the years 1961 to 1974. He was the President of the Korean Ophthalmological Society from 1970 to 1972 and was the Director of the Yonsei Cancer Center during 1973 to 1974. Some examples of his many publications are "*Ocular signs due to hornet sting*. Kor. J. Ophthalmol. vol 1(1) 1958.", "*Refractive error incidence in primary school children*. Kor. J. Ophthalmol vol 16(1) 1975."(SM)

Hong, Suk Hoo (1883-1940) Korean Ophthalmologist and Professor of the Severance Union Medical College. He was one of the first 7 graduatees of the Severance Union College of Medicine (1908), and he became one of the 7 medical doctor who received the first licence from Korean Government. He established the first Ophthalmology Clinic in Korea (1908). He served as the Chairman of the Department of Ophthalmology and Otorhinolaryngology at Severance Union Medical College (1908-1922, 1928-1930). He completed his fellowship involving the anatomy of the head and neck at the Kansas Dental College and New York Medical College (1921-1922). He served as a Vice-Dean of Severance Union College of Medicine. He established the Eye and ENT clinic at the YMCA building in Chong-no, Seoul (1931).(SM)

Hong, Young Jae (1946-) Korean Ophthalmologist, Professor of the Department of Ophthalmology, Yonsei University Medical College. He graduated from Yonsei University Medical College in 1971,studied Ophthalmology under Prof. CHOI Ouk and received Doctor of Medical Sciences in 1978 (thesis: *The experimental study of oculomotor dysfunction -The properties of the vertical saccadic system in humans*. Yonsei Med J 10:299-308, 1977). He studied in 1986-1988 at the Kresge Eye Institute, Wayne State University, Detroit, with Prof. Dong H. Shin and published 19 articles with him in these 2 years, e.g. "*Implantation of posterior chamber lens in the absence of capsular and zonular support*. Arch Ophthalmol 106:416-420, 1988." and "*Reversal of glaucomatous optic disc cupping in adults patients*. Arch Ophthalmol. 107:1599-1603,1989. He served as the Chairman of the Department of Yonsei University Medical College from 1990-1995 and has been in the present position since 1992 and conjointly he serves as the Head of the Glaucoma Service. He is the leading Glaucoma specialist in Korea and some examples of his publications are "*The prevalence of Glaucoma in Korean adults*. Invest. Ophthalmol. Vis. Sci. 34:1286, 1993" and "*Chemical analysis of aqueous humor in patients with cataract and glaucoma*. Glaucoma 16: 18, 1994". He serves as the President of theThird Congress of Asia Oceanic Glaucoma Society to be held in Seoul in 2001.(Department of

Ophthalmology, Yonsei University Medical College, 134 Shinchon-Dong, Seodaemoon-ku, Seoul Korea; phone: +82-2-361-8450, fax:+82-2-312-0541, e-mail: yjhong0815@yumc.yonsei.ac.kr)(SM)

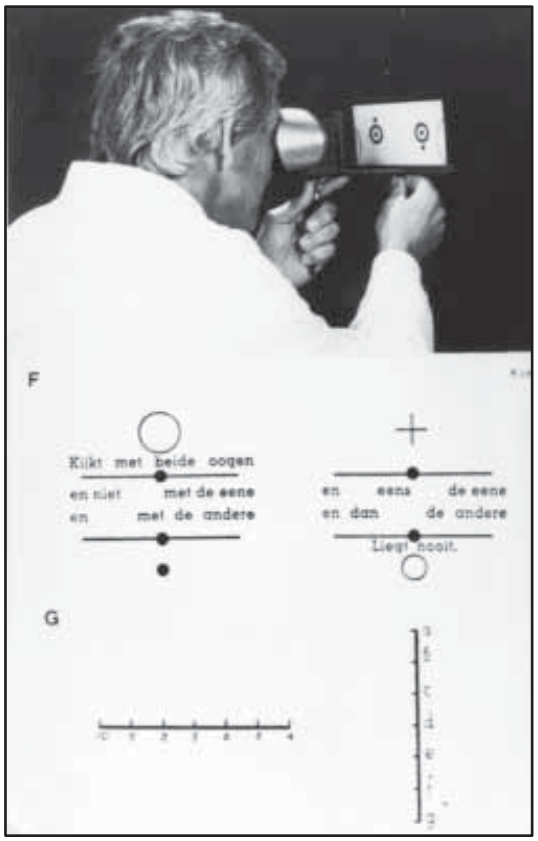
Honmura, Sachiko (1938-) Japanese female Ophthalmologist, Professor of Ophthalmology of Tsukuba University. She graduated from Tokyo Medical and Dental University in 1963, studied Ophthalmology at the Graduate School of Medicine under Prof.→OTSUKA Jin and received the degree Doctor of Medical Sciences in 1968. She is in the present position as above since 1985. Her research interest covers many areas of Ophthalmology and her many publications include " *A new model of transient complete obstruction of retinal vessels induced by endothelin-1 injection into the posterior vitreous body in rabbits*. Graefe Arch clin. Exp. Ophthalmol. 231: 476, 1993" and "*Survey of risk factors for expulsive choroidal hemorrhage: Case reports*. Ophthalmologica 210: 344, 1996". She is a Councillor of the Japanese Ophthalmological Society, Japan Society of Ophthalmological Optics. She is a member of the American Academy of Ophthalmology and the Association for Research in Vision and Ophthalmology. (Department of Ophthalmology, Institute of Clinical Medicine, University of Tsukuba, 1-1-1 Tennodai, Tsukuba-shi, Ibaraki-ken, 305-0006, Japan. phone: 81-298-53-3220, fax: 81-298-53-3214)(SM)

Hooke, Robert (1635-1703) One of the most ingenious of experimental English philosophers. He was born, the son of a minister, at Freshwater, in the Isle of Wight. In 1658 he entered the University of Oxford. Becoming assistant to Robert→Boyle, he rendered a great amount of service to that brilliant investigator in connection with his invention of the air-pump. Robert Hooke anticipated some of the most significant discoveries and inventions of his time, but was unable to implement them himself. He analyzed the role of air in combustion, but his most notable accomplishment was undoubtedly the improvement which he achieved in the design of scientific instruments. His many triumphs include not only his formulation of the theory of elasticity. He was also a pioneer in the field of microscopic research and discovered plant cells. It was Hooke who invented the term "cell" in a biological context – a concept that has gained fundamental importance in the life sciences since the 19th century. Hooke had many controversies with other scientists over questions of priority: Huygens and Newton are just two examples. In 1662 Hooke was appointed "*Experimenter*" to the Royal Society, and, in 1677, its Secretary until 1683. He is chiefly to be remembered by ophthalmologists as the first to measure (not to discover, see→Euclid) *the minimum visual angle*. The passage in which this great discovery is recorded is found in Birch's *"History of the Royal Society"* (1757, III, p. 120) and runs as follows: "*If a graduated ruler be held at such a distance from the eye that the interval between any given division-mark- and the next appears under a smaller angle than one minute, then the sharpest eye can no longer discriminate the two marks from one another*." On this great discovery is based a very large proportion of the daily work of every practising ophthalmologist. Hooke also invented the clock spring, the watch spring, and probably (the point is much disputed) the reflecting telescope. He wrote: *Micrographia, or some physiological descriptions of minute bodies made by magnifying glasses* London: John Martyn, 1667. He died of overwork at London, Mar. 3, 1703.American Encyclopedia of Ophthalmology, Vol.8, p.5998

Hooper, Robert (? – 1835) British London physician, medical lexicographer, and natural historian, who devoted considerable attention to ophthalmology. Born at London, he studied at Pembroke College, Oxford, and in 1805 received the degree of Doctor of Medicine at St. Andrews. Settling in London, he became physician to the Marylebone Infirmary, where he was very successful as well as in his private practice. Hooper is chiefly remembered for *"Hoop,er's Medical Dictionary"* and *"The Physician's Vade Mecum*." His only ophthalmologic writing was "*A Diagram of the Human Eye; with Observations" (1804).* American Encyclopedia of Ophthalmology,Vol.8,p.6002

Hoor Karoly (1858-1927) Hungarian Ophthalmologist. Karoly Hoor was born and studied medicine in Pest. After his graduation in 1881, he entered the medical corps of the Austro-Hungarian army, and in 1884 he was posted to the army-hospital in Vienna. During his service-time in Vienna, he worked for two years in Fuchs' clinic. Returning to Hungary in 1887 he was entrusted with the eye-department of the Army Hospital in Budapest. In 1890

he became a Privatdocent, and in 1894 was appointed to the Chair of Ophthalmology in the Kolozsvar University. 14 years later he was appointed to the newly established second chair of ophthalmology at the University of Budapest, and here he continued to work until the end of his life. In 110 scientific contributions he dealt with every branch of ophthalmology. He was particularly interested in the pathology and treatment of trachoma. To do research work in this field he spent a long time in Egypt. His name is associated with the first Hungarian "Ocular surgery" ('*Szemeszeti mutettan*'), published in 1892. In the same year appeared his handbook on the 'Troubles in Refraction and Accommodation' ('*A fenytoresi es alkalmazkodasi rendellenessegek*') and also his 'Methods of Eye Examinations' ('*Szemvizsgalas modjai*'). The German edition of '*Prophylaxe und Beseitigung des Trachoms*' was published in Vienna in 1903 and '*Hornhauterkrankungen*' in Stuttgart. His monograph, '*Keratitis parenchymatosa*' was published in 1908. He was not only chief editor of Hoor-Grosz's: '*Handbook of Ophthalmology*' but also contributed several chapters to it. His handbook '*Szemeszet*' ('Ophthalmology') appeared in 1912. The chief labour of planning and building of the second eye clinic in Hungary was carried out under his leadership.[Magda Radnòt: *Famous Hungarian Ophthalmologists* (Budapest 1970)] Albert



Hooren's Stereoscopic plates

Hoorens, Antoine (1884-1960) Belgian ophthalmologist who practized ophthalmology successively in Aalst and in Ghent. He studied pupil motricity with the Nobel Prize Winner Corneille →Heymans and presented with him a report on this subject in 1949 for the Belgian ophthalmological society. He pioneered in treatment of strabismus by means of his stereoscopic plates. He was an active anti-alcoholist. (Verriest)

Hope-Robertson, Walter James (1901-1958) New Zealand ophthalmologist. Hope-Robertson was born at Gisborne, NZ., and took his medical education at Otago University, graduating in 1922. Thereafter he became one of the first specialist house surgeons at Wellington Hospital. His apprenticeship completed, he travelled to England where he studied at Moorfields and the Central London Ophthalmic Hospital, and afterwards occupied training posts at Wolverhampton and Birmingham. At the same time he obtained his F.R.C.S.(Ed.), the D.O.M.S., and the D.L.O., London. In 1928 he returned to New Zealand, commenced practice in Wellington, and was immediately appointed to the honorary staff of the Wellington Hospital. During his life he remained in association with this institution and became eventually the chairman of the medical staff. He initially practised both ophthalmology and otolaryngology, but from 1938 had confined his practice to ophthalmology, and rapidly became recognized as the senior exponent of this specialty in New Zealand. He was elected a Fellow of the Royal Australasian College of Surgeons in 1931, was one of the instigators in the formation of the Ophthalmological Society of New Zealand, becoming its president in 1956, and represented New Zealand at the XVI International Congress of Ophthalmology in London in 1950. In his own country he also played a prominent part in public activities, acting as consultant to the Health Department and, during the Second World War, to the New Zealand Armed Forces in the rank of Lieut.-Colonel. BJO 1958,42:256

Hopkins, Woolsey (1868-1900) American ophthalmologist of New York City, ho died at the age of thirty-two. Born at Alexandria, Va., he received his professional degree from the College of P. and S. of the City of New York in 1890. He was assistant surgeon to the Manhattan Eye and Ear Hospital, and a member of the American Laryngological, Rhinological, and Otological Society. He practised ophthalmology and oto-laryngology in New York City for several years.American Encyclopedia of Ophthalmology,Vol.8,p.6002

Hoppe, Johann Ignaz (1811-1891) German physiologist. Hoppe was born in Erfurt and received his M.D. at Berlin in 1834; he lectured at Bonn from 1846 to 1852 and was professor at Basel from 1852 to 1891. His research concerned various aspects of sensory physiology. He authored: *Psychologisch-physiologische Optik in experimentell psycho-physischer Darstellung*. Leipzig 1881.

Manao Hori

Sadanao Hori

Hori, Manao (1860-1929) Japanese Ophthalmologist, graduated from Tokyo University in 1887, continued his study at the Postgraduate School of Medicine at Tokyo University. He studied during 1983-1897 at the Universities of Giessen and Berlin. On his return to Tokyo, he was appointed the Professor at the Japanese Army Medical School. He developed a new Ophthalmoskiascope and published a paper: "*Gebrauchsanweisung fuer das Ophthalmoskiaskop nach Dr. M.Hori"*. Centralblatt Augenheilkd. 18:371, 1894. The most significant of his many contributions is the 6-volume book that described *Ocular Injuries in the Russo-Japanese War: 1904-1905*. This is the most comprehensive description of war injuries of the eye, particularly of Ophthalmia Sympathica. CH. OGUCHI translated the statistics compiled in this book into the German Language: see →OGUCHI Chuta. He also served as the Head of the Eye Clinic of the Japanese Red Cross Central Hospital. He was the President of the Japanese Army Medical School in 1911-1912. Subsequently he retired and practiced in Tokyo: he served as the President of Tokyo Ophthalmologists Association. (SM)

Hori, Sadanao (1888-1922) Son of HORI Manao. He graduated from Tokyo University in 1916, studied Ophthalmology under Prof. J.KOMOTO. He also studied at the Department of Pharmacology and submitted a thesis "*Physicochemical properties of the aqueous humor*" and received the degree Doctor of Medical Science from Tokyo University in 1922. From 1919 he worked as the Professor of Ophthalmology of Nihon University, but soon after the degree was conferred he died at the age of 35. (SM)

Hori, Sadao (1946-) Japanese Ophthalmologist, Professor and Chairman of Tokyo Women's Medical University. He graduated from Gunma University Medical School in 1972, studied at the Department of Pathology in the Postgraduate School of Medicine of the University and received his Doctor of Medical Sciences in 1976 (thesis: *An electron microscopic study on healing process of hypertensive arterial lesions in rat*. Kitakanto Med. J. 25: 201, 1975). He extended his research with Dr. Mukai Noritsugu on pathology of diabetic retinopathy at the Eye Research Institute of Retina Foundation (now Schepens Eye Research Institute) in 1976-1979. On his homecoming in 1979, he started Ophthalmology training at the Department of Ophthalmology of Tokyo University under Prof.→MISHIMA Saiichi and was promoted to the Lecturer of the Department in 1981. He moved to the Assistant Professor of the Diabetes Center of the Tokyo Women's Medical University in 1988, promoted to Professor of the Center in 1990 and he was appointed to the present position in 1998. He is the President of the Japanese Society of Ophthalmic Diabetology (1999-), Councillor of the Japanese Ophthalmological Society (JOS) (1995-), of the Japanese Society of Diabetology (1993) and on the Board of Trustees of the Japanese Vitreoretina Society (1994-). He is conducting extensive research on diabetic retinopathy and has 278 publications, and some examples are "*Pathophyisology of the intraocular neovascularization*. Special Report to the 94th Congress of JOS, J. Jpn. Ophthalmol. Soc. 94: 1103, 1990" and "*Diabetes and Ophthalmology*, ed. Hori, S., Aoi Medical Publ. Tokyo 1996". (Department of Ophthalmology, Tokyo Women's Medical University, 8-1 Kawada-cho, Shinjyuku-ku, Tokyo, 162-8666, Japan. phone: +81-3-3353-8111, ext. 37413; fax: +81-3-5269-8059)(SM)

Horiguchi, Masayuki (1956-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Fujita Health University. He graduated from Nagoya University in 1981, studied Ophthalmology under Prof.→AWAYA Shinobu, and received his Doctor of Medical Sciences in 1988 (*Increment of cone ERG during light adaptation-carp retina (in vivo and in vitro)* J. Jpn. Ophthalmol. Soc. 92: 395-402, 1988). He was appointed the Assistant Professor of Ophthalmology of Nagoya University in 1988, and subsequently he spent one year as a Research Fellow at the Institute of Ophthalmology (London), and carried out basic research on retinal horizontal cells in Xenopus with Prof. Geoffrey B Arden (Horiguchi M, Eysteinsson T, Arden GB: *Temporal and spatial properties of suppressive rod-cone interaction.* Invest Ophthalmol Vis Sci 32:575-581,1991). In 1998, he was invited to take the present position at the Fujita Health University as the Successor of Prof. Emeritus→MAJIMA Yoshinao. His research interest is in cataract, vitreo-retinal diseases, vitreous surgery, electrophysiology of vision, and he is member of Japanese Society for Clinical Electrophyisiology of Vision, The Retina and Vitreous Society of Japan, Japanese Society of Ophthalmic Diabetology, and also member

of International Society for Clinical Elecrtrophysiology of Vision, and Association for Research in Vision and Ophthalmology. Some examples of his many publications are " *Blue light-emitting diode built-in contact lens electrode?can record human S-cone electroretinogram*.?Invest Ophthalmol Vis Sci 36:1730,1995" and "*Staining of the lens capsule for circular continuous capsulorrhexis in eyes with white cataract*. Arch. Ophthalmol. 116:535, 1998". He received the Junior Honor Award from the Japanese Ophthalmological Society for excellence of his research (1993)(*Effect of temperature on electroretinographic readings during closed vitrectomy in humans*. Arch. Ophthalmol. 109: 11127, 1991), and also in 1997 he received the *Video Award* of the European Society of Cataract and Refractive Surgery.(Department of Ophthalmology, Fujita Health University, 1-98 Dengakugakubo, Kutsukake-cho, Toyoake, Aichi,, 470-1101, Japan: phone: 81-562-93-2111, fax: 81-562-93-0533, e-mail: masayuki@fujita-hu.ac.jp) (SM)

Höring, Carl Friedrich von. German ophthalmologist, son of Friedrich →H., and nephew of Gottlob Friedrich→Höring. The dates of his birth and death cannot now be ascertained. He was born at Schwaigern, Neckarkreis, Württemberg, Germany. He studied at Tübingen, Würzburg, Prague, Vienna, and Berlin, and received his medical degree in 1845. Settling in Ludwigsburg, he began to devote his attention exclusively to ophthalmology. He founded in 1859 a Private Eye Infirmary, which was very successful. He was pensioned in 1882. He wrote: 1. *Mittheilungen aus der Augenheilkunde für den Prakt. Arzt.* (Stuttgart, 1877.) 2. *Bericht über die 25jähr. Wirksamkeit der Privat-Augenheilanstalt zu Ludwigsburg*. (Stuttgart, 1885.) American Encyclopedia of Ophthalmology,Vol.8, p.6003

Höring, Friedrich von (1792-1867) German ophthalmologist, brother of Gottlob Friedrich, and father of Carl Friedrich Höring. The subject of this sketch was born at Willsbach, near Weinsberg, Germany, the son of a surgeon who was well-known locally. He studied with an uncle for five years, then, for a very brief period, with Friedrich →Jaeger. In 1812 he became assistant to Köllreuter in Stuttgart. He then for a time was a student at Tübingen University, at which institution he received his degree in 1817. He next proceeded to Vienna, where he made a specialty of ophthalmology and became assistant to Friedrich →Jaeger and to Joseph→Beer. He then for a time, resided in Württemberg, but in 1823 removed to Neuenstadt, where he practised surgery and ophthalmology and remained for eleven years. He afterwards removed to Ludwigsburg, where he became a celebrated operator. He died 1867, having practised medicine almost fifty years. He wrote: 1. *Verunglückter Versuch, eine Kropfgeschwulst durch Unterbindung der Art. Thyr. Super. zu Heilen* (Rust's Magazin, 1820). 2. *Über Myotomia Ocularis.* (Württem. Correspondenzbl., 1841.) American Encyclopedia of Ophthalmology, Vol.8,p.6003

Höring, Gottlob Friedrich (1813-1844) German ophthalmologist, brother of Friedrich, and uncle of Carl Friedrich, Höring. The subject of this sketch was born in 1813 at Willsbach, near Weinsberg, Germany, and in 1838 received his medical degree at the University of Tübingen. His dissertation on this occasion was entitled "*Über die Wirkungen des Broms*" [Bromine], and was crowned by the faculty. From 1830 to 1840 he studied with his uncles in Vienna. In 1841 he settled in Heilbronn, where he died. He wrote: 1. *Recherches sur le Siège et la Nature de la Cataracte*. (Ann. d'Ocul. VIII, 1842-3.) 2. *Über den Sitz und die Natur des Grauen Stars.* (Heilbronn, 1844.) 3. *Cysticercus de la Conjunctive*. (*Ann. d'Ocul.* II, 1839.) 4. *Über die Dislaceratio CapsuIae*. (*Württemberger Corr.*, 1841.) 5. *De l' Emploi de I'Appareil de Rotation Electro-Magnetique dans les Maladies de I'Oeil.* (Ann. d'Ocul., XVI, 1846.) 6. *Iritis Syph.* (Anna,l. d'Ocul., XXX, 1854.) American Encyclopedia of Ophthalmology,Vol.8,p. 6004.

Hornblass, Albert (1939-) American ophthalmologist, born in New York City. Hornblass received his B.A. at Yeshiva University and obtained his M.D. in 1964 with the thesis, *"Clinical Correlation in Ptosis both Acquired and congenital"* at the University of Cincinnati, College of Medicine and became resident (1965-1969) in ophthalmology at the State University of New York under Byron C. →Smith and Richard C. →Troutman. Hornblass became Director of the Department of Ophthalmic Plastic Surgery at the Manhattan Eye, Ear and Throat Hospital and is Professor of ophthalmology at SUNY Downstate N.Y. He wrote "*Oculoplastic, Orbital and Reconstructive Surgery*", 2 volumes,

Baltimore 1988 and 1990, and authored *"Tumors of Ocular adnexa and Orbit"* (Mosby 1979). Hornblass is on the Editorial Board of *0phthalmic Plastic-and Reconstructive Surgery*, his papers were published between 1970 and 1998 in *Opht* and *AJO*. Today Hornblass works in New York City. He received a Honor Award in 1982 and a Senior Honor Award in 1993. His medical hobby is collecting old instruments and photography. Address: Albert Hornblass, M.D. , 130 East 67th St. Suite 1C, New York, NY 10021-6136. Fax:(201)489-1389 (AB).JPW

Horner, Johann Friedrich (1831-1886) The *first* professor of Ophthalmology in Switzerland, Horner is now remembered chiefly as the author of a brief paper in 1869 on ptosis due to a sympathetic palsy. This paper, not considered worth mentioning by Landolt in Horner's obituary is the source of the term "*Horner's syndrome*". Horner is also credited with discovery of corneal herpes, and, according to some introduced antiseptics into ophthalmology. He was born in Zurich, and in 1854 received his medical degree there. He spent some time in Vienna and was influenced by the Jaegers to take up ophthalmology. He became an assistant to Albrecht von Graefe, and, for three or four months, he studied in Paris with Desmarres. In 1856 he returned to Zuerich as docent in ophthalmology, and, in 1862, when Billroth was appointed as Professor of Surgery, a separate chair was designated for diseases of the eye, and Horner got the job. Karl Wilhelm Zehender also trained with Jaeger and with von Graefe, and in 1857 they, with 13 other students of von Graefe founded what was to become the Heidelberg Ophthalmological Society and in 1929 renamed as the Deutsche Ophthalmologische Gesellschaft. When Zehender founded the *Klinische Monatsblaetter fuer Augenheilkunde*, Horner sent him most of his work. Horner was a cautious and able diagnostician, a very successful operator and a copious and interesting speaker. Despite his disinclination for literary labors, however, Horner did manage to perform considerable literary work. His more important writings are as follows: 1. *Zur Retinalerkrankung bei Morbus Brightii*. (Klin. Monatsbl. für Augenheilkunde, 1863.) 2. *Ein Fall von Periostitis Orbitae und Perineuritis Nervi Optici*. (Ibid.) *3. Tumor Retinae*. (Ibid.) 4. *Fremde Körper in der Iris*. (Ibid.) 5. *Carcinom der Dura Mater: Metastase der Mm. Recti*; *Exophthalmus*. (Ibid. 1864.) 6. *Colobom des Augenlids mit Zahlreichen Dermoid geschwülsten.* (Ibid.) 7. *Eine Kleine Epidemie von Diphtherit. Conjunctivae.* (Ibid. 1869.) 8. *Zur Behandlung des Keratoconus*. (Ibid.) 9. *Ueber eine form von Ptosis*. (Ibid.) 10. *Tumoren in der Ungebung des Auges*. (Ibid. 1871) 11. *Ueber Herpes Corneae*. (Ibid.) 12. *Refractionsänderungen.* (Ibid. 1873.) 13. *Zwei Fälle von Trigeminuslähmung mit Secund. Augenaffectionen*. (Correspondenzbl. für Schweizer Aerzte, 1873.) 14. *Desinfic. Behandl. einiger Hornhauterkrankungen*. (Zehender's Klin.Monatsbl., 1874.) 15. *Ueber den Anatom. Befund bei Entzündl. Kapselcataract.* (Ibid.). 16.*Keratitis Mycotica*. (Ibid.) 17. *Ueber die Entstehung und Beschaffenheit des Pterygiums*. (Correspondenzbl. für Schweizer Aerzte, 1875.) 18. *Ueber Strabismus Converg. bei Myopie.* (Ibid. 1876.) 19. *Indicationen und Contraindicat. von Atropin und Calabar*. (Ibid. 1877.) 20. *Ueber Intoxicationsamblyopien*. (Ibid. 1878.) 21. *Ueber die Verbreitungswege der Sympathischen Entzündung.* (Ibid. 1879.) 22. *Die Krankheiten des Auges im Kindesalter.* (Gerhardt's Handb. f. Kinderkrankhh., Tübingen, 1880.) 23. *De la Myopie Congénitale.* (Revue Méd. de la Suisse Romande, Genève, 1881.) 24. *Die Antisepsis bei Augenoperationen*. (Internat. Med. Congress, Lond., 1881.) 25. *Über Brillen aus Alter und Neuer Zeit.* (Neujahrsbl. zum Besten des Waisenhauses in Zürich 1885, English edition: *On spectacles: their history and uses* London 1887) American Encyclopedia of Ophthalmology, Vol.8,p.6006-6008, see also his autobiography (edited one year after his death by E.→Landolt) : *Dr.J.F. Horner- Ein Lebensbild geschrieben von ihm selbst, ergänzt von Dr. E.Landolt*, Frauenfeld 1887; Ott, E. *Friedrich Horner 1831-1886 Leben und Werk* (=Zürcher Medizingeschichtl.Abhandlungen, Neue Reihe Nr.136) Zürich 1980; H.M.Huldrych Koelbing & Chr. Mörgeli: *Johann Friedrich Horner* Hans Rohr, Zürich 1986. Thompson, H.S. Am. J Ophth .102:792-795, 1986; JPW


D^r J. F. HORNER

EIN LEBENSBILD

BESCHRIEBEN VON IHM SELBST

ERGÄNZT

VON

D^r E. LANDOLT

FRAUENFELD

Horner´s very interesting autobiography edited by his friend E. Landolt

Horner, William Edmonds (1793-1853) American physician, discoverer (in 1822) of "Horner's muscle, *i. e., the tensor tarsi,* and the first to explain in a satisfactory manner the passage of the tears from the conjunctival sac to the nose. Born of English extraction at Warrenton, Fauquier County, Va., he received the degree of Doctor in Medicine at Philadelphia in 1814. For a time, he was a surgeon's mate in the U. S. Army; but in 1816 settled in Philadelphia. There he became prosector, in 1819 adjunct professor, and in 1831 titular professor of anatomy, in the University of Pennsylvania. In 1847 he founded St. Joseph's Hospital. For a time he studied in Europe. Returning to Philadelphia, he practised there until his death. Horner's only writings on the eye are those which deal with the muscle discovered by him. These which are three in number, are: 1."*A Description of a Muscle connected with the Eye, lately discovered by W.E. Horner"* (The London Medical Repository," Vol. XVIII, No. 103, July 1, 1822 p.32.*)* 2. "*Description of a Small Muscle at the Internal Commisure of the Eyelids"* (Philadelphia Medical Journal, VIII , 1824) 3."*An Inquiry into the Discovery of the Tensor Tarsi Muscle, being an Answer to the Objections of Signior Gaetano Flajani , of Rome"* (Philadelphia Medical Journal, IX, p.98 ff) American Encyclopedia of Ophthalmology,Vol.8,p.6008-6023

Horrocks, Jeremiah (1619-1641) This British scientist was an astronomer of remarkable genius, generally known as the first observer of the transit of Venus, an account of which phenomenon he has given in a Latin treatise entitled *Venus in Sole visa*. Newton, in the *Principia*, bears honorable testimony to the value of Horrocks astronomical work, especially commanding his lunar theory as the most ingenious yet brought forward,. Hevelius printed the *Venus in Sole visa*, which first appeared in Germany, a translation of this work, with a memoir by Whatton, appeared at London in 1859. In 1678 Horrocks's fragmentary works were published under the auspices of the Royal Society, being edited by Wallis, with the title *Jeremiae Horroccii Opera Posthuma.* American Encyclopedia of Ophthalmology,Vol.8,p.6024.

Horstman, Karl (1847-1912) German ophthalmologist. Horstmann was extraordinary professor of ophthalmology in the University of Berlin. The Ophthalmoscope, 1912,p.181.

Hosack, David (1769-1835) An American physician, based in New York, who made only one contribution to ophthalmology. In 1794, as a 26 year old American doctor studying in England, he boldly stuck his oar into the question of how the eye was able to change its focus from far to near, thus "accommodating" vision to a close object. This had been discussed by William Porterfield, and Thomas Young had offered some thoughts on the subject before the Royal Society. Hosack was invited to present his paper to the Royal Society (Phil Trans Royal Soc. London, 84: 196-216). In this paper he suggested that when the eyes converged upon a near object, the muscles squeezed the globes, lengthening them and thus focusing the vision upon the near object. This turned out to be not the case, but by then Hosack had started a famous garden of medicinal plants (The Elgin Botanic Garden - the first in America) in New York City - near where Rockefeller Plaza is now; and before long he was a leader in New York's social and cultural life, and the controversial founder of what is now the College of Physicians and Surgeons of the Columbia-Presbyterian Medical Center. He later became a Fellow of the Royal Society. The complex mechanism of accommodation of the eye was eventually resolved by Helmholtz, long after Hosack was gone. (Stanley H.Thompson)

Hosaka, Akio (1926-) Japanese Ophthalmologist, Professor Emeritus of Asahikawa Medical College. He graduated from Tokyo Medical and Dental University in 1949, studied Ophthalmology under Prof.→OHTSUKA Jin and received the degree Doctor of Medical Sciences in 1955 (thesis: *Clinical studies of aniseikonia. Ochanomizu* Med. J. 3: 325-374, 1955). He served as the Assistant Professor of Fukushima Medical College under Prof. KAJIURA Mutsuo (1963- 1975). He was then promoted to the Professor and Chairman of the Department of Ophthalmology of Asahikawa Medical College in 1975 and served until retirement in 1992. His research interest has been in myopia and refractive anomalies, and he has many publications in this field. Some examples are "*The ocular findings in the premature infants, especially on the premature signs*. Jpn. J. Ophthalmol. 7: 77, 1963", "*Vitreo-retino-ciliary barrier in myopia*, Jpn. J. Clin. Ophthalmol. 39: 569, 1985" and " *Population studies – Myopia experience in Japan*. Acta Ophthalmol. (Suppl): 66:37, 1988". He wrote "*Immediate Assistance for Optical Problems*.

Kanehara Publ. Co. Tokyo, 1985". He served as a Councillor to the Japanese Society of Ophthalmology (1974-1992) and the Japanese Society of Visual Science (1965-1996), and is the Honorary Member of these Societies. He also gave lectures at the Second International Conference on Myopia (1987) (*The growth of the eye and its components – Japanese studies*. Acta Ophthalmologica (Suppl) 66: 65, 1988. (Hosaka Eye Clinic: 3-17-33, Mori, Isogo-ku, Yokohama 235-0023, Japan, phone/fax: 81-45-754-0888)(SM)

Hotz, Ferdinand Carl (1843-1908) American ophthalmologist of Chicago, Ill., inventor of the well-known *Hotz's operations for entropium*, ectropium, trichiasis and trachoma. He was born at Wertheim, Baden, Germany and he received his early education in the Lyceum at Wertheim, his medical training at Heidelberg (1863-66) and Berlin (1866-67). His medical degree was conferred at Heidelberg in 1865. The teachers who chiefly influenced him at Heidelberg were →Helmholtz, Simon, and →Knapp; at Berlin, →Graefe, Virchow, and Langenbeck. After a tour of study to Vienna, Paris, London, Edinburgh, Glasgow and Dublin, he came to America and settled in Chicago in 1869. He was ophthalmic surgeon at the Illinois Eye and Ear Infirmary from 1876 until his death. On the resignation by E. W. →Holmes of the chair of ophthalmology and otology in Rush Medical College Hotz was appointed in his place, and this position he held for many years. For a time he also occupied the chair of ophthalmology at the Chicago Polyclinic. Among his more important writings are: 1. *Ein Fall von Strabismus Deorsum Vergens in Folge von Congenitaler paralyse der Rect. Sup. geheilt durch Vorlagerung desselben. (*Archiv für Augen- und Ohrenlheilkunde, Bd. V, Abth. 2, p. 379, 1876.) 2. *Two cases of Death Resulting from Aural Diseases.* (Transacts. of Ill.State Med.Soc., 1876.) 3. *Notes on Intraocular Lesions Produced by Sunstroke.* (Am. *Journ. Med.Sciences*, July, 1879.) 4. *Two Cases of Chronic Blepharospasmus as Traumatic Reflex Neurosis.* (Ibid., Oct., 1879.) 5.*Traumatic Aneurysm in the Eyelid, Following an Operation for Trichiasis. (New York Med.Record*, June, 1879.) 6. *Klinische Beobachtungen. (*Archiv für Augeinheilkunde, *X.)*
7. *Eine Neue Operation für Entropium und Trichiasis.* (Ibid.) 8. *Die Ectropium Operation am Unteren Augenlid, Besonders bei Alten Leuten*. (Klin. Monatsblätter für Augenheilkunde, 1880.) 9. *Über das Wesen und die Operation der sog. Ptosis Atonica*. (Archiv für Augenheilkunde, Bd. I, 1880.) 10. *Die Frühzeitige Perforation des Warzenfortsatzes bei Otitis Media Purulenta, Complicirt durch Acute Entzündung der Warzenzellen. (*Zeitschr. für 0hrenheilkunde, IX.) 11. *Schlimme Folgen einer Calomel-Einstaubung ins Auge. (*Archiv für Augenheilkunde, 1882, IX.) For a time Hotz was associate editor of the *Chicago Medical Journal and Examiner*. American Encyclopedia of Ophthalmology, Vol.8,p.6053-6055

Hovius, Jacob (c.1675-1740) Dutch surgeon, born at Enkhuizen, Holland. The exact date of his birth as well as the place and date of his death, are unknown. He became doctor of philosophy, master of arts, and doctor of medicine, all at Utrecht. The date of conferring upon him of the last-named degree was June 13, 1702. On the reception of his medical doctorate, he presented a dissertation, entitled "*De Circulari Humorum Ocularium Motu*." Utrecht 1702. This created a considerable stir in the ophthalmologic world-as well it might, for, therein, were first announced, or accurately described, two very important matters: (1) The influx and efflux of the ocular humors as well as a (very inaccurate) means of measuring these fluxions; (2) The "circulus venosus" which is formed by the *venae vorticosae*. This dissertation was published at Leyden in 1716 (*Tractatus de circulari humorum motu in oculis ... in clarissimum ... Fredricum Ruyschium*. Lugduni Batavorum: Joannem Arn. Langerak, 1716.), and again in 1740. In 1715 he published an *"Epistola Apologetica in Vir.Cl. DD. Fredericum Ruyschium*. Hovius was one of the lesser opponents of the then new doctrine concerning the nature and seat of cataract. Throughout antiquity and the middle ages, and well on into the modern period, it was firmly believed that a cataract was a deposit of a corrupt and inspissated "humor" in a (wholly imaginary.) space between the pupil and the lens. →Quarré, about 1643,, first theoretically taught the true doctrine, and →Rolfinck, in 1656, confirmed his teaching by anatomical dissection. Then the matter simply sank into oblivion until →Brisseau and →Maître Jan, just after the beginning of the 18th century, re-discovered this most important truth and compelled the scientific world to accord it recognition. Before the recognition was accorded, however, a bitter controversy arose concerning the matter. The opposition to the new theory was led by Thomas →Woolhouse, an English oculist resident

in Paris. Among the followers of Woolhouse was Hovius. American Encyclopedia of Ophthalmology,Vol.8,p.6055

Howard, Henry (1815-1889) A well-known Canadian ophthalmologist, author of the *first* text-book on the eye to be issued in the Dominion of Canada. Born at Nenagh, County Tipperary, Ireland, he received his early education in his native town. He studied his profession in Dublin, receiving the degrees of M. D. and M. R. C. *S.*, the latter in 1838. After practising in Dublin for a very short time, he emigrated in 1841, to Canada. For a time he engaged in general practice on Amherst Island, U. C. afterwards at Kingston. At length he moved to Montreal, where he practised the eye, ear, nose and throat exclusively, and where he was surgeon to the Montreal Eye an Ear Institution. From 1845 until his death he contributed a number of articles on the eye, ear, nose and throat to the *Dublin Medical Journal.* He also wrote at some length and rather frequently for the *British American Journal* of Montreal. About 1860 he wrote a brochure entitled *"The Physiology of Insanity, Crime and Responsibility*." In 1861 he was appointed medical superintendent of the Lunatic Asylum, of St. John's, L. C., later situated at Longue Pointe, Montreal, a position which he held until his death. The chief ophthalmologic writing of Dr. Howard was his justly famous text-book, entitled, "*The Anatomy, Physiology, and Pathology of the Eye"* London: John Churchill;,Montreal: Armour and Ramsey 1850. In the preface to this work, the author says: "He [the author] has availed himself of the published opinions of the numerous distinguished writers who have explored the field of science in which he has labored; and he wishes in this place to state, not only his great obligations to them for the information which he has been enabled to derive from their writings, but also to express to those learned and respected friends who have contributed many valuable notes and suggestions, his sense of the service they have rendered to his inquiry; a service by which, in some instances, he has been enabled not only to enrich his work, but to confirm his own experience of the propriety of the treatment which he has successfully pursued; a treatment, which the author may be pardoned for stating, has not been suggested in any published treatise on the Pathology of the Eye which has come under his notice. " The peculiar treatment of the author's, thus indefinitely referred to ill his preface, would seem to be that for cataract and glaucoma, which he thus describes, in the appropriate portions of the body of his book The little book of Henry Howard's constituted a very auspicious beginning for Canadian ophthalmography. American Encyclopedia of Ophthalmology,Vol.8,p.656-658

Howe, Andrew Jackson (1825-1892) American anatomist and surgeon. Howe was born near Worcester, Massachusetts, receiving his M.D. at the Worcester Medical Institute in 1855. From 1859 until his death he was professor of anatomy and surgery at the Eclectic Medical Institute, Cincinnati. He was the author of numerous surgical treatises. In ophthalmology he wrote: *Manual of Eye Surgery* Cincinnati 1874 (1879?).Albert.JPW

Howe, Lucien (1848-1929) American ophthalmologist. Howe was born at Standish, Maine. He graduated from Bowdoin in 1870, and studied medicine at Harvard, when Oliver Wendell Holmes was teaching anatomy there, and also at Bellevue. On completing his medical course he went abroad for further study. This was largely on the advice of a teacher who said to him: "*There is a man in Edinburgh named Lister, who thinks that fevers are caused by some sort of germ.. I think there may be something in it. I advise you to go over and see*." He not only studied under Lister, but also in France and Germany, and in the clinics of Vienna. He was also at one time a student under Helmholtz. On his return to America he settled in Buffalo, New York, then a comparatively small but growing city. There he practiced ophthalmology for fifty years. In the beginning it was popularly considered a wild venture, as "*no one had trouble with their eyes*," and when five patients appeared there was, in certain quarters, an uneasy feeling that there must be something uncanny about the strange young man. In 1876 he founded the Buffalo Eye and Ear Infirmary which, before his connection with it closed, had treated over 100,000 patients. This included the period before Buffalo's developing industries had brought the city the abundance of clinical material which it now has. The New York State Medical Society twice awarded him its medal for valuable original scientific work, and in 1927 he received the Dana medal of the National Society for the Prevention of Blindness, awarded for eminent work in that field. He himself established in the New York State Medical Society a prize for work in ophthalmology. Among foreign societies, he was a member of the

Deutsche Ophthalmologische Gesellschaft, the Société Française d'Ophtalmologie, the Ophthalmological Society of the United Kingdom, and the Royal College of Surgeons. His writings comprised a book on universal military education, a two-volume treatise on the muscles of the eye, and over one hundred scientific papers. He was recognized in this country and in Europe as one of the leaders in his branch of medicine. In 1926 Dr. Howe presented to Harvard University $250,000 for the establishment of a laboratory of ophthalmology. This sum was increased to $500,000 by donations from the General Education Board and from the corporation of Harvard, and the Howe Laboratory of Ophthalmology, with Dr. Howe as director, was established with its' headquarters at the Massachusetts Eye and Ear Infirmary. The influence of this foundation is even now to be felt in medicine, and is bound to increase from year to year. In it Howe has left to medicine a worthy memorial. Devoted specialist though he was, even living once with the Arabs in the desert in order to study the transmission of the ophthalmia of Egypt, he was a man of varied tastes. He wrote: *Universal Military Educationand Service: The Swiss System for the United States*, London 1916; *The Muscles of the Eye*, 1907-1908 AJO 1929,12:145-147; JPW

Howe, Samuel Gridley The *first* American to devise (in 1830) an improved alphabet and to print literature for the sightless.American Encyclopedia of Ophthalmology,Vol.8,p.6058

Hoyack, Ernestus Fredericus (1826-1868) Dutch ophthalmologist of Amsterdam. Hoyack received his M.D. (his thesis was: *Specimen ophthalmologico-medicum inaugurale continens quaedam de choroiditide* [Antonii Rutgers, praeses.] Amstelodami, Apud C.G. van der Post, 1848) at Leiden in 1848, and after studying ophthalmology abroad for several years established a large practice in this specialty in Amsterdam. Albert.

Hoyt, William Fletcher (1926-) American Neuro-ophthalmologist, Professor Emeritus of University of California San Francisco. He graduated from the University of California School of Medicine in San Francisco in 1950, served 2 years as medical officer in the United States Navy and completed 3 years of Ophthalmology Residency in 1956 in San Francisco. He extended his studies as a Fullbright Scholar at the University of Vienna Eye Clinic in 1957, and then studied Clinical Neuro-ophthalmology with Prof. Frank B. Walsh at Johns Hopkins School of Medicine in Baltimore in 1958. He returned to the University of California in 1959 where he began his academic career as a Clinical Teacher of Neuro-ophthalmology with joint appointments at the Departments of Ophthalmology, Neurosurgery and Neurology. He became Full Professor in 1969 and Emeritus Professor in 1994. He has been awarded Honorary Membership in numerous ophthalmologic, neurosurgical and neurologic Associations in America and in other countries. Professional awards have included The Norman McAlister Gregg Medal in Australia (1975), The Franceschetti-Liebrecht Prize in Germany (1976), The University of Antwerp Medal in Belgium (1980), Honorary Doctor of Medicine from the Karolinska Institute in Stockholm, Sweden (1988), Patron of the Australian Neuro-ophthalmologic Society (1990), Foreign Adjunct Professor at the Karolinska Institute in Sweden in 1992. He has served on the Editorial Boards of the *Archives of Ophthalmology* (1961-1975), the *Archives of Neurology* (1977-), *Neuroradiology* (1978-1981), *Journal of Neurology* (1979-1985), *Neuro-ophthalmology* (1985) and *Journal of Neuro-ophthalmology* (1977-). For forty years he has lectured and presented clinical papers in America and abroad on a wide range of Neuro-ophthalmologic topics related to neurosurgical and neurologic diagnosis. With his co-workers he published over 280 journal articles in American and International Journals. He also contributed book chapters covering a wide range of Neuro-ophthalmologic subjects dealing with retina, optic disc, optic nerve, chiasm, lateral geniculate nuclei, occipital lobes, brainstem and cerebellar control of eye movements, ocular motor palsies, orbital disease and neuroimaging. These publications span 40 years. He co-authored two books: 1) with Beeston "*The Ocular Fundus in Neurologic Disease*" C.V. Mosby Co., St. Louis, 1966 and 2) with F. B. Walsh: "*Clinical Neuro-ophthalmology*" 3rd Edition in 3 volumes, Williams and Wilkins Co., Baltimore, 1969 (3000 pages). He has been a Clinical Teacher of a long stream of ophthalmology residents trained at the Department of Ophthalmology of the University of California. He has been the postdoctoral mentor of 70 ophthalmologists and neurologists who have become the professors teaching Neuro-ophthalmology in medical schools throughout the Americas, Europe and Asia. (Department of Ophthalmology, University of California, San Francisco. Rm. 521 U, San Francisco, California, USA 994143. Phone: +1-415-476-1130; e-mail: wfhoyt@AOL.com)

Hu, Cheng (1915-) Chinese Ophthalmologist, Professor Emeritus of Peking Union Medical College. He is a graduate of West China Union University, Chengdu, in 1944 and studied Ophthalmology at the University Hospital and was promoted to the Instructor of Ophthalmology at the University (1948-1949). He was then invited to Peking Union Medical College and served as Instructor (1950-1955), Associate Professor (1956-1978) and the Professor and Chairman of the Department of Ophthalmology (1979-1986). He is currently Honorary Director of Eye Research Center of the Chinese Academy of Medical Sciences (1984-) and the Vice-President of the Chinese National Committee for the Prevention of Blindness (1984-). He has served as an editor to many professional journals, and they are *Medical Digest of Ophthalmology* (Vice-Editor, 1960-1965), *Chinese Ophthalmologic Association* (Executive Editor, 1956-1988), *Chinese Journal of Ophthalmology* (Vice-Editor, 1979-1984; Chief Editor, 1985-1988), *Afro-Asian Journal of Ophthalmology* (1982-1990) and *System of Ophthalmology* (Vice-Editor, 1986-1996). He continues to serve as Honorary Consultant to the *Chinese Journal of Ophthalmology, Chinese Ophthalmologic Association* and to *Ma Jinmin Eye Center*. Some examples of his many original papers are "*Prevention of blindness in China*, Chin. Med. J. 1992, 105: 695", "*Cataract free zone and primary health care approach to prevention of blindness in Shunyi County of Beijing*. Chin. Med. J. 1996, 109: 561" and "*The strategy of prevention of blindness*. Eye Science, 1997, 13: 156". He also contributed chapters to many books, e.g. "*Fundus diseases*, *China Medical Encyclopedia*, Shanghai Science Technical Publ. House, 1985" and "*Laser treatment of glaucoma and prevention of glaucoma* in *System of Ophthalmology*, People Health Publ. House, 1996". In recognition of his outstanding contributions, he has been granted many Honor Awards, that embrace Distinguished Education and Research Award from the Ministry of Education (1984), Science Award from the Ministry of Health (1985), Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology (1989) and Award from the International Agency for the Prevention of Blindness (IAPB)(1990) (Honorary Director, Eye Research Center, Chinese Academy of Medical Sciences, Peking Union Medical College Hospital, 1, Shuai Fu Yuan, Beijing 100730, P. R. China. phone: +86-10-65296357) (SM)

Hubais. A distinguished Arabian ophthalmologist, nephew of Hunain and one of his most devoted students. He completed Hunain's "*Book on the Questions of Medical Science*" and wrote "*The Book on the Improvement of Purgatives*," "*The Book of Simple Remedies*," and the "*Work on the Pulse*." According to Halifa, he composed a book entitled "*The Volume of Explanations of Eye Diseases*." The ophthalmologic book is remarkable only for the fact that it seems to have contained a number of illustrations-e. g., of pterygium and pannus and was, therefore, one of the very earliest of illustrated works upon the eye. This book, most unfortunately, is no longer extant.American Encyclopedia of Ophthalmology, Vol.8, p.6058

Hubbell, Alvin Allace (1846-1911) This well-known American ophthalmologist was born in Conewango, N. Y. He studied medicine at Philadelphia, Penna., and at the University of Buffalo, receiving his degree from the latter institution in 1876. In 1896 he received the honorary degree of Ph.D. from Niagara University. For a time he practised general medicine and surgery, and, in fact performed in 1878 the operation of laparotomy for intestinal intussusception for the fourth time in the United States. In 1883 he decided to limit his practice to ophthalmology and otology, and soon was known throughout the United States as an expert in these specialties. He became ophthalmic surgeon to the Riverside Hospital, the Buffalo Hospital of the Sisters of Charity, the Erie County Hospital (of which he was one of the founders), and of the Charity Eye, Ear, Nose and Throat Hospital of Erie County, of which he was one of the founders and directors. He was also one of the founders of the Medical Department of Niagara University, in which he became Professor of Ophthalmology and Otology and Secretary to the Faculty. In 1898 he accepted the chair of clinical ophthalmology in the University of Buffalo, a position which he held till 1911, when he was made Professor Emeritus. He was a member of the Buffalo Academy of Medicine, the Buffalo Medical Union, the Buffalo Ophthalmological Society, the Erie County Medical Society, the Medical Association of Central New York (of which he was President in 1892), the New York State Medical Association (of which he was President in 1902), the Medical Society of the State of New York, the New York Academy of Medicine, the American Medical Association (of whose section on ophthalmology he

was Chairman, 1908-09), the American Ophthalmological Society, the Pan-American Medical Congress, the Eighth International Ophthalmological Congress, held at Edinburgh in 1894, and of the Ninth, held at Utrecht in 1899. He was also a member of numerous historical and literary societies. Dr. Hubbell invented a number of instruments and appliances, the most important of which, perhaps, is an improved electromagnet for the extraction of attractable bodies from the interior of the eye. In addition to numerous journal articles he wrote one of the sections in de Schweinitz's *American Text-Book of Diseases of the Eye* (Philadelphia, 1899) ; also'." *The Development of Ophthalmology in America from 1800-1870*" (Chicago, 1908). He was associate editor of the *Buffalo Medical Journal* and of the *Ophthalmic Record.* At the time of his death he was engaged in writing a work on →Daviel. American Encyclopedia of Ophthalmology, Vol.8, p.6058-6060

Huber, Alfred (1918-) Swiss ophthalmologist and neuro-ophthalmologist. Huber received his medical degree in 1943 and became lecturer in ophthalmology in 1954. He was named professor of ophthalmology at Zurich University in 1963. He was councillor to the Zurich University Eye Clinic as well to the Neuro-Surgical Clinic of the same university. Huber worked with Vogt, Amsler and Witmer. He received the Franceschetti-Liebreich Prize in 1966 and the Alfred Vogt Prize in 1972. He worked closely with Krayenbuehl and then with Yasargil in the Neurosurgery Clinic in Zurich. He authored *Augensymptome bei Hirntumoren* Huber Bern 1956; *Eye Symptoms in Brain Tumors* 1961(translation by Stefan van Wien), '71 and '76 (translations by F.C.Blodi); *Sympathikus und Auge 1990*. Huber was co-author, with M. Amsler and Fl.Verrey of *L´Humeur acqueuse et ses functions* 1955 and *Lehrbuch der Augenheilkunde*, 2nd edition 1954. He also wrote, with D.Kömpf, the important book *Klinische Neuroophthalmologie* which was published by Thieme Stuttgat in 1998. He published countless papers and book chapters (for example *The Eye* in Schinz, *Lehrbuch der Röntgendiagnostik*, vol.III,1966) and was editor of: *Ophthalmic Literature* from 1947 to 1972; *Kl. Monatsbl.f.Augenheilk.*; *Aktuelle Neurologie* and *Neuro-Ophthalmology*. Huber also published some work on eye movements in Graves disease and, with Esslen and others was responsible for some important electromyography of the extraocular muscles that for the first time explained the odd behaviour of the eyes in Duane's syndrome. Huber, A. Esslen, E., Kloti, R.; Martenet, AC, *Zum Problem des Duanes-syndrome.* Graefe's Archiv f. Clin Exp Ophthalmol 167:169-171, 1964. In 1976 Huber, together with Thomas R. Hedges, Jr. founded the International Neuro-ophthalmology Society (INOS) by putting on a meeting in LaNapoule, France. Address: Prof.Dr.med.A.Huber, Stockerstr.38, CH-8002 Zurich, Switzerland. JPW

Huber, Francis (1750-1831) Blind Swiss naturalist. He was born at Geneva, Switzerland, the son of a prominent soldier and natural historian, T. Huber, who was the author of a notable book, entitled, "*Observations sur le Vol des Oiseaux"* (Geneva, 1784). The subject of this sketch would seem to have been myopic even in childhood, and when only fifteen years of age, he became totally blind. Even before the onset of his blindness, he had shown a remarkable aptitude for natural history, and, when shut up in "the ever-during dark," his predilection rose to the point of an all-absorbing passion. His wife Marie Aimée was of great assistance to him in all his investigations. So, too, was his servant, Francois Burnens, who was trained by Huber to an almost marvellous power of observation. Huber even invented a glass bee-hive, through the walls of which his devoted helper could observe to a nicety the ways and works of his favorite bees. Huber published: 1. *Nouvelles Observations sur les Abeilles* (1792; Engl. trans., 1806; 2d French ed. 1814). 2. *Mémoire sur I'Origine de la Cire (Bibliothèque* Brittanique, tome xxv). 3. *Lettre A M. Pictet sur Certains Dangers que Courent les Abeilles* (Op. *cit.* XX, vii). 4. *Nouvelles Observations rel. au Sphinx Atropos (Op. cit.,* XXVII). In addition to these independent compositions, Huber assisted Jean Senebier in his " *Mémoire sur I'Influence de 1'Air, etc., dans la Germination*" (Geneva, 1800). Huber's name was given by De Candolle to a genus of Brazilian trees, Huberialaurine. Huber was a wealthy man from the beginning to the end of his career' After a long and happy life (for he was always cheerful and consented) he died at Lausanne. American Encyclopedia of Ophthalmology,Vol.8,p.6060

Hudson, Arthur Cyril (1875-1962) British ophthalmologist. Though comparatively little known outside his country or indeed his own teaching hospital, he was a man remarkable both for his professional merit and for his unusual personal qualities. Hudson was the youngest son of the vicar of Bingley, Yorkshire. He was educated at Rugby and Trinity

College, Cambridge, where in addition to taking an honours degree he played tennis for the University and it is said would have gained a rugger blue had he been of heavier physique. He entered St. Thomas's Hospital Medical School in 1899, having won the University Scholarship and qualified M.B., B.Chir. (Cantab.) in 1902; proceeding to M.D. in 1906 and F.R.C.S. (England) in 1905. He held general surgical as well as ophthalmic appointments at St. Thomas's before becoming House Surgeon at The Royal London Ophthalmic (Moorfields) Hospital where he was able to obtain unrivalled clinical and operative experience. His talents led to his appointment as Curator, then the recognized stepping stone to the staff, and during his tenure of this post he gained extensive experience of ocular pathology which was the basis of his sound judgment of eye diseases. During these early years he not only produced several careful and valuable publications but was largely responsible for improving aseptic methods in the operating theatres and greatly reduced the infectivity rate which resulted from eye operations in the early years of the 20th century. In 1913 he was appointed Honorary Surgeon to Moorfields and on the retirement of J. B. Lawford in 1915 joined Herbert Fisher at St. Thomas's Hospital, taking charge of the eye department in 1924 with P. G.→Doyne as his junior. He resigned from Moorfields at the early age of 53, partly to make way for a younger man, but continued at his undergraduate hospital until he reached retiring age in 1935. He was Vice-President of the Ophthalmological Society of the United Kingdom and in 1932-33, as president of the Ophthalmological Section of The Royal Society of Medicine, delivered the presidential address on cataract surgery. Hudson's work was meticulous and took no account of time. His careful examinations coupled with his knowledge of pathology established him as an outstanding clinician who seemed almost to live within the eye. To other London ophthalmic surgeons he wa.s the first choice for second opinions on difficult problems and if he had a fault it was in persisting for too long in trying to improve a hopeless case. As an operator he was without doubt in the front rank, especially in cataract surgery, for he was an artist with the von Graefe knife. As a lecturer he was not very easy to follow because his voice did not carry and because he never used any form of illustration, though what he said was invariably sound if rather above the heads of some of his audience. To his post-graduate students he was the best teacher of his day because of the thoroughness of his examinations with the simple apparatus then available and his willingness to discuss problems fully. At one period no less than a quarter of the ophthalmic surgeons on the staff of London's teaching hospitals had been his House Surgeon at St. Thomas's, which is proof of the stimulus of his example and his influence on British ophthalmology. His publications were moderate in number but always carefully compiled and worthy of close attention, and his last paper on a stereoscope of his own design was published in his 80th year. -Hudson's line- perpetuates his name in ophthalmology. BJO 1962,46:575

Hueck, Alexander Friedrich (1802-1842) Russian anatomist, paleontologist and archeologist of some importance in ophthalmology. Born at Reval, he received the degree of Doctor in Medicine in 1826, his graduation thesis being. "Diss. inaug. Physiol.Med. de Mutationibus Oculi Interin Respectu Distantiae Rerum." After a scientific journey to Berlin, Munich, Göttingen and Paris, he settled in Dorpat, where, in 1830, he became Prosector at the Anatomical Institute of the University. In 1833 he was made Full Professor of Anatomy. He died not quite forty years of age. Hueck's ophthalmologic writings are as follows: *1. Das Sehen, seinem Aeusseren Process nach Entwickelt.* (Dorpat and Göttingen, 1830.) 2. *Die Axendrehung des Auges.* (Dorpat, 1838.) 3. *Die Bewegung der Krystalllinse.* (Leipzig, 1841, 4 plates.) American Encyclopedia of Ophthalmology,Vol.8,p.6061. Albert

Hueter, Karl Christoph (1803-1857) German surgeon and obstetrician, who paid considerable attention to diseases of the eye. Born at Melsungen, Lower Hesse, he received the degree of Doctor in Medicine at Marburg in 1824. After a year or more of study in various foreign universities, he settled in Marburg, as Privat-Docent in Medicine, Surgery, and Obstetrics. Hueter's ophthalmologic writings are as follows: 1. *Ueber Ophthalmia Intermittens in Hinsicht auf ihr Vorkommen und den Zusammenhang mit dem Wechselfieber, etc.* (v. Graefe and Walther's Journ., vol. XII.) 2. *Ein Fall von Ophthalmia Intermittens mit Achttägigen Typus.* (Ibid.,vol. XIII.) 3. *Die Katarrhalischen Augenentzündungen.* (Heidelb.Klin.Annalen, Bd. V, VI.) American Encyclopedia of Ophthalmology,Vol.8, p.6061

Huggins, William (Sir William) (1824-1910) An English astronomer, born in London. He was attracted to the study of chemistry, magnetism, and allied branches of physical science. Having in 1855 built for his own private use an observatory at Upper Tulse Hill, near London, he began the study of the physical constitution of stars, planets, comets, and nebulae. By researches on the sun's spectra and the spectra of certain comets, he ascertained that the luminous properties of the former are not the same as the luminous properties of the latter. Since 1875 he had been engaged photographing the ultra-violet parts of the spectra of the stars. He also determined the amount of heat that reaches the earth from some of the fixed stars. He was president of the Royal Astronomical Society (1876-78), president of the British Association (1891) and president of the Royal Society (1900).American Encyclopedia of Ophthalmology, Vol.8,p.6062

Hughes, Wendell L. (1900-1994) American ophthalmologist, considered the father of modern ophthalmic plastic surgery. Hughes was born Feb. 26, 1900. A graduate of the University of Western Ontario Medical School in London, Ontario, Canada, Hughes did his internship and residency at Bellevue Hospital in New York City from 1923 to 1925. He was a student of Drs. John Wheeler, Charles B. May, and Webb Weeks. He practiced in New York City and Hempstead, Long Island, from 1930 to 1968. He was attending chief surgeon at the New York Eye and Ear Infirmary, Among his many contributions, Hughes reported on his techniques of lower eyelid reconstruction in 1937. In 1943, he published his scholarly book, "*Reconstructive Surgery of the Eyelids*," which was initially prepared as a thesis for the American Ophthalmological Society. Hughes pioneered the development of micro needles and sutures, standardization of instruments, combination surgery for cataract and glaucoma, and most decidedly, ophthalmic plastic surgery. Hughes was president of the American Academy of Ophthalmology and Otolaryngology in 1967. He was the first president' of the American Society of Ophthalmic Plastic and Reconstructive Surgery in 1969. Hughes was president of the New York Ophthalmological Society and the Nassau Ophthalmology Society, wich is now the Long Island Ophthalmological Society. He was board-certified in ophthalmology and plastic surgery. Throughout his exceptional career, Hughes followed Wheeler's example in his emphasis on education, both in the personalized training of residents and fellows, and in the educational activities of the American Academy of Ophthalmology and Otolaryngology. Dr. Hughes was appointed the first chairman of the Reconstructive Plastic Surgery Committee of the American Academy of Ophthalmology and Otolaryngology. In 1961, under Dr. Hughes's direction, a manual entitled, *Ophthalmic Plastic Surgery*, was published by the American Academy of Ophthalmology and Otolaryngology. After Hughes's retirement in 1968 to Florida, the Academy established the Wendell L. Hughes Lectureship, which is co-sponsored by the American Society of Ophthalmic Plastic and Reconstructive Surgery. Alston Callahan and Byron Smith gave the first two lectures. This lecture is presented each year at the Academy's meeting. Dr. Hughes's alma mater, Western Ontario Medical School, also has an annual Hughes Lecture. AJO 1994,118:272-273

Hui, Yan-Nian (1943-) Chinese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Fourth Military Medical University (FMMU). He graduated from the FMMU in 1967 and studied Ophthalmology in the Graduate School of the FMMU under Prof. Yong-Shu Cai, and extended his study as a Research Fellow at the Doheny Eye Foundation, Los Angeles, under the direction of Prof. S. J. Ryan (1985-1987). After having served as Associate Professor (1987-1989), he was promoted to the present position in 1990. In 1991-1992, he worked as a Guest Scientist at the Department of Ophthalmology, University of Cologne (Director, Prof. K. Heimann). He has been a member of the Chinese American Ophthalmology Society (1986-), International Executive Committee of the International Society of Ocular Trauma (1990), Vice-Chairman, Shanxi Ophthalmological Society (1990) and the Club Jules Gonin (1998-). He serves as an editor to 12 professional journals, including the Chinese edition of *Arch. Ophthalomol.*, *Chinese Journal of Ocular Fundus Diseases*, *Eye Science* and *Chinese Ophthalmic Research.* He has published more than 200 original papers in the National and International Journals: some examples are "*Vitrectomy for complicated Eales disease*. Eye Science 13: 25, 1997", "*Vitreous surgery for severe ocular trauma*. Chin. J. Ocular Fundus Diseases. 15: 4, 1999" and "*Prevention of experimental proliferative vitreoretinopathy with daunomycin and triamicinolone based on the time course of the disease*. v. Graefe's Arch. Clin. Exp.

Ophthalmol. 237: 601, 1999". He served the Chief-Editor for Section 6 for the Chinese *System of Ophthalmology*, People's Health Publishing House, Beijing 1996. He is a recipient of many Awards, including International Guest Scholar, American College of Surgeons (1984), Eugene Chan Award (1989) and Award from Chinese American Ophthalmological Society (1996). (Department of Ophthalmology, Xijing Hospital, 4th Military Medical University, Xian 710032, People's Republic of China, phone: +86-29-337-5371; fax: +86-29-329-2763; e-mail: yannian_hui@hotmail.com)

Hulke, John Whitaker (1830-1895) A famous London ophthalmologist and President of the Royal College of Surgeons of England. He was born at Deal, England, the son of a well-known general practitioner of that place. He studied at King's College, and was House Surgeon there under Sir William Ferguson. He served in the war of the Crimea, and was surgeon at Smyrna and before Sebastopol. In 1857 he became a fellow of the Royal College of Surgeons and Surgeon to Moorfields Hospital. Here he soon became a finished operator ranking, in fact, almost as high as →Critchett and Sir William →Bowman. In 1862 he was appointed Surgeon to the Middlesex Hospital, and in 1890 was elected President of the Royal College of Surgeons. Among his numerous writings, the following possess a maximum of ophthalmologic interest: 1. *A Practical Treatise on the Use of the Ophthalmoscope; Being the Essay for which the Jacksonian Prize was Awarded in 1859* (London, 1861). 2. *On the Morbid Changes in the Retina, as Seen in the Eye of a Living Person and After Removal from the Body* (Proceed. of the Royal Society 1865). 3. *Anatomy of the Retina in Amphibia and Reptiles* (Proceed. of the Roy.Soc., 1865). 4. *Anatomy of the Chameleon's Retina* (Philosoph. Transacts., 1866). 5. *The Fovea Centralis of the Human Retina* (Ibid., 1867). Hulke was also a well known writer on geology, especially on paleontology. American Encyclopedia of Ophthalmology,Vol.8,p.6062

Hunain (808-873 A. D.) His full Arabic name is **Abu Z.aid Hunain b. Ishaq al lbadi;** the Latin name: **Johannitius)**. A Christian physician who lived at Bagdad and practised as an oculist with conspicuous success. He wrote, among other treatises, "*The Work of the Ten Books of the Eye*," which is highly important as being, so far as we know, the earliest ophthalmological text-book produced in the Arabic period. According to the last "*Book*" of this work, the author had previously composed nine treatises on ocular subjects, and these he combined together, adding also certain new material, to form the present classic. Usaibia, in his work "On *the Classes of Physicians*," says that the contents of the several books of Hunain's Masterpiece are: (1) *Nature of the Eye*. (2) *Nature of the Brain*. (3) *The Optic Nerve and Vision*. (4) *Hygiene*. (5) *The Causes of Ocular Accidents*. (7) *The Virtues of Medicines*. (8) *Ocular Remedies*. (9) *Treatment of Eye Diseases*. (10) *Combinations of Ocular Remedies, Prescriptions*. " In certain manuscripts, there is given an eleventh book, devoted to Ocular Operations. →Hirschberg, to whom we owe so much that is valuable in the history of ophthalmology, has shown conclusively that this important work by Hunain still exists in two mediaeval Latin translations, as follows: "*Liber de Oculis translatus a Demetrio*" and "*Liber de Oculis Constantini Africani*." Hunain also wrote for his sons David and Isaac, "*a work upon the eye in the form of questions and answers*," nothing but fragments of which have come down to our day. Hunain exerted a tremendous influence in Arabian ophthalmology for more than five hundred years. He is, in fact, always mentioned with a kind of reverence by the most important of the later Arabians, e.g., Ali b. →Isa, →Zarrin-Dast, →Halifa, →Al-Gafiqi, and →Alcoati. American Encyclopedia of Ophthalmology, Vol.8,p.6063-6064

Hung, Por T. (1934-) Taiwanese Ophthalmologist, a graduate of National Taiwan University in 1959, and received Ophthalmology training from Prof. YANG Y.F. He studied at the Wilmer Institute of Johns Hopkins University in U.S.A. during 1967-1968, and studied Immunology with Prof. A. Silverstein, and Glaucoma with Dr. I. Pollack. He again went to the U.S.A. in 1974-1976 and studied Glaucoma at New York Medical College with Prof. M. A. Galin. He was appointed the Professor of Ophthalmology of National Taiwan University in 1976; he stays in this position until today. During his tenure, he served as the Chairman of the Department of Ophthalmology during 1977-1983 and the Vice-President of the National Taiwan University Hospital during 1983-1992. Today, he is active as the Director of Glaucoma Service and of the National Research Laboratory of Myopia of the University. He is editor of many professional Journals, e.g.

Chief-Editor of J. Med. Ultrasound, Taipei, Editor of J. Glaucoma Portland, and J. Ocular Pharmacol. Texas and many others. He is active in public education and works as the President of Taipei Visual Science Education and Research Foundation Inc. He is also active in international activities and is fellow of American Academy of Ophthalmology, member of Association for Research in Vision and Ophthalmology and the Japanese Glaucoma Society. He founded the Asia Oceanic Glaucoma Society and is on the Board of Executive Directors. He is also an important member of the Council of the Asia-Pacific Academy of Ophthalmology, and is the President of the 23rd Congress to be held in Taipei. In recognition of his contribution, the Academy granted him a *Distinguished Service Award* in 1983. His many publications include "*Angle-closure Glaucoma, mechanism and provocation after iridectomy*, Arch Opthalmol. 97:1862, 1979" and "*Preoperative Mitomycin-C subconjunctival injection and glaucoma filtering surgery*, J. Ocular Pharmacol. 11:233, 1995". (National Taiwan University Hospital, 7 Chung-Shan South Road, Taipei, Taiwan, phone: 886-2-2397-0800,ext:5186; fax: 886-2-2341-2634, e-mail: portying@ha.mc.ntu.edu.tw) (SM)

Hunter, James (? - ?) Scottish, Edinburgh ophthalmologist whose life-dates are unknown, but who flourished about the middle of the 19th century. He was for a time surgeon at the Edinburgh Eye Hospital. In addition to an article on presbyopia in a boy (*Edin.Journ. No. 142, pp. 124-129*) he wrote a book entitled, "*On the Influence of Artificial Light in Causing Impaired Vision"* (Edinburgh, 1840, German edition: *Ueber den nachtheiligen Einfluss der künstlichen Beleuchtung auf das Auge* Weimar 1841).American Encyclopedia of Ophthalmology,Vol.8,p.6064 .Albert

Hunter, John (1728-1793) British Surgeon born in Long Calderwood, in the parish of East Kilbride, Lanarkshire, Scotland, the youngest of ten children, he at first displayed no extraordinary ability. Even when twenty years of age, he seems to have shown no very strong predilection for science, or even to have acquired an unusually good education. At about this age, however, he journeyed to London, there to join his brother, William, who had become a celebrated gynecologist. Stimulated by the example of his brother, he entered on the study of anatomy, and soon displayed a most extraordinary talent for this subject. He then proceeded to study surgery, first at the Chelsea Hospital then at St. Bartholomew's. In 1756 he was surgeon at St. George's. For a time -from 1760-63-he was surgeon in the English navy. Returning to London, he became almost at once a famous man. However, he published nothing until 1771, when he was 43 years old. In fact the labor of writing seems always to have been for him extreme, and he never, even to the end of his life, attained to the clearness, force, and perfection of polish, which so plainly characterized the literary style of his far less painstaking brother. Nevertheless, he was a great observer and thinker, and he it was who, by directing attention to the underlying principles and facts of anatomy, physiology and pathology, established the surgery of England on a scientific basis. Hypothesis, with him, was in little estimation. He wrote to Edward Jenner, concerning a certain theory which the younger man had just proposed, *"I think your solution is just; but why think? Why not try the experiment? Repeat all the experiments upon a hedgehog as soon as you receive this, and they will give you the solution*." It was also largely due to Hunter's suggestions and stimulus that the validity of vaccination was established by Jenner on an eternal foundation of careful experiment and exact observation. In fact Hunter's passion for observation amounted almost to mania. His own house at Earl's Court, Brompton, was almost literally "packed" with hedgehogs, blackbirds, lizards, snakes, fishes, toads, partridges, pheasants, silk-worms, eagles, bees, and even leopards. Once he nearly lost his life -by the escape of two leopards from their cages. These, however, he returned to their places alone and absolutely unassisted. Again, he was almost torn to pieces in a contest with a bull. Of course he did not know of the existence of the spirocheta pailida, but lie calmly faced its ravages just the same-as will appear more plainly hereafter. For fifteen years he kept a flock of geese, and all this time he studied the embryology of the goose with most intense persistency. "*It would almost appear*," he said, "*that this mode of propagation was intended for investigation.*" In the course of his toxicological experiments he poisoned, according to his own statement, "*some thousands of animals*." He succeeded in engrafting a human incisor tooth on the comb of a cock. He exchanged the spurs of a young cock and a young pullet. On the cock the small pullet spurs grew vigorously, while, on the pullet, the spurs of the cock

either did not grow at all or grew very little. His experiments on the bones of animals with inserted shot, followed up by the feeding of madder, are among the most familiar facts of high-school physiology. Hunter's most important writings are: 1. *Natural History of the Human Teeth, Explaining Their Structure, Use, Formation, Growth, and Diseases.* (London, 1771; 1778; Lat. trans., by Baddaert, Leipzig, 1775; Ger. trans., Leipzig, 1780.) 2. *On the Venereal Disease.* (London, 1786; Ger. trans., Leipzig, 1787; French trans., Paris, 1787.) *3*. *Observations on Diseases of the Army in Jamaica and on the Best Means of Preserving the Health of Europeans.* (London, 1788; Ger. trans., Leipsic, 1792.) 4. ***On*** *the Nature of the Blood, Inflammation and Gun-Shot Wounds.* (London, 1794; Ger. trans., Leipzig, 17971800.) *5*. *Observations on Certain Parts of the Animal Economy.* (London, 1787; Ger. trans., Braunschweig, 1803.) In the work on the *Venereal Disease,* Hunter, though he contributed much to our knowledge of syphilis, soft chancre, and gonorrhea, yet did much harm because of the position which he took and most tenaciously defended, respecting the identity or non-identity of these three diseases. To him it seemed to be absolutely plain that all these three affections were one and one only. His belief, however, was by no means baseless, for, to determine the question, he had inoculated himself, on the prepuce and the glans, with gonorrheal virus, and, in consequence, had, at the usual intervals, developed not only gonorrhea, but also chancroid, and, finally, "Hunterian" chancre and syphilis. Until the beginning of the 18th century there had been no doubt at all concerning the essential unity of the venereal disease. Then there began to arise certain questioning voices. The matter remained in abeyance for a time, until, in fact, this work of Hunter's, when the question appeared to have been settled for all time. "*No question*," however, "*is settled until it is settled right.*" So, from 1831 to 1837, by a vast series of inoculations, the immortal Ricord conclusively demonstrated that the three are by no means *one***,** but that the one is by all means three. In (5) *"Observations on Certain Parts of the Animal Economy*," Hunter recorded his investigations into the ocular pigment and the functions of the ocular oblique muscles. He was the *first* to describe the muscular layer of the iris. As a result probably of his self-induced syphilis, Hunter developed an aneurism of the aorta. Being a very irascible man, he was one day angered by a confrère, the aneurism ruptured, and Hunter passed almost immediately away. This occurred Oct. 16, 1793, when Hunter, though aged sixty-five, was still in the zenith of his powers and immense usefulness. American Encyclopedia of Ophthalmology,Vol.8,p.6064-6067

Hutchinson, Jonathan (1859-1933) British surgeon and ophthalmologist. Jonathan Hutchinson, like his distinguished father Sir Jonathan Hutchinson, was surgeon to the London Hospital. When he was born at Reigate in 1859 it was still possible for a surgeon to be encyclopaedic. Few advances had been made: Lister was still a physiologist; anaesthesia was on its trial; the microscope was but little used, for the staining and hardening of tissues was in its infancy; the ophthalmoscope and laryngoscope were new instruments. He lived to see everything changed, for he lived in the very heart of scientific surgery both at home and in the hospital. Educated at University College School, then in Gower Street, he entered the London Hospital Medical, College in October 1876, having gained the Buxton scholarship in arts. During his student career he was awarded honorary certificates in anatomy, physiology, and chemistry, and won the medical scholarship. He qualified M.R.C.S. in 1880, and was admitted F.R.C.S. on 13 November 1884, after serving as house surgeon to Frederick Treves. In the Medical College he was appointed assistant demonstrator of anatomy in 1882, and filled the post of demonstrator during 1893-95. At the Hospital he was elected surgical registrar in 1885 and served until 1889, when he became assistant surgeon, succeeding to the full staff in 1898, and becoming consulting surgeon in June 1920. He showed a versatility comparable with that of his father, for he filled the office of clinical assistant at the Royal London Ophthalmic Hospital, Moorfields, was ophthalmic surgeon to the Great, now Royal, Northern Hospital, and was surgeon to the Lock Hospital. He began his connexion with the Royal College of Surgeons of England by winning the Jacksonian prize in 1888 with an essay on *The diagnosis, effects, and treatment of injuries to the epiphyses of long bones*; the prize was awarded to him again in 1914, when he competed with *The pathology, diagnosis, and treatment of trigeminal neuralgia*. The honour was peat for in the long previous history of the Jacksonian prize it had been gained more than once only by Joseph Swan in 1817 and 1819, by George Calvert in 1822, 1823, and 1824, and by Rutherford Alcock in 1839 and 1841. He delivered the Erasmus Wilson lecture in 1892 on *Syphilitic affections of bones,*

joints and the lymphatic system, and in the following year he spoke on *Injuries to the epiphyses and their results* in his capacity as Hunterian professor of surgery and pathology. He was a member of the Court of Examiners 1911-21, and was elected a member of the Council in 1913. This honourable position he resigned in 1914, as no member of the Council can compete for the Jacksonian prize. Although he was never greatly interested in committee work he acted as honorary secretary of the Medical Society of London, was a member of the Pathological Society and was elected a Fellow of the Royal Medical and Chirurgical Society, then a somewhat exclusive body, as early as 1888. He lived during the greater part of his professional life at 1 Park Square, Regent's Park, where he died on 27 March 1933. In an annexe to the house there was long maintained the clinical museum collected by his father, which was used to illustrate post-graduate lectures at the Policlinic. Hutchinson wrote: *Aids to ophthalmic medicine and surgery*. London, 1889; 3rd edition, 1900; *The surgical treatment of facial neuralgia*. London, 1905; *On facial neuralgia and its treatment, with especial reference to the surgery of the fifth nerve and the Gasserian ganglion*. London, 1919; *Hernia and its radical cure*. London, 1923. He edited the second (1903) and third (1909-10) editions of Treves's *Manual of operative surgery*, and wrote the articles on Gonorrhoea, Diseases of the skin and Syphilis in Treves's *System of surgery*, 1895-96, and edited the 2nd (1904), 3rd (1911) and 4th (1924) editions of Treves's *Students' Handbook of Surgical Operations*. LFRCSE

Hutchinson, Jonathan (Sir Jonathan) (1828-1913) Famous British ophthalmologist, father of Jonathan (Jr.) Hutchinson. Appointed assistant surgeon to the Royal London Ophthalmic Hospital in the early sixties, he lectured from 1862 at the London Hospital on the principles and practice of surgery. There he became full surgeon 1863 and lectured on medical ophthalmology in the Medical College attached to the Hospital. In 1868 he became full surgeon to the Royal London Ophthalmic Hospital and stayed until 1883. He was vice-president of the Ophthalmological Society of the United Kingdom in 1880-81 and had the presidential chair from 1883 to 1886. He was elected vice-president from 1886-89. He delivered the Bowman Lecture in 1884 his subject being *"The Relation of Certain Diseases of the Eye to Gout"*. Important papers were published in Ophthalmic Hospital Reports. In 1863 he published his classic "*A clinical memoir on certain diseases of the eye and ear, consequent on inherited syphilis*" London 1863. This book represents a much extended reprint of his papers published in the *Ophthalmic Hospital Reports*. His *Archives of Surgery* (1889-1899), in ten volumes, is a compendium of original observations. His most important writings are: "*On the Form of Dyspepia which Usually Attends Phthists*" (1862) -, *"Surgical Diseases of Women*" (in Holmes's *"System of Surgery") "On Constitutional Syphilis"* (in Reynold's *"System of Medicine") "The Rectangular Catheter Staff for Lithotomy;" "Clinical Illustrations of Amaurosis;" "Lesions of the Eye in Connection with Injuries to the Fifth Nerve;" "Illustrations of Clinical Surgery;" "Clinical Lectures on Rare Diseases of the Skin*." American Encyclopedia of Ophthalmology,Vol.8,p.6067-6068. The Ophthalmoscope, London 1913,p.503-505 (by E.→Nettleship); Albert.

Hutchison, Edwin (1840-1887) American ophthalmologist, founder of St. Elizabeth's Hospital, at Utica, N. Y. Born at Utica, he received his education in the arts and sciences at Yale and his medical training at the Long Island Hospital Medical College and at the College of Physicians and Surgeons in the City of New York. At the latter institution he received his degree in 1866. Having served throughout the war, and also having received his medical degree he settled in New York both as general surgeon and as ophthalmologist, and, though his right forearm was anchylosed upon the humerus he soon had a wide reputation as an operator.American Encyclopedia of Ophthalmology,Vol.8,p.6069

Christiaan Huygens

Huygens, Christian (1629-1695) Dutch astronomer, mathematician, mechanician and optician. He was born at The Hague, Holland, the second son of Constantine Huygens, Lord of Zelem and Zuyliehem, and Secretary to the Prince of Orange. After his earliest instruction, which he chiefly received from his very learned father, he studied, first, at Leyden, mechanics and mathematics, and, later, at Breda, jurisprudence. Soon, however, he abandoned his legal studies, returning to mechanics, mathematics, and, by far the most important matter for our.purposes, to optics. In 1665 he invented a new and highly successful method of grinding lenses, and, by the aid of some of the lenses of his own

production, he discovered a satellite of Saturn, and for the first time in history announced the existence of the Saturnian ring as well as its angle to the ecliptic, 20°. Prior to that announcement the changing phenomena of Saturn had given to that body the appellation of " *the triple planet*." Huygens also invented the pendulum-clock, a copy of which instrument he presented to the States General on the 16th of June 1657. He also solved the problem of "*the center' of oscillation*, " invented cycloidal cheeks for clocks, as well as the "*aerial telescope*.," which consisted simply of a series of lenses of very long focal distances, mounted on high poles. In the field of optics his work was, if possible, more important and wide-sweeping still. He it was who established for all time the wave theory of light, which already had been propounded both by →Grimaldi and by →Hooke. Huygens announced the results of his investigations as early as 1678 before the Paris Academy but it was not until 1690 that he published the little "Traité de la Lumière." Huygens also discovered the polarization of light, a phenomenon described in the same " Traité." Throughout the work, its distinguished author assumes the existence of a luminiferous ether, the fundamental principles of which he was first in history to propound. This theory was afterward further developed and firmly established by →Euler, by →Fresnel, and, to much the same effect but independently, by →Young. *Opuscula postuma, quae continent Dioptricam* Lugduni Batavorum 1703. Huygens never married. He died in his native town, The Hague, June 8, 1695.American Encyclopedia of Ophthalmology,Vol.8, p.6069-6070;W. W. Rouse Ball A Short Account of the History of Mathematics' (4th edition, 1908).

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Ibn Abi as-Sajjar. An Arabian ophthalmologist of the Middle Ages, whose name is mentioned in Halifa's "*Book of Sufficiency in Ophthalmology*." Nothing else is known about him.American Encyclopedia of Ophthalmology,Vol.8,p.6133

Ibn Mendeweih al-Isbahani. An Arabian physician of the 11th century, who, in addition to a number of works on general medicine, composed a special (but unimportant) book entitled, "*On the Ocular Membranes and, the Dilatation of the Pupil*.American Encyclopedia of Ophthalmology,Vol.8,p.6133

Ibn Serafiun. See **Serapion the Elder.**

Ibn Sina. See **Avicenna.**

Ibn Wasif. A famous Sabaean physician who flourished at Bagdad in the middle of the 10th century. He was far and away the most noted oriental ophthalmic operator, and was besieged by patients not only from India and Egypt but from far Andalusia and Gaul. He was also a famous teacher, but he left no writings. It is related that on a certain day seven cataract-patients came in a body to Ibn Wasif's door. Of these, one offered him for an operation 80 drachma, pretending that this amount constituted his entire fortune. But just at the critical moment, the patient's girdle broke, strewing the whole floor with glittering gold-pieces. In anger, Ibn Wasif arose and drove the liar from his house. All of which shows that patients have always been as tricky and oculists as easily imposed upon and, withal, as uncalculatingly irritable as is the case today.American Encyclopedia of Ophthalmology, Vol.8,p.6133

Ibn Zuhr, Abu Bekr Muhammed b. Abd al-Malik (1113-1199). This fairly famous physician in general and excellent ophthalmologist in particular was born at Seville and died in Morocco, the son of the famous →Avenzoar, he was body-physician to the king and a well-known poet. He is said to have written a volume on the diseases of the.eye, which enjoyed an excellent reputation during its author's lifetime, but which, to all appearances, has been irrecoverably lost.American Encyclopedia of Ophthalmology, Vol.8,p.6134.

Hiroshi Ichikawa

Ibn Zuhr, Abu Muhammed Abdallah b. Abu Bekr Muh. This wellknown grandson of the much more famous →Avenzoar would seem to have been an excellent practical oculist and writer on diseases of the eye. Nothing from his pen, however, is extant.American Encyclopedia of Ophthalmology,Vol.8,p.6134

Ichikawa, Hiroshi (1922-1999) Japanese Ophthalmologist, Professor Emeritus of Nagoya University. He graduated from Nagoya University in 1945, studied Ophthalmology under Prof. NAKAJIMA Minoru and received Doctor the degree of Medical Sciences in 1952 (thesis: *Studies of extrafoveal color sensation using monochromatic light*. J. Jpn.

Ophthalmol. Soc. 56: 1349, 1952). He worked as the Head of the Eye Clinic of the Japanese Railway Bureau Hospital of Sapporo (1961-1965) and Tokyo (1965-1974) and then he was elected to the Professor and Chairman of the Department of Ophthalmology, Nagoya University in 1974 and served in this position until retirement in 1985. He held many executive positions in the professional Societies: Councillor of the Japanese Ophthalmological Society (JOS) (1965-1985), Board of Trustees of the Society (1975-1979, 1981-1983), President of the 41st Congress of the Mid-Japan Section of the Society (1975), President of the 7th Congress of the International Ergo-ophthalmology (1977), President of the 32nd Congress of the Japanese Society of Clinical Ophthalmology (JSCO) (1978) and President of the 25th Congress of the Japan Contact Lens Society (1982). He was the Editor of the *Japanese Journal of Clinical Ophthalmology* (1975-1985). His research interest was in color sensation, visual functions and aging as related to traffic safety and to occupational safety. He delivered many key note lectures, and they are "*Studies of color sensation and occupational safety*", at the 11th Congress of Traffic Medicine (1957), "*Color sense disturbance and occupation in regard to perception of color light*" at the 70th Congress of the Japanese Ophthalmological Society (J. Jpn. Ophthalmol. Soc. 70: 2073, 1966, "*The visual functions and aging*" at the 35th Congress of the JSCO (Jpn. J. Clin. Ophthalmol. 35: 9, 1981) and the JOS Award lecture "*On color vision defect – Physiological features and their clinical application*" at the 86th Congress of JOS (1982). [SM]

Kiyoshi Ichikawa

Ichikawa, Kiyoshi (1878-1937). Japanese Ophthalmologist; Professor Emeritus of Kyoto University. He graduated from Kyoto University in 1904, and studied Ophthalmology under Prof. ASAYAMA Ikujiro. During the Russo-Japanese war 1904-1905, he was drafted as an army doctor. After the end of the war, he came back to the University and was promoted to Assistant Professor in 1907. In 1909, he was appointed the first Head of the Eye Clinic of Osaka Red Cross Hospital. During 1912-1913, he studied in Germany under Prof. A.→Elschnig. On his return to Japan, he submitted a dissertation " *Ueber die Schnabelschen Kavernen*," v. Graefe Arch Ophthalmol. 87:429, 1914 and received the degree of Doctor of Medical Sciences from Kyoto University. In the year 1915, due to the death of Prof. ASAYAMA Ikujiro, he was asked to return to Kyoto University, and was promoted to Professor and Chairman of the Department of Ophthalmology of Kyoto University. He published many papers both in the Japanese and German Languages. During his tenure, he served as the Director of the University Hospital and as the President of the 23rd Congress of the Japanese Ophthalmological Society in 1919 and also of the 26th Congress of the Society in 1923. He also served for a long time the Society as a member of the Executive Council. In 1930, his students celebrated the 15-year anniversary of his Professorship. On this occasion he decided to retire and practice in Kyoto. He donated his own money to establish a fund for the ICHIKAWA AWARD to outstanding young Japanese Ophthalmologists, and the Award was granted from 1930-1943. After the end of the World War II, the fund was donated to the Japanese Ophthalmological Society.(SM)

Ideta, (formerly TOYOFUKU) Hidenao (1938-) Japanese Ophthalmologist, Director of Ideta Eye Hospital. He is the 3rd generation of Ophthalmology Family, (14th generation from maternal ancestry). He graduated from Kumamoto University in 1963, studied Ophthalmology at the University under Prof. SUDA Keiu, and received his Doctor of Medical Sciences in 1968 (thesis: *Effect of osmotic agents on formation of aqueous humor*. J. Jpn. Ophthalmol. Soc. 72: 408-425, 1968). Subsequently, he worked on chemistry of aqueous humor under Prof. Irvin LEOPOLD as a Research Fellow at Mount Sinai Hospital, New York City University (1969), and then on fluorescein angiography under Prof. Miles GALIN at the Flour Hospital, New York Medical College (1979). From 1972 to 1974, he worked under Prof. Charles→SCHEPENS at the Massachusetts Eye and Ear Infirmary as a Retina Fellow and published "*Retinal detachment following congenital cataract surgery I. Preparative finding in 114 eyes*. Arch. Ophthalmol. 98: 669-675, 1980". He is the leading expert in the vitreo-retinal diseases and gives lectures at many congresses besed on his expertise. Some examples of his publications are "*Atlas of Vitreoretinal Surgery*, Kanehara Publ. Co. Tokyo, 1993" and " *Vitrectromy and 360 degrees scleral buckling in the treatment of PVR*. (ed.) Freeman, H. M. et al. *Proliferative Vitreoretinopathy* (PVR): p. 185, Springer Verlag, New York, 1988". He is on the

Executive Committee of Japan Vitreoretinal Society, of Schepens International Society, Councillor of the Japan Ophthalmologists Association and of the Japanese Ophthalmological Society. He is also a member of the American Academy of Ophthalmology and Massachusetts Eye and Ear Infirmary Almuni. (Ideta Eye Hospital. 1-35 Gofuku-machi, Kumamoto, 860-0035, Japan. phone: +81-9-6325-5222, fax: +81-9-6311-5512, e-mail: ideta@po.iijnet.or.jp)(SM)

Igersheimer, Josef (1878-1965) American ophthalmologist of German birth. Born in Frankfurt, Germany, his education included the universities of Heidelberg, Berlin, Strassburg. He became chief of the Eye Department of the Bürger Hospital, Frankfurt-am-Main in 1926. His association with the great names of his day included Paul Erlich,→Gonin, Von→Hippel,→Leber,→Blascovich and →Weve. When the "dark ages" descended on Germany he was welcomed by Turkey and became professor of ophthalmology at the University of Istanbul. This modest, unassuming gentleman came to the United States in 1939 and "picked up threads" and started all over again at the age of 60 years. He asked for the opportunity to take the examinations of the American Board of Ophthalmology and was certified in 1947 when he was 68 years of age. His teaching associations with Tufts Medical School and the Lancaster Courses have endeared him to many hundreds of physicians. In 1952, he became a member of the American Ophthalmological Society. In his later years his name was reinstated in its former position at the university in Germany to which he had contributed so much. During his time as first physician at the Göttingen University Eye Clinic, Igersheimer wrote a voluminous work about the relation of syphilis to the eye: *Syphilis und Auge*, Berlin 1918. That book was dedicated to Theodor Leber and Eugen von Hippel. AJO 1966,61:571. JPW

Iijima, Hiroyuki (1953-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Yamanashi Medical University. He graduated from Tokyo University in1978, studied Ophthalmology under Prof.→MISHIMA Saiichi and received his Doctor of Medical Sciences in 1985 (thesis: *Rapid off-response and retinal receptor diseases*. Jpn. J. Ophthalmol. 28: 147, 1984). He was then invited to Yamanashi Medical University as the Assistant Professor to Prof. TSUKAHARA Shigeo, and was promoted to the present position in 1999. His research interest is in chorio-retinal diseases, and examples of his publications are "*Thrombin-antithrombin III complex in acute retinal vein occlusion*. Am. J. Ophthalmol. 126: 677, 1998" and "*Optical coherence tomography of idiopathic polypoidal choroidal vasculopathy*. Am. J. Ophthalmol. 127: 301, 1999". He is on the Board of Trustees of the Japanese Society of Clinical Electrophysiology of Vision. He is a member of American Academy of Ophthalmology, Association for Research in Vision and Ophthalmology, International Society for Clinical Electrophysiology of Vision, besides being member of many National Societies. (Department of Ophthalmology, Yamanashi Medical University, Tamaho-cho, Nakakuma-gun, Yamanashi, 409-3898, Japan. phone: +81-5-5273-9657, fax: +81-5-5273-6757)(SM)

Iwao Iinuma

Iinuma, Iwao (1912-1997) Japanese Ophthalmologist, Professor Emeritus of Wakayama Prefectural Medical University. He graduated from Nagoya University in 1937 and studied Ophthalmology at Osaka University under Prof. B.→NAKAMURA. He was drafted as an army doctor during the World War II, and after the War he became the Head of the Eye Clinic of Momoyama Hospital of the City of Osaka. He completed his thesis and received his Doctor of Medical Sciences from Osaka University. He moved to Wakayama Prefectural Medical University as the Assistant Professor in 1950 and a month later he was promoted to Professor and Chairman of the Department of Ophthalmology. He trained many Ophthalmologists, and his particular interest in clinical research was glaucoma and its heredity. He gave a special lecture at the 19th Meeting of the Japanese Society of Glaucoma Research. He retired in 1975 and was named the Professor Emeritus of the University. He then served as the Director of Wakayama Rosai Hospital (Public Hospital under Ministry of Labor) until 1987, and was entitled the Director Emeritus of the Hospital: during his service to the Hospital, he published many essays on the History of Ophthalmology of the World. In 1985, the Government conferred on him The Third Order of the Rising Sun on him.(SM)

Ikeda, Akira (1927-) Japanese Biologist working on the eye with particular attention to the crystalline lens, Professor Emeritus of Kawasaki University, Okayama. He graduated

from the Faculty of Literature and Science, Hiroshima University in 1953 and received his Ph.D. degree in 1958. He worked at the Department of Anatomy of Hiroshima University School of Medicine during 1954-1974, starting as Lecturer, Assistant Professor and then Associate Professor. In 1964-1968, he worked at Virginia University, U.S.A. as Assistant Professor of Anatomy, and at Edinburgh University, Institute of Animal Genetics as a Research Associate in 1970. He further served as a Visiting Professor to Wayne State University, Department of Anatomy of the School of Medicine during 1973-1974. Subsequently he served as the Professor and Chairman of the Department of Anatomy of Kawasaki University, School of Medicine from 1974 until retirement in 1992. He further serves as the Professor of Kawasaki University of Medical Welfare since 1992. He is the Founding Member of the Japanese Chapter of the International Society for Eye Research since 1971. He has many publications on the crystalline lens and the structure of the eye, and some examples are "*Immunofluorescence study on induction and differentiation of the chicken eye lens*. Invest. Ophthalmol. 5: 402, 1966", "*An immunofluorescent study of corneal development in the chick*. J. Exp. Morph. 33: 279, 1975", "*Immuno-chemical studies on the isoelectric focusing of chick water-soluble crystallins*. Exp. Eye Res. 32: 363, 1981" and "*A new look at the blood supply of the recto-ocular space: Three-dimensional analysis of the arterial pattern of the posterior ciliary artery*. Anat. Rec. 233: 3231, 1992". (Department of Anatomy, Kawasaki Medical School, 577, Matsushima Kurashiki, Okayama 701-0114, Japan, e-mail: a-ikeda@po.harenet.ne.jp)(SM)

Ichizo Ikeda

Ikeda, Ichizo (1912 -1972). Japanese Ophthalmologist and Professor of Ophthalmology of Osaka City University. He graduated from Osaka University in 1936 and studied Ophthalmology under Prof. B. NAKAMURA. He received his Doctor of Medical Sciences (thesis: *Changes in the luminosity discrimination threshold during dark adaptation*) from the University in 1941 and was appointed the Assistant Professor of Ophthalmology of Osaka University in 1948. He was then invited to the Osaka City University in 1954 to work as the Professor and Chairman of the Department of Ophthalmology. He was very interested in the events that occur in the eye under stress, and investigated them by means of various physiological and cytological techniques. His research also covered uveitis, and he was elected as one of the three Symposists on Uveitis at the 64th Congress of the Japanese Ophthalmological Society in 1960: he gave a lecture entitled "*Stress as a causative factor in uveitis*". He served as the Director of the University Hospital in 1967-1969: unfortunately he became ill and passed away in 1972: the Government conferred on him the posthumous decoration of the Third Order of the Rising Sun.(SM)

Ikeda, Mitsuo (1933-) Japanese Physicist specializing in Visual information processing and Color Science. He graduated from Osaka University, Faculty of Engineering in 1955, and conducted postgraduate research at the Institute of Optics of University of Rochester in U.S.A. and was granted the Ph.D. degree in 1962. He was appointed the Professor of Visual Science at Tokyo Institute of Technology. He has published many articles and books in his professional field, and they include "*Fundamentals of Color Engineering*, Asakura Publ. Co. 1980", "*What Eyes are Seeing – Visual Information Processing*. Heibonsha, Tokyo, 1988". He left Tokyo Institute of Technology in 1990, and was entitled the Professor Emeritus of the Institute. Subsequently, he took the position of the Professor of Visual Environment at the Department of Architecture of Kyoto University. He retired from the University in 1996, and was then invited to be the Professor at the Department of Photonics, Faculty of Science and Engineering of Ritumeikan University Kyoto. He is a member of Optical society of Japan, Color Science Association of Japan, Optical Society of America, and he is currently the President of International Color Association (1997-2001). He is a *pioneer* of the Visual Science in the field of Optics in Japan and he played the pivotal role in establishing the Visual Science Group in the Japan Society of Applied Physics. He educated many Vision Scientists in the Societies of Optics and Applied Physics in Japan. (Department of Photoengineering, Faculty of Science and Engineering, Risumeikan University, 1-1-1, Kusatsu-city, 525-8577, Japan; phone:81-7-756-2872, fax: 81-7-7561-2663, e-mail: mikeda@se.ritsumei.ac.jp)(SM)

Ikeda, Tsunehiko (1955-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Osaka Medical University. He graduated from Keio University in 1981, and started his career as an Ophthalmologist at the Department of Ophthalmology of Keio University, under Prof.→UEMURA Yasuo, and then he moved to

Osaka University to extend his studies under Prof.→TANO Yasuo in 1984. He spent one year in 1993 at the Kellogg Eye Center of the University of Michigan, U. S. A. and carried out basic research on retinal glia cells and growth factor with Prof. D. G. Puro. He submitted a thesis (Ikeda T. and Puro, D.G.: *Nerve growth factor: a mitogenic signal for retinal Muller glial cells*. Brain Res. 649: 260-264, 1994) to Osaka University and received his Doctor of Medical Sciences in 1995. He was appointed the Assistant Professor of Kyoto Prefectural Medical University in1995 under Prof. KINOSHITA Shigeru, and was then promoted to the present position as above in 1999. His main interest is surgical treatment of vitreoretinal diseases, molecular biology of the retinal glial cells and growth factors that will contribute to the understanding of disease processes and to the development of methods of treatment of intractable vitreoretinal diseases. He has published more than 200 original papers in this field and some examples are "*Regulation of retinal glial cell proliferation by antiproliferative molecules*. Exp. Eye Res. 60: 435, 1995" and "*Expression of transforming growth factor ?s and their receptors by human retinal glial cells*. Curr. Eye Res. 17: 546, 1998". He serves to the Japanese Ophthalmological Society as a Councillor and is a member of the American Academy of Ophthalmology and Association for Research in Vision and Ophthalmology (ARVO). (Department of Ophthalmology, Osaka Medical University, Daigaku-cho Takatsuki, Osaka 569-8686, Japan. phone: +81-7-2684-6434, fax: +81-7-2683-0995, e-mail: tikeda@poh.osaka-med.ac.jp)(SM)

Hiroshi Ikui

Ikui, Hiroshi (1912-1986). Japanese Ophthalmologist, Professor Emeritus of Kyushu University. He graduated from Kyushu University in 1936, studied Ophthalmology under Prof. Y.SHYOJI and S. TAMURA, and was promoted to Assistant Professor of the University in 1944. Then he served as the Professor and Chairman of the Department of Ophthalmology of Kurume Medical University form 1956 to 1959, when he was promoted to Professor and Chairman of the Department of Ophthalmology of Kyushu University, the position he held until retirement in 1976. His main interest in research was Ophthalmic Pathology, and he compiled a great number of autopsy records and used electron microscopy for investigation. He gave a lecture entitled "*Pathology and Therapy of Ocular Tuberculosis*" at the 55th Congress in 1951, "*Pathologic Findings in Hypertensive Retinopathy*" at the 67th Congress in 1963, and a special lecture "*Pathology of the Retina, with particular attention to Glial Cells* " at the 78th Congress in 1974, of the Japanese Ophthalmological Society. To commemorate his retirement from the University, his students published a Commemorative Issue in the *Japanese Journal of Ophthalmology* (English Language Journal), Vol.20, No.1, 1976, where his detailed Curriculum Vitae and 94 selected publications are listed.(SM)

Imachi, Jo (1909-) Japanese Ophthalmologist, Emeritus Professor of Kobe University and Hyogo College of Medicine. He is the younger brother of IMACHI Ken: he graduated from the Kyoto Imperial University in 1933, studied Ophthalmology under Prof.→MORI Shin-nosuke in the Postgraduate School of the Kyoto Imperial University. He submitted the thesis (*Studies of eclampsia and nephritis of pregnancy*, No. 1. J. Jpn. Ophthalmol. Soc. 43: 2452, 1939; No. ibid. 44: 1, 1940) to Kyoto University and received his Doctor of Medical Sciences in 1940. He founded the Department of Ophthalmology of Kobe University in 1952 as the first Professor and Chairman and worked until retirement in 1973. He then established the Department of Ophthalmology of Hyogo College of Medicine and worked as the Professor and Chairman during 1973-1982. He is a *pioneer* in Neuro-ophthalmology and introduced craniotomy for the treatment of alterations in the chiasmal region and performed surgery on many cases. (Special report to the 61st Congress of the Japanese Ophthalmological Society (JOS). *Causes of chronic retrobulbar optic neuritis and the influence of circulatory disturbances of the cerebrospinal fluid around the chiasmal region on the optic nerve functions*. J. Jpn. Ophthalmol. Soc. 61: 2039, 1957 and *Therapeutic effects of craniotomy to optic neuritis*. J. Jpn. Ophthalmol. Soc. 67: 1550, 1963). He gave special report to the 71 Congress of the JOS (*Optic nerve disturbance in head injuries*. J. Jpn. Ophthalmol. Soc. 71: 1874, 1967) and also delivered JOS Award Lecture (*Leber's disease and dominant juvenile optic nerve atrophy*. J. Jpn. Ophthalmol. Soc. 77: 1650, 1973). He laid the foundation of the Japanese Neuro-ophthalmological Society. He served the Japanese Ophthalmological Society as a Councillor and the Japanese Neuro-ophthalmological Society on the Board of Trustees; he

is Honorary Member of these Societies. (Department of Ophthalmology, Hyogo College of Medicine, 1-1 Mokogawa-cho, Nishinomiya, 663-8501, Japan. phone:+81-7-9845-6462; fax:+81-7-9845-6464)(SM)

Ken Imachi

Imachi, Ken (1903-1949). Japanese Ophthalmologist and Professor of Ophthalmology of Kyoto University. He graduated from Kyoto University in 1928, and studied Ophthalmology under Prof. K. ICHIKAWA, and received his Doctor of Medical Sciences from the University in 1938 with his thesis "*Effects of drug induced autonomic nerve changes on the intraocular pressure*". He was made the Head of the Eye Department of Kurashiki Central Hospital, and after 13-years service he retired and practiced in the City of Kurashiki. In 1949, he was invited to be the Professor and Chairman of the Department of Ophthalmology of Kyoto University, but only 4 months later he passed away due to cerebral hemorrhage. His research covered glaucoma, retrobulbar optic neuritis, Leber's disease, and disease in and around the Sella Turcica. He performed craniotomy in many cases of optic nerve diseases in the Chiasma region, and the results were to be given as the special lecture at the 54th Congress of the Japanese Ophthalmological Society in 1950. However due to his death his wife, DR. SHIZUYO IMACHI, an Ophthalmologist, read the paper.(SM)

Shinkichi Imai

Imai, Shinkichi (1866-1948). Japanese Ophthalmologist and the first Professor of Ophthalmology of Osaka University. He graduated from Tokyo University in 1890, and the following year he was invited to Osaka Medical School (now Osaka University) to establish the Department of Ophthalmology. He trained many Ophthalmologists in Osaka and conducted epidemiological surveys of school myopia and trachoma. From 1897 he studied in Germany for 2 years, and returned to Osaka Medical School in 1899. He served as the President of the 5th Congress of the Japanese Ophthalmological Society in 1901. He left the Medical School in 1905 and practiced in the City of Osaka.(SM)

Imaizumu, Kitetsu (1907-) Japanese Ophthalmologist, Professor Emeritus of Iwate Medical University. He graduated from Tohoku University in 1936, studied under Prof.→KOYANAGI Yoshizo and received his Doctor of Medical Sciences in 1941 for his work on ocular tuberculosis. He was invited to be the Professor and Chairman of the Department of Ophthalmology of Iwate Medical University in 1949 and worked until retirement in 1975. He further served as the Director of Hanamaki National Hospital from 1974-1978. During his tenure at the Iwate Medical University, he performed the *first* successful keratoplasty in Japan and this gave rise to a social interest and discussion towards legislation to allow the surgery, namely, the "Keratoplasty act" was enacted as law in 1958. He is one of the founders of the *Japan Eye Bank Association* and served as a Trustee since its foundation in 1965 until 1998. He carried out extensive studies of the ERG and EOG: he delivered a Special Lecture "*Electrophysiological studies of retinitis pigmentosa*" at the 73rd Congress of the Japanese Ophthalmological Society in 1969 (J. Jpn. Ophthalmol. Soc. 73: 2347, 1969) and the Society granted him the Shimizu Award. He also gave an invited lecture "*The origin and clinical application of electro-oculography (EOG)*" at the Third Symposium of the International Society for Clinical Electroretinography (ISCERG)(Clinical Electroretinography, Proceedings of the Symposium, Supplement of Vision Research: p.311, 1966). He served as the President of the 77th Congress of the Japanese Ophthalmological Society in 1973 and as the Honorary President of the 16th Symposium of the ISCERG in 1975. He worked on Cataracts and published many papers on the subject, e.g. "*A study on etiology and treatment of cataract*"(J. Jpn. Ophthalmol. Soc. 77: 192, 1973). His professional activities have been numerous and he is the honorary member of the Japanese Ophthalmological Society and many societies including the Sri Lanka Eye Bank. He is the recipient of many awards for his contribution to the development of the Eye Bank, e.g. from President Johnson of the U.S.A., the Kahoku Culture Award, and the Award from the Ministry of Education and Culture. In the School of his hometown(the old School is now registered as a National Important Treasure), the Museum "*Pioneer of transplantation, Imaizumi Kitetsu*" was established after him. In recognition of his meritorious service, the Government conferred on him the Third Order of the Sacred Treasures in 1979.(SM)

Imbert, Armand (1850-1922) French physician. Imbert was born at Orange, France. Imbert became lecturer of medicine at Lyons and later professor at Montpellier University.

His main working field was physical biology. He wrote: *De l'astigmatisme*. Paris 1883, *De l'interprétation et de l'emploi du pouvoir dioptrique et de la dioptrique metrique en ophtalmologie* Paris 1883, *Traité élémentaire de physique biologique* Paris 1895, *Observations économiques des vies ouvrières* Montpellier 1911.Albert.Fischer.

Imre, Jozsef Jr. (1884-1945) Hungarian Ophthalmologist. Jozsef Imre, Jr. was born in Hodmezovasarhely. He was the son of the eminent professor of ophthalmology, Jozsef Imre, Sr. He studied medicine at the Universities of Kolozsvar and Budapest. Immediately after his graduation he received a post in Professor →Grosz's clinic. He spent the academic year, 1909-10**,** studying in →Axenfeld's clinic, in Freiburg. In 1914 Imre became Privatdocent and in 1918 Professor of the Eye Clinic in Pozsony. When in 1919 the town became part of Czechoslovakia, its university moved temporarily to Budapest and in 1924 the University of Pecs was established. Professor Imre became a member of the Medical Faculty of Pecs and was elected Rector of University in 1928. In 1929 he returned to Budapest to be appointed to the Head of the State Eye Hospital and in 1939 to the only existing chair of ophthalmology in Budapest. Professor Imre was the most distinguished representative of theoretical and practical ophthalmology in Hungary. His scientific work covered operation problems and he gained international reputation chiefly because of his plastic operations of the eyelids. Imre, jr. was also the initiator and best performer of keratoplasty and operations against retinal detachment in Hungary. He was the first to call attention to the relation of disturbance of the endocrine glands to various eye diseases, especially glaucoma. From 1918 he tried to perform exclusively intracapsular extraction of cataracts. He investigated the physiological effect of reflecting glasses both on the healthy and the sick eye, and finding them highly effective, made arrangements for their manufacture. He contributed more than 50 articles to Ophthalmological Journals and in 1922 published a textbook in collaboration with Kornel Scholtz, entitled '*Szemeszet*' ('Ophthalmology'), which was used for over three decades by all medical students in Hungary. His monograph, the '*Szemhejplasztikak*' ('Plastic Operations of the Eyelids') published in 1928 presents a collection of his own operations with the application of the arched eyelid-plastics. The book was also published in German and French. He published the description of his method of keratoplasty in German, '*Klinische und histologische Erfahrungen der Hornhautuebertragung*', in 1942**.** He contributed a chapter, entitled '*Operationen an den Lidern'* to Thiel's four- volume '*Ophthalmologische Operationslehre'*. Professor Imre played an important role in the international and Hungarian scientific life. He was an active member of the Hungarian Ophthalmological Society and its chairman from 1941 to 1945**.** He attended many congresses both at home and abroad as lecturer by invitation. He was a corresponding member of various foreign scientific societies. His skill in performing operations was admired by foreign ophthal- mologists who came in great numbers to learn his arched lidplastics. His last book entitled '*Medical Ethics*' (1925) written in retirement is of special significance, because it is the expression of lofty ethical and philosophical principles. [Magda Radnot: *Famous Hungarian Ophthalmologists* (Budapest, 1970)]

Inatomi, Akihiro (1927-) Japanese Ophthalmologist, Professor Emeritus of Shiga University of Medical Science. He graduated from Kyoto Prefectural Medical University in 1951, studied Ophthalmology at the University under Prof. YUGE Tsunekazu and received his Doctor of Medicine in 1959 (thesis: *Observation on the visual function in strabismus*. J. Jpn. Ophthalmol. Soc. 59: 456, 1955: ibid. 61 1529, 1957). He was then promoted to Lecturer (1962) and worked as the Head of the Eye Clinic of Ohtsu Red Cross Hospital (1963-1978). He served as the Professor and Chairman of the Department of Ophthalmology of Siga University of Medical Science from 1978 to 1989, and also as the Vice-President of the University (1987-1993). His research interest has been strabismus, pediatric ophthalmology, neuro-ophthalmology and he has many publications in this field, e. g. "*Study of cyclodeviation.* J. Jpn. Ophthalmol. Soc. 91:1119, 1987" (Special report to the 91st Congress of the Japanese Ophthalmological Society (JOS). He has been Councillor of the JOS, Japanese Society of Ophthalmic Surgeons, Japanese Society of Pediatric Ophthalmology, Japanese Society of Strabismus and Amblyopia and Japan Contact Lens Society: he is an Honorary Member of these Societies. He received the JOS Award and delivered the Award Lecture to the 96th Congress in 1992 (*Eye movement: experimental and clinical study using cine mode MRI*. J. Jpn. Ophthalmol. Soc.

96: 1532, 1992), he also received the Highest Honor of the Japan Medical Association for the excellence of his works (1992).(SM)

Inatomi, Makoto (1940-) Japanese Ophthalmologist, Professor of Ophthalmology of Show University. He is the younger brother of →INATOMI Akihiro. He graduated from Juntendo University in 1966, studied Ophthalmology at the University under Prof.→NAKAJIMA Akira, and received his Doctor of Medical Sciences in 1972 (thesis: *The study of small eye movements*. J. Jpn. Ophthalmol. Soc. 76: 477, 1972). He is in the present position since 1964. His interest is in ocular traumatology, cataract and pediatric ophthalmology, and some examples of his many publications are "*Management of optic nerve injuries*. Afro-Asian J. Ophthalmol, 4:201, 1986" and "*Intraocular lens power calculation for microphthalmos*. J. Cataract Refractive Sug. 23: 1208, 1997". He serves as a Concilor to the Japanese Ophthalmological Society, Japanese Society of Traumatology and occupational medicine, Japanese Society of Neuro-ophthalmology and Japanese Society of Biomaterial. He is also on Board of Trustees of Japanese Society of Intraocular Lens and Refractive Surgery. He is also a member of the American Society of Cataract and Refractive Surgery, International Society for Clinical Elecrtrophysiology of Vision, International Society of Orbital Disorders, and International Society of Ocular Trauma. (Department of Ophthalmology Showa University, School of Medicine,1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8666, Japan. phone:+81-3-3784-8553, fax: +81-3-3784-5048)(SM)

Ingram, Harold Vernon (1902-1980) British ophthalmologist. Harold Vernon Ingram was born in Durham, the second child and elder son of William Jesse Ingram, a headmaster, university lecturer and bursar of Bede College, and of Eleanor Ingram (née Coates). From school he went to the College of Medicine of Durham University and qualified in 1924. After resident appointments in South Shields he decided to train in ophthalmology at Newcastle-upon-Tyne Eye Hospital and was duly appointed honorary ophthalmic surgeon at the Hospital for Sick Children, Newcastleupon-Tyne, honorary assistant surgeon at Newcastle Eye Hospital in 1931, ophthalmic surgeon, Royal Victoria Infirmary and ultimately head of the department of ophthalmology in the United Newcastle-upon-Tyne Hospitals in 1950. He was also consultant ophthalmologist to the Gateshead and South East Northumberland Hospital Group, and regional adviser in ophthalmology. As a Territorial Army officer, he was called up at the outbreak of war in 1939 with the rank of Major RAMC, serving in the United Kingdom and France and later, from 1942 to 1945 in South-East Asia. In 1942 he was Promoted to the rank of Lieutenant-Colonel and became adviser in ophthalmology to the Allied Land Forces in South East Asia Command, and to the Central and Eastern Commands in India. He was awarded the TD in 1942, and the OBE (Mil) in 1945. Vernon Ingram had been elected to membership of the Ophthalmological Society of the United Kingdom in 1935 and, on returning to his hospital appointments after the war, he became an ex-officio member of its council in 1955. A member of the Faculty of Ophthalmologists, he was elected to Council in 1950, was Vice-President in 1965-67, and subsequently an honorary member. An industrious worker, he combined a happy family life with his many hospital appointments and private practice. He was also active in clinical research, and is especially remembered for his development, in conjunction with the International Research and Development Company and the Scientific Research Committee of the United Newcastle Hospitals, of a ruby laser ophthalmoscope which was one of the pioneer instruments in this method of eye treatment. He also devotedly advanced the departments of ophthalmology in the Newcastle Hospitals, which resulted in the establishment of a Chair of Ophthalmology in the University of Newcastle. He earned : OBE(Mil) 1945; TD 1942; MRCS 1924; FRCS 1962; MB,BS Durham 1924; DOMS 1930; LRCP 1924.LFRCSE

Inomata, Hajime (1938-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Graduate School of Medical Sciences,Kyushu University. He graduated from Kyushu University in 1962,studied Ophthalmology in the Postgraduate School of Medicine under Prof. IKUI Hiroshi and received his Doctor of Medical Sciences in 1967 (thesis: 1.*Electron Microscopic Observations on Mueller's Fiber in the Human Retina*. J. Jpn. Ophthalmol. Soc. 69: 2133-2143, 1965; 2. *Electron Microscopic Observations on Cystoid Degeneration in the Human Retina*. Jpn. J. Ophthalmol. 10: 26-40, 1966). He extended his research at the Institute of Ophthalmology, College of

Physicians and Surgeons of Columbia University in New York in 1967-1970,and worked with Prof. George. K.→SMELSER (*Unconventional routes of aqueous humor outflow in cynomolgus monkey* (macaca irus). Am. J. Ophthalmol.73: 893, 1972). On his homecoming, he was appointed the Professor of Kyushu University in1983 and served until 1999, when the University System was changed and he was appointed to the present position. He holds executive positions in many National Societies, Councillor of the Japanese Ophthalmological Society (JOS) (1963-), Japanese Society of Microcirculation (1988-),Japanese Society of Ocular Pharmacology (1988-), Japanese Ocular Inflammation Society (1989-),Japanese Society for Ophthalmic Pathology (1983-), Japanese Glaucoma Society (1989-) and Japanese Society of Ophthalmic Diabetology (1983-).He is also a Council Member of the International Society for Eye Research (ISER),International Uveitis Study Group (IUSG)and a guest of honor to the Verhoeff Society. He is editor to the Japanese Journal of Ophthalmology (1971-1977,1984-), J. of the JOS (1988-), Folia Ophthal.Japonica (1982-) and Journal of the Eye(1984-). His research interests have covered wide areas, i.e.Ophthalmic pathology, uveitis, glaucoma, circulatory disturbance of the retina, ocular neovascularization and diabetic retinopathy,etc. Some examples of his original papers are "*Necrotic changes of choroidal melanocytes in sympathetic ophthalmia*.Arch.Ophthalmol.106:239,1988" and "*Immunohistochemical studies of Vogt-Koyanagi-Harada disease with sunset sky fundus*. Curr.Eye Res.9(suppl): 35,1990. He received the JOS Award and delivered the Award lecture at the 102nd Congress of JOS (*Intraocular neovascularization*). (Department of Ophthalmology, Kyushu University Graduate School of Medical Sciences,3-1-1,Maidashi,Higashi-ku,Fukuoka 812-8582, Japan. phone: ++81-92-642-5645,fax:++81-92-642-5645,
e-mail: inomata@eye.med.kyushu-u.ac.jp) (SM)

Toyotaro Inoue

Inoue, Toyotaro (1861-1951). Japanese Ophthalmologist, graduated from Matsue Medical School in 1884. He came to Tokyo in 1887 to study Ophthalmology at the INOUYE Eye Hospital under INOUYE Tatsuya. He started to study in Berlin in 1891 and then in Munich under Prof. A. von →Rothmund and received his Doktor Medicine degree in 1896. After his homecoming he founded Tokyo Eye Hospital, which became one of the biggest teaching hospitals in Ophthalmology in early times. Dr.INOUE published the *Annual Report of the Hospital* and a *Journal for public education on Eye Hygiene*. He taught Mr. Yamada how to make eye drops, which was named Rohto eye drops according to Dr. Inoue's teacher Prof. Rothmund. Yamada sold the Eye drops and became the Founder of the present Rohto Pharmaceutical Company.(SM)

Tsuutai Inoue

Inoue, Tsuutai (1866-1941). Japanese Ophthalmologist, and a graduate of Tokyo University in 1890. He studied Ophthalmology under Prof. J.→KOMOTO, then was made the Head of the Eye Clinic and the Vice-Director of Himeji Public Hospital in 1893: Y.→OHNISHI, I.→ASAYAMA and S.→OGATA gathered at Inoue's home in Himeji and planned publication of a new Journal " *Journal of Ophthalmology*" that was the first professional Ophthalmology Journal in Japan. The Journal was transferred to the *Journal of the Japanese Ophthalmological Society* at the foundation of the Society.(→ASAYAMA Ikujiro and →OHNISHI Yoshiakira.) He was invited to Okayma Medical School (now Okayama University) in 1895 and served until 1902. He received his Doctor of Medical Sciences from Tokyo University in 1904: the thesis was "*Ueber Subconjunctivitis rheumatica und deren verhaeltnis zur Episcleritis periodica fugax, Sclerokeratitis rheumatica und Tendonitis rheumatica ocularis*, Ophthalmol. Klinik 7:353,1903. During his practice he published a new Journal "*Ganka Shin Chishiki: Forschritte auf dem Gebiete der Augenheilkunde*" in 1906-1910. He was a great poet of WAKA (Japanese traditional poem of 31 syllables), and was appointed a Consultant to the Ministry of Royal Affairs in charge of WAKA.(SM)

Inoue, Yoichi (1930-) Japanese Ophthalmologist, Director of Olympia Eye Hospital, Chairman of Suda Keiu Memorial Fund for Glaucoma Research Inc. He graduated from Kumamoto University in 1959, studied Ophthalmology at the University under Prof. SUDA Keiu and received his Doctor of Medical Sciences in 1964 (thesis: *Protein and electrolyte in the vitreous fluid of rabbits*. J. Jpn. Ophthalmol. Soc.68: 368, 1964; Protein and electrolyte in the rabbit vitreous after aspiration. ibid. 68; 375, 1964). He served as the Lecturer of the University in 1966, but he moved to Tokyo and founded his Eye Hospital. Conjointly, he has served as part-time Clinical Professor to Tokyo University (1972-1985),

to Tokyo Medical and Dental University (1980-present). He is the leading Glaucoma Specialist, is one of the Founders of the Japan Glaucoma Society (JGS) and serves as Executive Director (1990-present), and organized as the President the 4th Congress of the JGS in 1993. According to the will of the late Prof.→SUDA Keiu, he founded SUDA Keiu Memorial Fund for Glaucoma Research Inc. which grants Suda Awards to young research workers of glaucoma at the JGS Congress and also supports the SUDA Memorial Lecture of the JGS. His field of research has been glaucoma and dysthyroid ocular diseases, and many publications embrace "*Clinical aspects of early glaucoma*, Jpn. J. Clin. Ophthalmol. 86: 87, 1992", "*Clinical aspects and definition of dysthyroid ophthalmopathy*. J. Jpn. Ophthalmol. Soc. 75: 929, 1971" and "*Classification of dysthyroid ophthalmopathy*. ibid/ 75: 2057, 1971". He is a Councillor to the Japanese Ophthalmological Society (1975-1977) and Japanese Society of Neuro-ophthalmology (1990-). He also serves as Visiting Professor to Zhejiang University, China, and a member of the International Perimetric Society, European Glaucoma Society, American Academy of Ophthalmology and Association for Research in Vision and Ophthalmology.(Olympia Eye Hospital. Olympia Eye Hospital , 2-18-12 Jingumae Shibuya-ku Tokyo 150-0001 Japan ; Phone: +81-3-3746-8981; Fax:+81-3-3746-8830; e-mail: yoichi@olympia.net)(SM)

Inoue, Yoshiro (1940-) Japanese Neuroanatomist, Professor of Anatomy and Dean of the Faculty of Medicine, Hokkaido University. He graduated from Keio University in 1965, studied neuroanatomy at the Anatomy Department and received his Doctor of Medical Sciences from the University in 1970. He has worked as the Professor of Anatomy of Hokkaido University since 1978 and as the Dean since 1997. He has many publications on glial cells of the retina and optic nerve, e.g. " *Cell death of oligodendrocytes or demyelination induced by overexpression of proteolipid protein depending on expressed gene dosage*. Neuroscience Res. 25:161, 1996" and "*Atypical neural sheaths formed by Muller cells in the chicken retina*. Okajimas Folia Anat. Jpn. 57: 79, 1980". He is a member of the Japanese Association of Anatomists, Japan Neuroscience Society and Society of Neuroscience U.S.A. (Dean, Molecular Neuroanatomy Laboratory, Hokkaido University, Faculty of Medicine, Kita-15jyo, Nisi-7chome, Kita-ku, Sapporo 060-8638, Japan; phone:81-1-1706-5000, fax: 81-1-1717-5386, e-mail: inoyoshi@med.hokudai.ac.jp) (SM)

Nobuo Inouye

Inouye, Nobuo (1875-1971). Japanese Ophthalmologist, son-in-law of →INOUYE Tatsuya. He graduated from Tokyo University in 1901, and studied Ophthalmology under Prof. J.→KOMOTO. In 1902 he went to Freiburg and studied under Prof. Th.→Axenfeld, and then for 3 years in Leipzig under Prof. H.→Sattler. He returned home in 1906 and served as the Director of the INOUYE Eye Hospital: in 1909 he transferred the Directorship to INOUYE Tatsuji. He then went to Germany again and studied in Wuerzburg under Prof. C.→Hess, in Heidelberg under Prof. Th.→Leber, in Berlin under Prof.→Siegrist, and in Leipzig under Prof.→Sattler, and returned home in 1911. He was invited to be Professor of Ophthalmology of Okayama Medical School (now Okayama University), and he submitted the thesis " *Beitrag zur Kenntnis der retinalen Cystenbildung und der Papillitis nach Entzuendungen des vorderen Bulbusabschnittes*. v. Graefe Arch. Ophthalmol.81:118,1912", and he received his Doctor of Medical Sciences from Tokyo University. He was then asked to be the Head of the Eye Clinic of Juntendo Hospital (now Juntendo University) and concurrently he served as the Professor of Ophthalmology of Tokyo Medical School (now Tokyo Medical University). He was appointed the Eye Doctor of the Ministry of Royal Affairs, and retired from the Medical School. He retired from Juntendo Hospital in 1935 and practiced in Tokyo and served as the President of the Tokyo Ophthalmologists Association. (SM)

Tatsuji Inouye

Inouye, Tatsuji (1881-1976) Japanese ophthalmologist, second son of INOUYE Tatsuya. He graduated from Tokyo University in 1904, studied Ophthalmology under Prof. J. KOMOTO. During the Russo-Japanese War 1904-1905, he worked at the Military Hospital in Tokyo and studied visual field defects of soldiers with perforating bullet wound in the occipital brain, under the guidance of Prof. J.→KOMOTO. He then studied, from 1906 to the end of 1910, in Leipzig under Prof.→Sattler and →Bielschowski. During his stay in Leipzig, he published with the help of the two Professors his book "*Die Sehstoerungen bei Schussverletzungen der kortikalen Sehsphere: nach Beobachtugen an Verwundeten der letzten japanischen Kriege* Wilhelm Engelmann, Leipzig 1909.This book

is regarded as the classic in Neuro-ophthalmology. He then returned home in 1910 to become the Director of the INOUYE Eye Hospital which his father INOUYE Tatsuya founded in 1882: the Hospital is maintained by his descendants today as the largest private Eye Hospital in Tokyo.(SM)

Tatsushichiro Inouye

Inouye, Tatsushichiro (1869-1902). Japanese Ophthalmologist, adopted son of INOUYE Tatsuya, by marriage with Tatsuya's niece. He graduated from Saiseigakusya (a private Medical School in Tokyo which existed from 1876 to 1903) and passed the National Examination for Medical Practice. He studied Ophthalmology at INOUYE Eye Hospital under INOUYE Tatsuya, and then studied for 2 years, 1895-1897, in Leipzig under Prof. →Sattler and in Breslau under Prof.→Uthoff. He received his Doktor der Medizin " *Ueber die eigentuemliche Farbe des Augenhintergrundes der mongolischen Race*", Centralbltt prak. Augenheilkd,20:200,1896. On his homecoming he was made the Director of INOUYE Eye Hospital. When the Japanese Ophthalmological Society was founded in 1898, he advised all the members of INOUYE Eye Research Society to join the new Japanese Society. He then reformed the Journal of INOUYE Research Society to the Journal of INOUYE Alumni Association and continued to publish scientific and clinical articles. He developed the Inouye Ophthalmoscope and published many books that include *Ocular Hygiene*, *Inouye Text-book of Ophthalmology*, *Atlas of Fundus diseases and Trachoma Story*. (SM)

Tatsuya Inouye

Inouye, Tatsuya (1848-1895). Japanese Ophthalmologist, founder of INOUYE Eye Hospital in Tokyo. He was born as the 4th son of INOUYE Choudo, the 10th generation of Inouye Family who had served as the Medical Doctor for the Feudal Master Hachisuka of Awa (now Tokushima), and became the Founder of the INOUYE Ophthalmology Family. Tatuya entered Tokyo Medical School (now Tokyo University) in 1870 and finished the course in 2 years. He decided to specialize in Ophthalmology in 1874: his teachers of Ophthalmology were →Bauduin and →Schultze. In the early times of Medical education in Japan, Tokyo University was the only School of Medicine and the German teachers maintained the formal 7-year course, but the Society urgently needed Doctors with western medical education. Therefore, the Meiji Government opened a Medical School with a 3-4 year course at Tokyo University in 1875, and Tatuya was made the Professor of this Medical School (Bekka of Tokyo University). He left the University in 1882 and founded the INOUYE Eye Hospital in Tokyo, where he trained many Ophthalmologists and the number of his students exceeded several hundred. He established the INOUYE Eye Research Society that held Scientific and Clinical Meetings regularly, and the Journal of the Inouye Eye Research Society founded in 1889 is the oldest professional Ophthalmological Journal in Japan. For one year, 1885-1886, he studied in Berlin under Prof. J.→Hirschberg, in Leipzig under Prof. H.→Sattler, and in Paris under Prof.→Landolt, and in Utrecht under Prof.→Snellen. After his homecoming, he published the Journal of the INOUYE Eye Research Society in the German Language where he reported the clinical statistics of his Hospital; the most comprehensive and extensive statistics of that time. Prof. J. Hirschberg visited Japan in 1892 and stayed for about one month: Dr. Inouye and Prof.→Komoto were the hosts in Tokyo. Prof. Hirschberg gave lectures at the INOUYE Eye Research Sociey on anesthetics and disinfection in Ophthalmology, and the Lecture was printed in the German Language of the Journal of INOUYE Society. He wrote many books in Japanese including, Inouye *Textbook of Ophthalmology*, *Textbook of Surgery of the eye*, *Atlas of Fundus disease* , *Ophthalmic Hygiene*, *Operation for Strabismus*, *Operation for Cataract* and they were widely read as the most valuable textbooks by Japanese Ophthalmologists of early times. Dr. Inouye published 6 articles in German in *Centralbltt prakt. Augenheilkd*. during 1882-1891 that include his experience as the first user of cocaine in Japan in 1885, and one paper in French in 1886, Rev. gen. d'Ophtalmol.5:97. Unfortunately, he died from an accident in 1895, before the Japanese Ophthalmological Society was founded. The INOUYE Eye Hospital was then directed by INOUYE Tatsushitiro, INOUYE Nobuo and by INOUYE Tatsuji. INOUYE Masazumi, Tatsuji's son followed and presently INOUYE Jiro, Tatsuji's grandson is the Director of the Hospital. (SM) also:American Encyclopedia of Ophthalmology, Vol.8, p.6367-6370

Kimiho Irinoda

Irinoda, Kimiho (1911-1987). Japanese Ophthalmologist, Professor Emeritus of Hirosaki University. He graduated from Tohoku University in 1938 and studied Ophthalmology

under Prof. Y.→KOYANAGI; he was granted his Doctor of Medical Sciences from Tohoku University in 1943. In 1945 he was promoted to be the Professor and Chairman of the Department of Ophthalmology at Hirosaki University. He was in this position until retirement in 1977. In 1954, he worked for one year at the Howe Laboratory of Harvard University in Boston, as a visiting Researcher. During his tenure, he studied endemic diseases in the Hirosaki Region and elucidated that it was due to Vitamin deficiency, particularly Vitamin B2 deficiency. By intensive treatment, this long-standing endemic disease disappeared. He was then interested in Hypertensive Retinal changes and organized a project team consisting of Ophthalmologists, Physicians, and Pathologists: Dr. IRINODA served as the Director of the project team. The work was crystallized in a book "*Color Atlas and Criteria of Fundus Changes in Hypertension*," 1970. He also served as the Director of the University Hospital. To commemorate his retirement, his students published a Commemorative Issue for Prof. IRINODA, in the *Japanese Journal of Ophthalmology* (English Language), Vol. 21, No. 2. 1977, where details of his profile and his 94 selected publications are available.He was interested in an animal model of Hypertension, and in this issue he summarized his works on SHR (Spontaneous hypertensive rat). In 1983 the Government conferred The Third Order of the Rising Sun upon him.(SM)

Irvine S. Rodman (1906-1999) American ophthalmologist, born in Salt Lake City. He graduated from Stanford University, Palo Alto, Calif, in 1928 and from Harvard Medical School, Boston, Mass, in 1932. After his internship, he initially did not get an ophthalmology residency at the Massachusetts Eye and Ear Infirmary, but after a year's residency in neurology he was accepted on his second attempt. After residency, he joined his father's practice in Los Angeles, Calif, but soon went to India, where he gained a great deal of practical experience working with Colonel Wright at the British Government Hospital in Madras from 1936 to 1937. He visited the major eye clinics in Europe on his way home and then settled back into practice in Los Angeles. He and his father (and later his brother, Sandy) joined the faculty at the University of Southern California. Through the beneficence of one of his patients, Estelle Doheny, they established the Doheny Eye Foundation at the University of Southern California. As the University of California, Los Angeles, developed, he focused his attention there to build the eye service as its clinical chair. When the ophthalmology department developed to the point of a full-time teaching institution, he decided to remain in private practice, but did continue to serve as a clinical professor while handing over the reins of the department to Bradley→Straatsma. For modern ophthalmologists reared in a time of subspecialization, the variety of Rod Irvine's interests and practice is a wonder and revelation. He was best known for his cataract surgery in which, from a clinical study of 2000 patients, he recognized the correlation between vitreous strands in the wound and macular edema, the syndrome that now bears his name. At the same time, however, he was analyzing anterior chamber taps in uveitis. He was a charter member of the International Glaucoma Society and of the Pathology Club (later known as the Verhoeff Society). He was a member of the Squint Society and wrote his American Ophthalmological Society thesis on the phenomenon. He studied the use of diathermy in retinal detachment surgery and its effects on the vitreous. When invited by Alan Woods to be a visiting professor at the Wilmer Eye Institute, Baltimore, Md, in 1950, he performed experimental work with rabbits on the effect of steroids on corneal scarring while teaching the residents optics and refraction. He was not a dilettante, but rather was at the forefront of knowledge, publishing in peer-reviewed journals in each of these fields. He moved to Laguna Beach, where he continued a consulting practice and joined the clinical faculty at the University of California, Irvine. He continued teaching there until he retired fully a few years before his death. Arch Ophthal 118, 863,2000: AJO 2000, p.570

Isayama, Yoshimasa (1920-) Japanese Ophthalmologist, Professor Emeritus of Kobe University. He graduated from Kyoto University in 1948. He studied Ophthalmology at Kobe University under Prof. IMACHI Jo and received his Doctor of Medical Sciences in 1957 (thesis: *An experimental observation upon the lymphatic channels in the vitreous, retina and optic nerve*. Jpn. J. Ophthalmol. 1: 208, 1957). He served as the Assistant Professor from 1956 under Prof. IMACHI Jo. He was then promoted to be the Professor and Chairman of the Department of Ophthalmology as the successor of Prof. IMACHI J.

in 1973 and served until retirement in 1984. During his tenure, he served as the Director of the University Hospital (1981-1983) and Councillor of Kobe University (19798-1980, 1981-1983). He received the Society Award of the Japanese Ophthalmological Society (JOS) in 1981 and delivered the Award Lecture at the 85th Congress of the JOS (*Diagnosis and treatment of optic nerve diseases*. J. Jpn. Ophthalmol. Soc. 85: 1835, 1981). He organized the 36th Congress of the Japanese Society of Clinical Ophthalmology as the President in 1982. He has served as Councillor of the JOS, and Board of Trustees of the Japanese Society of Neuro-ophthalmology, and is Honorary Member of these Societies. His research interest has been Neuro-ophthalmology and he has many publications in this field, e.g. "*Homonymous hemianopia*, J. Jpn. Ophthalmol. Soc. 76: 33, 1972" and "*The state of water in optic nerve of the rabbit*. Jpn. J. Ophthalmol. 16: 174, 1998". In 1994, the Government of Japan conferred on him the Third Order of the Sacred Treasures, in recognition of his meritorious services.(SM)

Shinobu Ishihara

Ishihara, Shinobu (1879-1963). Japanese Ophthalmologist and Professor Emeritus of Tokyo University. He graduated from Tokyo University in 1905, and became a military doctor to work for one year. He then graduated from the Postgraduate School of Tokyo University where he studied Ophthalmology under Prof. J.→KOMOTO; subsequently he was made the Professor of Ophthalmology at the Military Medical School. He went to Germany in 1912 and studied for one year in Jena under Prof. W. Stock. His work in Jena was published in a paper "*Warum koennen Anisometropen hoeheren Grades in der Regel die vollkorrigierenden Glaeser nicht ertragen*?" Klin. Mbl. Augenheilkd. 52:247.1914. During his visits to Freiburg and Munich, World War I broke out and he returned home. He received his Doctor of Medical Sciences from Tokyo University in 1916. In 1922, after the retirement of Prof. J. KOMOTO, he was promoted to the Chair as the successor of KOMOTO. He held this position until retirement in 1941: he was then entitled as Professor Emeritus of Tokyo University. During his tenure, he served as the Dean of the Faculty of Medicine and the President of the Japanese Ophthalmological Society from 1928 to 1942. He invented many instruments and techniques for Ophthalmology that embrace the Ishihara Visual Acuity Chart, Ishihara *accommodometer*, Ishihara *Pupillary Distance Meter* and many others. The most famous invention is "*Ishihara Pseudoisochromatic Charts for Color Blindness*". He painted in his own hand with water colors and produced 3 sets of Charts, 1) in Japanese katakana, 2) in Japanese hiragana (Japanese phonetic characters) and 3) in Arabic numbers, and the last set was called the *International Edition*. The International Edition was used worldwide throughout the World War II and in the postwar period. Prof. Ishihara was rewarded for this work by the Award of the Japan Academy of Science and National Order of Cultural Merit. In 1926, he wrote a textbook " *Concise Ophthalmology*" which became the most widely read textbook of Ophthalmology, and in 1991 Prof. S.→SHIKANO revised the 22nd edition. He also wrote many monographs,including e.g. *Atlas of Eye Diseases*, *Atlas of Fundus Diseases*. His research covered wide areas including Trachoma, Myopia, Accommodation, Light Sense, etc. After retirement from Tokyo University, he was invited to be President of Maebasi Medical College (now Gunma University) and he retired in 1945. He donated the royalty of his Ishihara Pseudoisochromatic Charts to establish a Foundation "Isshin-kai: Foundation to Create a New Era". The Foundation was incorporated at the Ministry of Education and Culture, and gives research grants to those who conduct good research of Color sensation and its anomaly. The Foundation the produced "Ishihara Medal" and this was given to Prof. J.→Francois, the President of the International Council of Ophthalmology, at the time of the 23rd International Congress held in Kyoto in 1978. His students built a house with a hot spring in Izu Peninsula where he could spend his aged life. There he opened an eye clinic which served patients free of charge. His daughter married →SATO Tsutomu. In 1963 the Government conferred the First Order of the Sacred Treasure upon him. (SM)

Ishii, Keizo (1920-) Japanese Virologist, Professor of Hokkaido University. He discovered, in 1972 in collaboration with →KONO Reisaku, a new Enterovirus Type 70 that causes Acute Hemorrhagic Conjunctivitis. He graduated from Keio University in 1945, studied Internal Medicine at the University. He then worked at the National Institute of Health, Japan (N.I.H. Japan) from 1947 to 1971. During his tenure at the Institute, he received the 4th Futaki Award from the Japanese Society of Infectious Diseases for his

excellence in research. He was then promoted Director of the Virological Laboratory in 1964. In 1967, he was appointed a Senior Researcher of WHO and spent 6 months in the preparation of disease surveillance at the California State Laboratory, Berkeley and Center of Disease Control in Atlanta Georgia. He served as a Member of SMON Research Committee (1969-1972), Executive Director of the Committee (1972-1974), Consultant of the Committee (1974-1982) and Honorary Consultant (1982-1993). He was then invited to be Professor of Public Health of Hokkaido University in 1971 and served in this position until retirement in 1984. He had joint appointment as the Member of the N.I.H. Japan for 2.5 years from 1971. He also served as the Short-term Consultant of the West Pacific Regional Office of WHO in 1983. The Hokkaido Medical Association granted him the Highest Honor Award in 1980, in recognition of his distinguished service. Among many professional activities, some examples are as follows: Councillor of the Japanese Society of Infectious Diseases (1965-), Executive Director of the Japanese Society of Virology (1973-1977) and Emeritus Member of the Society (1991-), Japanese Society of Hygiene (Councillor: 1977-1990, Emeritus Member: 1991-), Japanese Society of Public Health (Councillor 1981-1985, President: 1978), Executive Director of Antiviral Agent Research Group (1991-), Consultant to the Japanese Research Group of Infectious Diseases of Nervous System, and a member of New York Academy of Sciences (1984-) and American Society of Microbiology (1986-). The papers concerning the discovery of the Enterovirus Type 70 are as follows: "*Pandemic of new type of conjunctivitis*. Lancet 1:1191, 1972" and "*Acute hemorrhagic conjunctivitis – Etiology, Epidemiology and Clinical Manifestations*. Ed. in Chief ISHII Keizo, University of Tokyo Press / Karger, Basel 1989".(SM)

Ishikawa, Kiyoshi (1918-) Japanese Ophthalmologist, Professor Emeritus of Chiba University. He is a graduate of Chiba University in the year 1944 and was drafted as an army surgeon to Northeast China and was detained until 1949 after the World War II. On his homecoming, he studied Ophthalmology at Chiba University under Prof. ITO Yaeji and received his Doctor of Medical Sciences in 1954 (thesis: *Clinical studies of trachoma: McCallan Classification and conjunctival flora, with special reference to early stage trachoma*. J. Jpn. Ophthalmol. Soc. 57: 1101, 1953). He was then promoted to be Assistant Professor in 1957 and to Professor and Chairman of the Department of Ophthalmology in 1975: he served in this position until retirement in 1984. He served on the Executive Board of Chiba University (1983-1984), on the Council of the Ministry of Health and Welfare (National Medical Examination Board)(1977-1979) and many other Governmental Committees and Councils. He served the Japanese Ophthalmological Society (JOS) as a Councillor (1975-1984), as Executive Board Member (1979-1983), as the President of the 85th Congress of the JOS. He also served as the President of the 18th Congress of the Japanese Society of Ophthalmic Optics (1982) and a Councillor of the Japanese Society of Diabetology (1977-1984). He is Honorary Member of these Societies. He worked extensively on diabetic retinopathy and has many publications in this field, in particular, he delivered the JOS Award Lecture at the 84th Congress of the JOS (*Clinical aspects of diabetic retinopathy and its treatment*. J. Jpn. Ophthalmol. Soc. 84: 1787, 1980). He is the author of "*New Handbook of Ophthalmology*, Vol. 10A, *Hypertension and the eye*, Kanehara Publ. Co. Tokyo, 1983" and "*Atlas of Clinical Ophthalmology*, *Aging and the eye: diabetic retinopathy*. Medical View, Tokyo, 1984".(SM)

Ishikawa, Satoshi (1932-) Japanese Ophthalmologist, Professor Emeritus of Kitasato University, Director of the Kitasato Institute of Clinical Environmental Medicine. Born as the 3rd generation in a Ophthalmology family (his father was the Assistant Professor to Prof.→KOYANAGI Yoshizo of Tohoku University), he graduated from Tohoku University in 1957, studied Ophthalmology at Tokyo University under Prof. →HAGIWARA Hogara. He received his Doctor of Medical Sciences in 1963 (thesis: *Studies of electrophysiology of intraocular muscles: action potentials of the ciliary muscles*. J. Jpn. Ophthalmol. Soc. 65: 1, 1961; ibid. 66: 728, 1962). In 1963 he was granted a Fulbright Scholarship and started to conduct research with Prof. Gm. Breinin of New York University: he was appointed the Lecturer in 1964 and Assistant Professor in 1965, at the New York University. (*Accommodation in monkeys induced by midbrain stimulation*. Invest. Ophthalmol. 7: 386, 1968). On his homecoming, he was made the Lecturer at Tokyo University in 1965 and then promoted in 1971 to be the Professor and Chairman of the Department of

Ophthalmology of Kitasato University, where he served until retirement in 1997. During his tenure, he served as the Dean of the School of Medicine of the University (1994-1997). The positions he has held in professional Societies are Councillor and Executive Board of Trustees of the Japanese Ophthalmological Society (JOS) and the President of the 96th Congress of the JOS. He is one of the founders and the President (50th Anniversary Congress) of the Japanese Autonomic Nervous System Society, President of the Neuro-ophthalmology Society Japan (1974-present), President of the 6th International Neuro-ophthalmology Society (INOS) (1986), International Board of Environmental Medicine, and Fellow of the American Academy of Environmental Medicine (1989-), Scientific Consultant of Environmental Health Center Dallas, U. S. A. (1989-) and President of the Japanese Society of Clinical Ecology (1992). He has many editorial assignments, including Chief Editor of J. Clin. Ecol. Japan (1992-), Jpn. J. Ophthalmology (1971-) and Chief editor of Neuro-ophthalmology Japan (1974-). He devoted himself to studies of health hazard of environmental factors, and he worked as the Chairman of the Ministry of Health project "*Toxicity of organic phosphate agents on humans*" since 1972, and the outcome was reflected in Government policy to terminate use of certain organic phosphate in agriculture. He also served as the Chairman of "*Myasthenia Gravis Research Project*" of the Ministry of Health (1973-), and also of "*Ophthalmological studies of Visual Display Terminal workers*" (1986-1992). In recognition of his meritorious research, the JOS granted him their Award in 1995 (Award Lecture at the 99th JOS Congress: *Ocular disturbances due to environmental pollution: in particular attention to organic phosphate*. J. Jpn. Ophthalmol. Soc. 100: 417, 1996), and he received the Jonathan Forman Award from the American Academy of Environmental Medicine (1996). Some examples of his publications in these fields are "*Development of myopia following chronic organophosphate pesticide intoxication: an epidemiological and experimental study in Neurotoxicity of the visual system*. Ed.W. H. Merigan et. al., p. 233, Raven Press, New York 1980" and "*The center for controlling the near reflex in the midbrain of the monkey: a double labelling study*. Brain Research. 519: 217, 1990". (Director, Clinical Environmental Medicine, The Kitasato Institute, 5-91, Shirogane, Minato-ku, Tokyo 108-8641, phone: +81-3-3444-6161(ext. 5610); fax: +81-3-3448-0553; e-mail: ishikawa@kitasato-u.ac.jp)(SM)

Hiroshi Ishizu

Ishizu, Hiroshi (1884-1936). Japanese Ophthalmologist, a graduate of Tokyo University in 1912. He served as a military doctor for 2 years, and then he studied at the Postgraduate School of Tokyo University under Prof. J.KOMOTO. He studied the visual field of Kakke patients (Vitamin B deficiency, very frequent at that time), and finished the thesis "*Ocular symptoms of Kakke patients*" and was granted the Doctor of Medical Sciences from Tokyo University. He discovered a racket shaped central scotoma, typical of axial optic neuropathy: the scotoma is called *Ishizu Scotoma* (SM)

Isis. An ancient Egyptian goddess, whose healing powers were especially at the command of ophthalmic patients. Long and widely known in antiquity was the eye-salve called "*the plaster of Isis.*" Isis would, in fact, appear to have been, among the gods, "a general practitioner, paying especial attention to diseases of the eye."American Encyclopedia of Ophthalmology,Vol.9,p.6682

Hosei Ito

Ito, Hosei (1831-1898). The *first* Japanese Ophthalmologist who studied in Utrecht, Holland. He studied Medicine in Nagasaki under Pompe van →Meerdervoort. He was selected in 1862 as one of the students to study Medicine in Holland and he returned in 1868, and was appointed the Head Doctor of the Ministry of Royal Affairs. On his return he brought a model of the eye, made in France in 1863, composed of many parts that could be dismantled to study the structure of the eye: this model eye is preserved at the Museum of the Faculty of Medicine of Tokyo University. Dr. ITO went to Utrecht again in 1870 and studied under F.C.→Donders. He studied with →Snellen the visual acuity and produced the Visual Acuity Chart: Ito Gempak: *Snellen's Lettertafel in Japanisch*, Utrecht, 1873. After returning home he served the Emperor Meiji: his survey of eye diseases in Niigata Prefecture, carried out in 1878, was reported to the Emperor who gave funds to establish teaching and treatment facilities for eye diseases. This was the beginning of social movements for Eye sanitation and hygiene in Japan. (SM)

Ito, Masao (1928-) Japanese Neurophysiologist, Professor Emeritus of Tokyo University, Director, Brain Science Institute, RIKEN (Institute of Physical and Chemical Research). He

graduated from Tokyo University in 1953, studied Physiology under Prof. FUKUDA Kunizo and received his Doctor of Medical Sciences in 1962 (thesis: *The electrical activity of spinal ganglion cells investigated with intracellular microelectrodes*. Jpn. J. Physiol. 7:297-323, 1957). During the period of 1959-1962, he joined Prof. Sir John Eccles in Canberra, Australia and worked on ion permeability of motoneuron synaptic membrane. He served as the Professor and Chairman of the Department of Physiology of Tokyo University from 1970 until retirement in1989. During his tenure, he served as the Dean of the Faculty of Medicine of the University and the Executive Board of Tokyo University (1986-1988). He has held many key positions in National and International professional Societies. They are President/ Secretary, Japanese Physiological Society (1978-93), President of IBRO (International Brain Research Organization)(1980-1986), President of Japan Neuroscience Society (1982-1999), and President of the International Union of Physiological Sciences (1993-1997). He served also many Government Councils and Committees and Japan Science Academy, and served as Chairman of the Science Council of Japan (1994-1997). His research covered neuronal activities of the cerebrum and cerebellum and integration of neuronal functions, that included oculomotor and vestibulo-ocular reflexes, and he published 88 original papers and 93 review articles and 2 Monographs in the English Language. Some examples of publications are "*Specific patterns of neuronal connexions involved in the control of the rabbit's vestibulo-ocular reflexes by the cerebellar flocculus*. J. Physiol. (Lond.) 265: 833, 1977", "*Subdural application of hemoglobin to the cerebellum blocks vestibuloocular reflex adaptation*. NeuroReport, 2: 193, 1991" and "*Cerebellar learning in the vestibulo-ocular reflex*. Trends in Cog. Sci., 2: 313, 1998". In recognition of his meritorious scientific Achievements, the Government of Japan conferred on him the *Order of Culture* (1996), the Government of France the *Chevalier de la Legion d'Honneur* (1998), *Japan Prize*(1996: The Science and Technology Foundation of Japan), *Person of Cultural Merit* (1994: the Government of Japan) and many other prizes from Japan and abroad. He is a member of Japan Academy (1989-), foreign member of Royal Swedish Academy of Sciences (1989-), Armenian Academy of Sciences (1990-), Royal Society London (1992-), Russian Academy of Sciences (1994) and French Academy of Sciences (1998-). Due to his expertise, he was asked to give numerous Lectures and was given honorary degrees from three universities. He is currently active in research to explore new horizons of brain research. (Director Brain Research Institute, RIKEN. Hirosawa 2-1 Wako, 351-0106, Japan. +81-4-8462-1111(ext. 7541); fax: +81-48-467-9683, e-mail: masao@postman.riken.go.jp) (SM)

Motoharu Ito

Ito, Motoharu (1865-1920). Japanese Ophthalmologist, a graduate of Tokyo University in 1893 and a student of Prof. J.→KOMOTO. He served as the Professor of Ophthalmology in Sendai Medical School (now Tohoku University) during 1898-1902, and in Kyoto Medical School (now Kyoto Prefectural University of Medicine) during 1902-1914. He studied in Berlin in 1910-1912, under Prof. R.→Greeff, Prof. J.v.→Michel, and Prof. J.→Hirschberg. His work during this time was published in the German Language, "*Ein Beitrag zur Kenntnis der pathologischen Anatomie bei Retinitis syphilitica hereditaria*", Arch. Augenheilkd. 73:4,1913.(SM)

Yaeji Ito

Ito, Yaeji (1891-1958). Japanese Ophthalmologist, Professor Emeritus of Chiba University. He graduated from Tokyo University in 1917. He studied Ophthalmology under Prof. J. KOMOTO, and was appointed the Professor of Ophthalmology of Chiba Medical School (now Chiba University). He studied in Germany and Switzerland for 2 years, 1921-1923: his work on *Electroretinogram* conducted at the University of Bern, under Professor Ascher became his thesis, and he was granted his Doctor of Medical Sciences from Chiba University. He retired from the University in 1955. During his tenure, he served as the Director of the University Hospital, and the President of the 44th Congress of the Japanese Ophthalmological Society. He also served as the President of the Society 1947-1949. He was interested in physical therapy and at the 45th Congress of the Society, he delivered a Special Lecture "*on Physical Therapy in Ophthalmology*". He was also a great scholar of Medical History and he translated "THE SUSHRUTA SAMHITA" (Indian Classic of Medicine, see SUSRATA) into a 3-volume Japanese Language book from the English translation of the original Sanskrit text. He was made Emeritus Member of the Japanese Ophthalmological Society and Japanese Society of Medical History. In 1944 the Government conferred the Second Order of the Sacred Treasure upon him. (SM)

Motokazu Itoi

Itoi, Motokazu (1929-1996). Japanese Ophthalmologist, Professor Emeritus of Kyoto Prefectural University of Medicine. He was a graduate of the Tokyo University in 1955 and a student of Prof. H.HAGIWARA. He was trained at the Department of Ophthalmology and received his Doctor of Medical Sciences in 1961 through his work on the properties of corneal collagen. He conducted research on the cornea at the Retina Foundation in Boston from 1967 to 1969. He was then appointed Assistant Professor at Juntendo University, and promoted to Professor and Chairman of the Department of Ophthalmology of the Kyoto Prefectural University of Medicine. He also served the University of Florida as a visiting Professor in 1972 and 1973. During his tenure at Kyoto Prefectural University of Medicine, he served as the President for the 95th Congress of the Japanese Ophthalmological Society in 1991. He retired from the University in 1991 and was named Professor Emeritus of the University. He was subsequently invited to be Director of the Akashi City Hospital where he served for 2 years. His main interest was the cornea and he wrote many papers on this subject. He developed *thermokeratoplasty* for keratoconus. He founded a professional Journal (in Japanese) "*ATARASHII-GANKA: Journal of the Eye*" in 1984 and worked as Chief-Editor until 1993. This Journal is now edited by Prof. S. KINOSHITA and provides most up-to-date practical knowledge to Ophthalmologists throughout Japan. Other official activities include President of the Keratoplasty Society of Japan and the Japan Society of Ophthalmic Electronics, and many others.(SM)

Hideyuki Iwashi

Iwahashi, Hideyuki (1925-1984) Japanese philanthropist, Chief Director of Nippon Lighthouse Inc. and Association for Ophthalmic Cooperation to Asia (AOCA). He was born the son of IWAHASHI Takeo and graduated from Kansei-Gakuin University, Department of Philosophy. He lost vision in both eyes in his youth and devoted himself to the welfare of the blind and prevention of blindness not only in Japan but also in the world. He was made the Secretary General of the Japan Federation of the Blind (1954-1960) and attended as the representative of Japan the First Assembly of the World Council of the Welfare of the Blind (WCWB) (1954). He was nominated the Chief Director of Nippon Lighthouse Inc. in 1954. He never failed to attend the World Assembly of the WCWB and was on the Executive Board since 1967 and served as the Chairman of the Asian Committee of the WCWB since1967. He founded AOCA and served as the President. The AOCA invited many Asian Ophthalmologists and Ophthalmic Technicians to Japan for training and also sent Medical teams on many occasions to conduct Eye Camps and Eye Care teaching in Asian Countries, in particular, to Nepal. He founded "*Vocational and Social Adjustment Training Center for the Blind*", and in recognition of this service, he was granted the Mainichi Culture Award (1969). He also contributed to the Welfare of the Blind in Korea, and he received a Certificate of Appreciation from the Ministry of Health and Welfare of the Republic of Korea (1972). He published many books, and some examples are "*Creation of useful member of the society – the training of visually handicapped*, Nippon Lighthouse, 1968", "*From the Northern to the Southern Hemisphere – with a white cane*, Nippon Lighthouse 1972", "*A song of Blue Bird – Helen Keller and Japan*, NHK Publ. 1981" and "*What do you see, Miyake Bunko*, 1983". In recognition of his service, he received the Takeo Iwahashi Prize in 1978. (Nippon Lighthouse: 2-4-37, Imazu-naka, Tsurumi-ku, Osaka 538-0042, Japan. phone: +81-6-6961-5521, fax: +81-6-6968-2059)(SM)

Takeo Iwashi

Iwahashi, Takeo (1898-1954) Japanese philanthropist, Pioneer for the Welfare of the Blind and Founder of the Nippon Lighthouse. While he was a student of Waseda University, he fell ill at the age of 19 and lost vision in both eyes. In the midst of despair, he was encouraged by his mother and started to study at Osaka Municipal School for the Blind in 1918 and then he studied at Kansei-Gakuin University. Under the guidance of Mr. Kumagai Tetsutaro, he joined the Toa (East-Asia) Association of the Blind in 1922 and organized the All Japan Assembly of the Blind in Osaka. He worked very actively for publication of Braille books and periodicals. He served at the Osaka Municipal School of the Blind as a teacher of the English Language. He then studied at the University of Edinburgh in 1925-1927 and received his Master of Arts degree. He extended his studies on the welfare of the blind at the Royal National Institute for the Blind in London and returned home in 1928. While teaching at Kansei-Gakuin University, he expanded the work of Braille publications and founded Lighthouse in 1928. He was invited to the United States of America to lecture

in various cities and this travel initiated his friendship with Ms. Helen Keller. On return home, he built in 1935 the Center for the Blind that had auditorium, Braille printing facilities, and Braille library. He started various courses for the blind at the Center, e.g. acupuncture, massage, weaving, knitting and counseling of the blind: the Center celebrated its opening in 1936 and was recognized as the World's 13th Lighthouse. Mr. Iwahashi invited Ms Helen Keller in 1937 and in 1948: they traveled throughout Japan and completed a campaign for the welfare of the blind. In 1948 he founded the Japan Association of the Blind and served as the Chairman, and he contributed greatly for the enactment of the legislation for the welfare of the handicapped. The Center he founded was incorporated in 1952 and named the Nippon Lighthouse Inc. He founded the National Council of Welfare Institutions for the Blind in 1952, and served as the Chairman. He wrote 24 books, e.g. "*Light from Darkness*" (in English) Nippon Lighthouse, 1946", "*Helen Keller and Blue Bird*. Shufu-no-tomo, Tokyo 1948" and "*Creative Peace*, Dobunkan, Tokyo 1949". In recognition of his distinguished service, the Asian Committee of the World Council for the Welfare of the Blind (WCWB) (presently World Blind Union) created the Takeo Iwahashi Prize in 1975 to be given to those in Asia who made outstanding contributions to the welfare of the visually handicapped. Since 1985, the Nippon Lighthouse continues the Prize. (Nippon Lighthouse: 2-4-37, Imazu-naka, Tsurumi-ku, Osaka 538-0042, Japan. phone: +81-6-6961-5521, fax: +81-6-6968-2059)(SM)

Iwamoto, Takeo (1927-) American Eye Pathologist of Japanese Origin, Professor Emeritus of Cornell University Medical College New York. He graduated from Tokyo University with M.D. degree in 1955, studied Ophthalmology under Prof. HAGIWARA Hogara and received Doctor of Medical Sciences in 1962 (thesis: *Electron microscopic studies on the cells in the normal human iris stroma* Acta Soc. Ophthalmol. Jpn. (J. Jpn. Ophthalmol. Soc.) 65:1296, 1961). In recognition of this work the Society granted him the Shimizu Prize. He moved to Columbia University, College of Physicians and Surgeons in New York and was appointed Assistant Professor in 1968 and promoted to Associate Professor in 1971. He then worked as Professor of Clinical Ophthalmology, Cornell University from 1979 to 1992. His main interest of research has been in electron microscopic studies of eye pathology. His many publications include *Electron microscopic studies on Fuchs combined dystrophy* Part I and II, IOVS 10: 9 and 29, 1971 and *Ultrastructural comparison of spindle A, spindle B, and epithelioid-type cells in uveal malignant melanoma*. IOVS 11:873, 1972î. (e-mail : TIwa166536@aol.com)(SM)

Alexander Iwanoff

Iwanoff, Alexander (1836-1880) Russian ophthalmologist, renowned for investigations into the pathologic anatomy of the eye. He studied for a number of years at Moscow. Compelled to relinquish his studies in 1859, because of tuberculosis, he proceeded to Montpellier, in the South of France, in search of the health which was never to be his. While at Montpellier, however, he became acquainted with →Pagenstecher, and was filled by this ophthalmologist with such an enthusiasm for ophthalmology, that he determined to devote his practice exclusively to the treatment of the eye. He thereupon studied ophthalmology with →Knapp at Heidelberg, with Pagenstecher at Wiesbaden, and with →Arlt in Vienna. In 1867 he entered the University of St. Petersburg, at which institution he soon received the degree of Doctor of Medicine. At the cost of the Russian Government (on account of his distinguished ability) he studied ophthalmology abroad for two years more. Then, in 1869, he settled at Kiev, Russia, where he had been already appointed full professor of ophthalmology. After a number of visits to kindlier climates than that of Russia, he succumbed to his pulmonary disease at Menton, France. Iwanoff's most important ophthalmologic writings are as follows: 1.*Zur Anatomie des Glaskörpers*. (Zehender's Klin. *Mowatsb., 1864.)* 2.*Ueber die Verschiedenen Entzündungsformen der Retina*. (Ibid 1864.) 3. *Zur Ablösung der Chorioidea*. (Graefe's *Archiv, XI.)* 4. *Zur Normalen und Pathologischen Anatomie des Glaskörpers. (Ibid.,* XII.) 5. *Ueber Neuritis Optica*., (Ibid., 1868.) 6. *Ueber Chorioiditis Disseminata*. (Ibid., 1869.) **7.** *Zur Pathologie der Retina*. (Ibid., XII.) 8. *Beiträge zur Anatomie des Ciliarmuskels*. (Ibid., XV.) 9. *Mikroskopische Anatomie des Uvealtractus und der Linse*. *(Handb. der Ges. Augenheilk.,* Graefe und Saemisch, Vol. I, Chap 3, 1874.) 10. *Zur Pathologischen Anatomie des Trachoms. (Ber. der* Ophthalm. *Gesellsch.,* 1878.).11. *Beitrag zur pathologischen Anatomie des Hornhaut- und Linsenepithels*(no place nor date) American Encyclopedia of Ophthalmology, Vol.9, p.6686-6687.Albert.

Iwata, Heitaro (1927-) Japanese Pharmacologist, Professor Emeritus of Osaka University. He graduated from the Faculty of Medicine of Osaka University, studied at the Pharmacology Department of the University and received the degree Doctor of Medical Sciences in 1956. He worked as the Professor and Chairman of the Department of Pharmacology, Faculty of Pharmacy of Osaka University from 1976 to 1991: he served as the Dean of the Faculty in 1979-1981. His professional activities have been extensive: Executive Director of the Japanese Pharmacological Society (1976-1981,1982-19861988-1991), President of the Society (1990-1991), Executive Director of the Pharmaceutical Society of Japan, Executive Director of the Vitamin Society of Japan (1983-1991). Currently he is the Emeritus Member of these Societies. He is one of the Founders of the Japanese Society of Ocular Pharmacology and served as the President of the 3rd Congress. He also served as the President of the 6th Japan-Korea Joint Seminar on Pharmacology (1987) and of the Research Society for sulfur-containing Amino Acids (1978-1987). His research covered Vitamins, Neuropharmacology, Ocular Pharmacology. For his meritorious work on "*Pharmacological and biochemical studies on the role of thiamin in the function of the nervous system*". The Vitamin Society of Japan granted him the *Society Award* in 1975. He also received Dr. *Honoris Causa* from Semmelweis Medical University in Budapest in 1991. Many of his articles and books include "*Possible role of thiamin in the nervous system*. Tren. Pharmacol. Sci. 2: 171. 1982", "*Cysteine sulfinic acid in the central nervous system 1-3*, J. Neurochem. 38: 1268, 1275, 1280, 1982". He wrote books e.g. "*Taurine, its metabolism, physiological and pharmacological effects*, Ishiyaku-Shyuppan, Tokyo 1975", and "*Taurine and the Heart*. Kluwer Academic Press, 1987". Besides his professional activities, he is the author of more than 15 mystery novels. (fax: 81-7-2649-3551)(SM)

Iwata, Kazuo (1927-) Japanese Ophthalmologist, Professor Emeritus of Niigata University. He is the 4th generation of an Ophthalmology Family, and graduated from Gunma University in 1952. He studied Ophthalmology at Niigata University under Prof. MIKUNI Masakichi and received his Doctor of Medical Sciences in 1957 (thesis: *Effects of deep anesthesia on the retinal vessel caliber and retinal arterial pressure*. J. Jpn. Ophthalmol. Soc. 61: 1371, 1957). He was granted an Alexander von Humboldt Scholarship and studied on glaucoma and retinal arterial pressure at University of Bonn (1961-1963). In 1964, he was appointed the Assistant Professor and then promoted to be the Professor and Chairman of the Department of Ophthalmology of the University in 1972 and served in this position until retirement in 1993. He delivered a special report to the 77th Congress of the Japanese Ophthalmological Society (JOS) (*Environmental pollution and the eye: Minomata disease in Niigata*. J. Jpn. Ophthalmol. Soc. 77: 1788, 1973) and a special lecture at the 38th Congress of the Japanese Society of Clinical Ophthalmology 1985 (*Early signs of primary open angle glaucoma*. Jpn. J. Clin. Ophthalmol. 39: 407, 1985). He is a recipient of the JOS Award (the Award Lecture: *Normotensive glaucoma and primary open angle glaucoma: its pathophysiology and mechanism of optic nerve damage*. J. Jpn. Ophthalmol. Soc. 96: 1501, 1992) and of the Suda Award from the Japan Glaucoma Society (JGS) (*Neuropathy in primary open angle glaucoma and normotensive glaucoma*. Atarashii Ganka (The Journal of the eye): 10: 1139, 1993). He also gave an invited lecture at the 2nd Congress of the Asia-Oceanic Glaucoma Society in 1999 (*New aspects of primary open angle glaucoma and normotensive glaucoma*). He has served on the JOS as a Councillor (1972-1993) and the Board of Trustees (1984-1991) and as the President to the 39th Congress of the Japanese Society of Clinical Ophthalmology (1985) and the 2nd Congress of the JGS (1991): he is one of the founders of the JGS and served on the Board of Trustees (1990-). He is also a member of the International Glaucoma Committee (1980-1998). He is an Honorary Member of these Societies, and currently serves as the President of Niigata Eye Bank. (SM)

Iwata, Shuzo (1930-1688) Japanese Pharmacologist working on the eye, President of the 7th Congress of the International Society of Eye Research 1986 and the President of the 5th Congress of the Japanese Society of Ocular Pharmacology, Professor of Pharmacology of Meijo University, Nagoya. He graduated from the Faculty of Sciences of Kobe University in 1955, and studied at Kyoto University where he received his Ph.D. for work on "*physico-chemical studies of the biomembrane and proteins in the crystalline lens*". He

Shuzo Iwata

worked as a Research Fellow at the Retina Foundation, Boston, U.S.A. in 1967-1969 and studied the surface chemistry of the tear film. He then conducted research at the Howe Laboratory of Harvard University on biochemical properties of the crystalline lens with Dr. KINOSHITA Jin. He served as the Professor and Chairman of the Department of Pharmacology of Meijo University from 1977 until his death. He was on the editorial board of Experimental Eye Research and the Committee Member of the International Society of Eye Research. The front-page figure of Experimental Eye Research is taken from his article "*Histochemical Studies on the use of sodium hyaluronate in the anterior eye segment.*" Jpn. J. Ophthalmol. 29: 187, 1985. He has published 151 original articles, 52 books or review articles, e.g. *Calcium pump and its modulator in the lens*, A review. Curr. Eye Res. 4: 229, 1985. He also delivered many lectures at domestic and international congresses. He was a Founding Member of the Japanese Society of Cataract Research and on its Executive Board of Directors. He was the President of the 2nd Congress of the US-JAPAN Cooperative Cataract Research Group in 1983. In recognition of his meritorious works, he received the Award of Naito Foundation in 1979, the International Award from the US-JAPAN Cooperative Cataract Research 1980 and the *First Alcon Science Award* in 1984.(SM)

Jackson, Edward (1856-1942) American Ophthalmologist, Editor, and Educator, was born in West Goshen, Chester County, Pennsylvania, where his father was a school teacher. He was the eldest son of Halliday II (1817-1887) and Emily (Hoopes) Jackson, but had an older half-brother whose mother Carolyn (Hoopes) Jackson died in 1851. He had two younger brothers, Halliday (1858-1950) and John (1868-1946), and a sister Carolyn (1862-1927). The Jackson forebears came from Lincolnshire, England, but became Irish colonists under Cromwell. Two generations later, Dr. Jackson's grandfather migrated to Pennsylvania where his father was born in Darby. Edward Jackson's father was an educator, writer, and lecturer, and was principal of the Friends' Institute, New York City (1849-1854) prior to his return to Pennsylvania where he continued teaching. The Jackson family were loyal members of the Society of Friends and Edward's decision to enter engineering was opposed because of its then military connotation. Nonetheless, he received a Bachelor of Science degree in civil engineering from Union College in 1874, and, in 1878, received the M.D. degree from the University of Pennsylvania. Dr. Jackson then began general medical practice in West Chester, but his practice was interrupted by diphtheria which caused prolonged paralysis of his leg muscles and the focussing muscles of the eye. During a lengthy convalescence; he became interested in the eye and, in 1884, moved to Philadelphia to practice ophthalmology. In 1885, he published a monograph concerning the measurement of refractive errors of the eye by means of the shadow test which was first described in 1873. Thereafter, his major scientific contributions were in the field of refraction and he was largely responsible for popularizing the cross-cylinder used in the measurement of astigmatism. In 1878, Jackson married Jennie L. Price. They had two sons and two daughters: Ethel Jackson Ramaley (1880-1952); Robert (1881-1913); Thomas (1883-1959); Edward (1887-1887); Herbert (1888-1912) and Helen (1892-1928). In 1894, Mrs. Jackson developed tuberculosis and the family moved to Denver, Colorado where she died in 1896. Jackson returned briefly to Philadelphia but went permanently to Denver in 1898. Jackson's professional career was dominated by teaching, Medical Society activity, and editorial work. He became Professor of Ophthalmology at the Philadelphia Polyclinic and School of Graduates of Medicine in 1888 and was appointed Surgeon to Wills Eye Hospital in 1890. In 1905, he was appointed Professor of Ophthalmology at the medical school of Colorado University and became Emeritus Professor in 1921. He was active in the formation of several medical societies; he participated in the establishment of the Ophthalmic Section of the College of Physicians of Philadelphia (1890), the American Board for Ophthalmic Examinations (1914), subsequently the American Board of Ophthalmology, the forerunner of twenty such specialty groups which certify medical specialists. In 1899, he collaborated in the formation of the Denver, later the Colorado, Ophthalmological Society. In 1900, he authored *A Manual of the Diagnosis and Treatment of the Eye*, which second edition was published in 1907. In 1915, he initiated a summer congress for eye specialists which has been widely copied and today is sponsored by the University of Colorado. From 1904 to 1927 he edited the *Ophthalmic Year Book* which he established. In 1918, he became the first editor of the Third Series of the American Journal of Ophthalmology, which

consolidated five existing medical journals; he remained editor until 1927 and director of the parent company until his death. He led a spartan, abstemious life combined with vigorous exercise, chiefly mountain climbing. His travel was limited to attending medical society meetings, but he went often and to many. He was particularly effective as a discussant of scientific papers. He was a tall, slender man with an air of preoccupation, who listened alertly and responded with apt phrases. His lectures, mainly dealing with professional topics, were extremely popular. He died in Denver, Colorado, and his ashes were scattered over the eighty acres of land he owned in Hidden Valley in Rocky Mountain National Park. He wrote: *Skiascopy and its practical application to the study of refraction*. Philadelphia 1895, and with Baldwin E. Gleason: *Saunders Question-Compends No.14, Part 1*: *Essentials of refraction of and the diseases of the eye*, Part II (by Gleason). *Essentials of diseases of the nose and throat* Philadelphia: W.B. Saunders, 1890. Complete Bibliography: Denver County Medical Society Library, University of Colorado Medical School, Colorado; State Historical Museum, and Dennison Building, Boulder Campus of University of Colorado; *Recollections*, AJO 26:89, 1943; Crisp, W. H.: *Edward Jackson's Place in the History of Refraction*, AJO 28:1, 1945, (Jackson Memorial Lecture); *Contributions to Ophthalmic Science*, Menasha, Wis., George Banta Co., 1926 [by Frank→Newell] .(BJO 27, AJO January 1943) JPW.

Jackson, John Hughlings (1836-1911) English ophthalmologist and neurologist, who gave his name to Jacksonian epilepsy. Born at York, England, he attended the York Medical School and Saint Bartholomew's Hospital, London. In 1860 he received the degree of M. D. from the University of St. Andrews, and in 1868 became a Fellow of the Royal College of Physicians of London. In 1874 he was made physician at the London Hospital, in which he was long famous as a teacher. Hughlings Jackson was a voluminous writer and ophthalmologists owe to him many acute observations of ocular symptoms indicative of nervous diseases. In addition to works and articles outside of ophthalmology, he wrote: 1. Observations on Defects of Sight in Brain Disease and Ophthalmoscopic Examination during Sleep. *(Royal London Oph. Hosp. Rep.,* 1863-5, IV.) 2. A Physician's Notes on Ophthalmology. (*Ibid.*, 1873, VII; 1874, VIII.) 3. A Physician's Notes on Ophthalmology, Second Series. (*Ibid.*, 1875, VIII.) 4. Remarks on the Routine Use of the Ophthalmoscope in Cerebral Disease. *(Med. Press and Circ.,* Lond., 1.879, n. s., XXVII.) 5. Discussion on the Relation Between Optic Neuritis and Intracranial Disease, *(Trans. Ophth. Soc. U. Kingdom,* Lond., 1880-81, I.) 6. On Eye Symptoms in Locomotor Ataxy. (*Trans.Ophth.Soc.U.Kingdom,* Lond., 1880-81, I.) **7.** On Optic Neuritis in Intracrania,l Disease. *(Med.Times and Gaz.,* Lond., 1881, I.) 8. On Ocular Movements with Vertigo, Produced by Pressure on a Diseased Ear. *(Tr.Ophth.Soc.U.Kingdom,* Lond., 1882-3, III.) 9. Ophthalmology and Diseases of the Nervous System, Being the Bowman Lecture. *(Trans.Ophth.Soc.U.Kingdom,* Lond., 1885-6, VI.) American Encyclopedia of Ophthalmology,Vol.9,p.6688;The Ophthalmoscope, 1911,p.811.

Jacob, Archibald Hamilton (1837-1901) Irish ophthalmologist, founder of the Dublin Eye and Ear Infirmary. He was born at Dublin, the fourth son of the distinguished Dublin ophthalmologist, Arthur →Jacob. He received the medical degree in 1862, and, in 1866, he succeeded his father as Ophthalmic surgeon to the City of Dublin Hospital. This position, however, he resigned in 1870, and in 1872 founded the Dublin Eye and Ear Infirmary, in which institution he was surgeon-in-chief until 1875. In 1882 he was made Professor of Ophthalmology at the College of Surgeons. In 1884 he became a Fellow of the Council of the Royal College of Surgeons. For a long time Dr. Jacob was editor-in-chief and sole owner of the *Medical Press and Circular*," and in that journal his most important ophthalmologic articles were published, to wit: " On Ophthalmic Surgery..... Comparative Statistics of Various Methods of Cataract Extraction," "Anatomy and Physiological Functions of the Crystalline Lens." American Encyclopedia of Ophthalmology,Vol.9,p.6689

Jacob, Arthur (1790-1874) Irish anatomist and ophthalmologist, father of Archibald Hamilton →Jacob, and himself the discoverer of *Jacob's membrane* (the layer of rods and cones in the retina) and (practically, at least) the discoverer of "Jacob's ulcer." Born June 13, 1790, at Knockfin, near Maryborough, Queen's County, Ireland, the grandson, son, and brother of well-known general surgeons, he began to study medicine in 1807 at Stevens Hospital, Dublin, receiving the medical degree at Edinburgh in 1814. After a year

of further study in Paris and London, he returned to Ireland and settled in Dublin. In conjunction with Graves, Marsh, Cusack and Hart, he founded the Park Street Medical School, which survived a few years. In 1826 he became Professor of Anatomy and Physiology at the Royal College of Surgeons of Ireland, and in this position became a celebrated teacher. In his practice he devoted his attention chiefly, but not exclusively, to ophthalmology, and, in his anatomical investigations, was also chiefly concerned with the eye. He was a broad man, however, and deeply interested in almost every branch of natural science. In 1838 founded, with Maunsell, "*The Dublin Medical Press*," and in 1852 assisted in the institution of *The City of Dublin Hospital*. He also founded, or assisted in founding, the *Royal Medical Benevolent Fund* and *The Irish Medical Association*. Jacob was thrice elected president of the Royal College of Surgeons. In 1860 a gold medal was struck in his honor, while, in 1874, his bust, his portrait in oils, and his great collection of medical works were installed in the hall of the Royal College of Surgeons. Jacob taught and practised till eighty years of age. Then, in 1869, when a very large number of the leading ophthalmologists of foreign countries (notably Henry →Howard, the first of Canadian ophthalmologists) had been his students, he retired to the house of his son at Barrow-in-Furness, Lancashire, where he died Sept. 24, 1874, aged 85. Jacob's most important writing was that in which he announced his discovery of what today is known as Jacob's membrane. It appeared in the *Philosophical Transactions* for 1819*: "An Account of a Membrane in the Eye, now first described. By Arthur Jacob, M. D. Member of the Royal College of Surgeons in Ireland, Demonstrator of Anatomy and Lecturer on Diseases of the Eye in the University of Dublin. Communicated by James Macartney, M. D. F. R. S. Read July 1, 1819"*. Next in importance to the classical article on the layer of rods and cones or Jacob's membrane, was that on Jacob's ulcer, which appeared in the *Dublin Hospital Reports,* Vol. IV, 1827, at p. 232, and runs as follows: "*Observations respecting an ulcer of peculiar character, which attacks the eye-lids and other parts of the face"*.In addition Arthur Jacob wrote as follows: 1. *The Eye*. *(Encyclopedia of Anatomy*.) 2. *Amaurosis*. *Ophthalmia*. *(Encyclopedia of Practical Medicine.)* 3. *Inquiries Respecting the Anatomy of the Eye*. *(London Med.-Chir. Trans.,* XII, 1823.) 4. *On the Form, Construction, and Use of a Cataract Needle of a Particular Description*. (*Dublin Hosp.Reports,* 1827, pp. 214-231.) 5. *Paralysis of the Ocular Muscles*. (*Dubl.Med. Press,* 1841.) 6. *The Pathology of the Eye as a Guide to General Pathology*. (*Dublin Med.Press,* 1845.) 7. *A Treatise on the Inflammation of the Eyeball*. (Dublin, 1849) 8. *Spintheropia*. *(Dubl. Med.,Press,* Jan. 25, 1845, and Aug. 6, 1851.) 9. *On Cataract and the Operation for its Removal by Absorption, with the Fine Needle, Through the Cornea*. (Dublin, 1851. Transl. by Testelin in *Ann. d'Ocul*., XXIX, 172-207, 1855.) American Encyclopedia of Ophthalmology,Vol.9,p.6689-6699.Boase: Modern Biography, Cameron´s History of the Royal College of Surgeons in Ireland. Albert. British Journal of Ophthalmology 1927, XI, p.257.[GM 1491 & 4025].

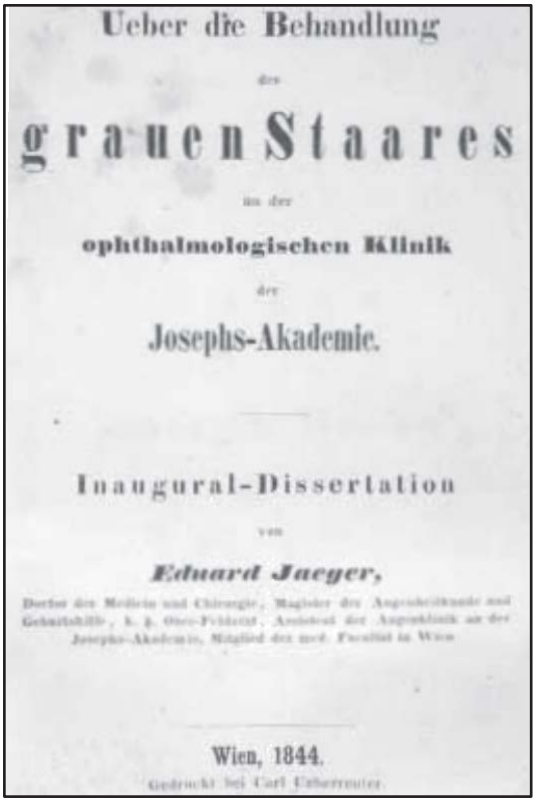
Jacobson, Julius (1828-1889) German ophthalmologist, son of Ludwig Jacobson and younger brother of Heinrich Jacobson, both internists of note, and himself an ophthalmologist of high reputation. Born at Königsberg, Germany, he studied there, at Berlin and at Vienna returning, however, to Königsberg for graduation in 1853 (thesis: . *De glaucomate* Regiomonti Pr.: Impressit Ernestus Julius Dalkowski [1853]). The following year he settled at Königsberg, and in 1857 he qualified as privatdocent in ophthalmology at the Königsberg University. In 1859 he was made extraordinary, in 1872 ordinary professor of the same subject in the same institution. Five years later a new ophthalmic polyclinic was erected for his use. Jacobson should be remembered for his long-continued and at last successful fight for the separation in Prussian universities of the chair of ophthalmology from that of surgery.(*Die Augenheilkunde an Preussischen Universitäten, ein Nothstand im Cultus* Erlangen 1868) This fight he waged for very many years, and, in 1869, was partially successful: the students were examined in ophthalmology as a separate branch. In 1873 the victory was complete: in all the Prussian universities there had been effected a complete separation of chairs. Jacobson died in 1889. His most important ophthalmologic writings are as follows: 1.*Ueber Retinitis Syphilitica*, etc. *(Königsberger Med. Jahrb., 1862.)* 2. *Ein Neues und Gefahrloses Operationsverfahren zur Heilung des Grauen Staares*. (1863.) 3. *Jahresbericht der Königsberger Augenklinik von 1877-1879*. (Berlin 1880.) 4.*Ueber Sporadische und Epidemische Diphtheritis Conjunctivae*, etc. (*Graefe's Archiv,* VI.) 5. *Cataractextraction*

mit Lappenschnitt. (Ibid., XI.) 6. *Intraoculärer Cysticercus*. (Ibid., XI.) 7. *Ueber Graefe's Neueste Cataractextraction*. (Ibid., XIV.) 8. *Klinische Beiträge zur Lehre vom Glaucom*. (Ibid., XXIX and XXX.) 9. *Präparatorische Iridektomie und Antisepsis*. (Ibid., XXX.) 10. *Albrecht v. Graefe's Bedeutung für unsere Wissenschaft aus seinen Werken*. (Berlin, 1885.).11.*Ueber Epithelwucherung und Follikelbildung in der Conjunktiva* Berlin 1879.12. *Beiträge zur Pathologie des Auges* Leipzig 1888.13. *Briefe an Fachgenossen mit dem Bildniss des Verfassers nach einem Oelgemälde von Johanna Jacobson*. Königsberg 1894. American Encyclopedia of Ophthalmology, Vol.9, p.6699-6700.Albert.BMC

Jaeger, Antoine *see* **De Jaeger**

Eduard Jaeger

Jaeger, Eduard von (*Ritter von Jaxtthal***) (1818-1884)** German ophthalmologist of much ability, son of the better known Friedrich von →Jaeger, and grandson of Georg Joseph →Beer. Born at Vienna, he received his chief instruction in diseases of the eye from his father. In 1854 he qualified as docent at the University of Vienna, but did not become professor till after a lapse of almost thirty years i. e., the fall of 1883. He was the first to employ, or at all events to introduce, the ophthalmoscope as a means of determining the ocular refraction. He was also the first to discover the ophthalmoscopic appearances due to diabetes. Furthermore, he introduced the well-known Jaeger test-types for the determination of visual acuity. Besides all this, he was a teacher of wide celebrity. Some of Jaeger' more important ophthalmic writings are as follows:1.*Ueber die Behandlung des grauen Staares* Wien 1844. 2. *Ueber Staar und Staaroperationen, nebst anderen Beobachtungen und Erfahrungen; aus seines Vaters Dr. Friederich Jaeger, und aus der eigenen Ophthalmologischen Praxis.* Vienna, L. W. Seidel, 1854. 3. *Beiträge zur Pathologie des Auges* Wien1855 (2nd ed.1870) 4.*Ergebnisse der Untersuchung des Menschlichen Auges mit dem Augenspiegel*. (in *Sitzungsb. d. k. Akad. d. Wissensch. Math.Naturw. Cl.*, Vienna, 1855, xv.) 5. *Über die Einstellung des dioptrischen Apparates im menschlichen Auge*. Wien 1861.6.*Ein freies Wort über medicinische Unterrichts und Prüfungsnormen Leipzig* 1867.7.*Schrift-Scalen in Hebräischer Sprache* Wien 1867.8. *Ophthalmoskopischer Hand-Atlas* Vienna, 1869. 9. *Ophthalmoskopischer Hand-Atlas.Neu bearbeitet und vergrössert von Maximilian Salzmann*.Vienna, 1890, 2nded.1894).10. American edition: *Ophthalmoscopical atlas revised and enlarged by Maximilian Salzmann* New York 1890.11. French edition : *Atlas d'ophthalmoscopie d'Eduard von Jaeger remanié et augmenté par Maximilian Salzmann* Paris 1890.).12. *Ergebnisse der Untersuchung mit dem Augenspiegel unter besonderer Berücksichtigung ihres Werthes für die allgemeine Pathologie* Wien 1876. 13. *Der Hohlschnitt; Eine Neue Staar-Extractions Methode.*Vienna 1873. American Encyclopedia of Ophthalmology,Vol.9,p.6700-6701.Albert.BMC


Ueber die Behandlung
des
grauen Staares
an der
ophthalmologischen Klinik
der
Josephs-Akademie.
Inaugural-Dissertation
von
Eduard Jaeger,
Wien, 1844.

Jaeger´s Inaugural Dissertation.

Jaeger, Friedrich von (1784-1871) Father of Eduard von →Jaeger and one of the greatest ophthalmologists of all time. Born at Kirchheim on the Jaxt, son of the body physician to the Duke of Württemberg, he studied at Würzburg, Vienna and Landshut. At the last University he received in 1812 the degree of Doctor of Medicine and Surgery, presenting as dissertation *Dissertatio de Keratonyxidis* Viennae 1812. Meantime,in 18O8, he had gone to Vienna, and been appointed chief physician to the Austrian Army. In this capacity

he served for one or two years. In 1812 he began to practise in Vienna, and, attracting the attention of Joseph→Beer, was by him appointed his private assistant. In 1815 he married Beer's daughter, Theresa, and, during Beer's long sickness, lectured in his place, a function which, moreover, he continued to perform for one and a half years after Beer's death. However, he never received the chair of ophthalmology in his own right. In 1825 he was appointed professor of ophthalmology in Joseph's Academy, a position which, for almost twenty-three years, he filled with high distinction. Prior to 1825 he conducted a small private eye infirmary in his own residence. For thirty years he was body physician to Prince Metternich. In 1839 he founded the Turkish Department of Public Health. Three distinguished ophthalmologists were his students: his own son, Eduard →Jaeger, J. →Sichel and Albrecht von Graefe. Sichel, as a result of Jaeger's most earnest solicitations, proceeded to Paris and founded the new French School of Ophthalmology. Jaeger wrote but little. His only productions, in fact, besides the above-mentioned dissertation, were: *Die egyptische Augen-Entzündung (Ophthalmia egyptiaca)* Wien 1840 and *Entoptics, with its uses in physiology and medicine* London 1864. He was, however, a wonderful lecturer, and a still more wonderful operator. He possessed, moreover, great inventiveness, and his operation for trichiasis, as well as his cystotome , his iris hook and lid-holder were well-known in his time and after. American Encyclopedia of Ophthalmology,Vol.9,p.6701-6702.Albert.BMC

Jaeger, Michael (1795-1838). German ophthalmologist of Erlangen, Germany. Born in Würzburg, he there received his medical degree in 1819, presenting, one year later, a dissertation, "Tractatus Anat.-Physiol. de Arteriarum Pulsu." After a number of scientific journeys, he qualified as docent in pathological anatomy at Würzburg. In 1822 he removed to Erlangen, accepting at that place the extraordinary professorship of pathological anatomy, as well as the directorship of the Medico-Chirurgical Hospital. For a number of years he lectured on ophthalmology. Jaeger was a prolific writer, but his only works of ophthalmologic importance were a "*Handwörterbuch der Chirurgie und Augenheilkunde*" and "*Klinische Beobachtungen über Augen-und Ohr-Krankheiten*" (*Ammon's Zeitschr. f. d. Ophth.* V, 1-20, 1837) American Encyclopedia of Ophthalmology,Vol.9, p.6702.

Jaeger, Wolfgang (1917-1995) German ophthalmologist born in Schwäbisch-Hall, Germany. He received his Dr.med. title in 1948 with the thesis: *Experimentelle Untersuchungen über inkomplette angeborene Farbenblindheit.* He became medical assistant to the Clinical and Pharmacological Institute at the Heidelberg University in 1948, received his approbation at Heidelberg and worked at the Eye Clinic of the same university until 1958. Meanwhile he had received his habilitation with the theme *Untersuchungen über dehydrierende Fermentsysteme der Cornea.*, was first physician at the eye clinic and became in 1955 ophthalmologist. Jaeger became n 1957 professor of ophthalmology. He became in 1958 chief of the eye clinic in Essen (just prior to Meyer-Schwickerath and before Essen was to be an University) and, the same year, accepted the Chair of ophthalmology at Heidelberg University where he remained for his whole life. Jaeger had a vast spectrum of ophthalmic interests and wrote many book chapters and countless papers. He was greatly interested in medical history and wrote among others: *Die Heilung des Blinden in der Kunst* 1958, 2nd edition 1975; *Augenvotive* 1974; *Die Illustrationen von P.P.Rubens zum Lehrbuch der Optik des Franciscus Aguilonius* 1976; *Die Erfindung der Ophthalmoskopie* 1977.JPW

Jaensch, Paul A. (1891-1961) German ophthalmologist, professor at the Düsseldorf Academy (now University). Jaensch was born in Magdeburg, and was physicians assistant during World War I, received his Dr.med. in Marburg in 1920 and began 1921 his ophthalmic education under Bielchowsky in Marburg, later in Breslau. He became lecturer in 1926 in Breslau , and there first physician at the eye clinic (Oberarzt). Jaensch became Professor (Extraordinarius) in Breslau in 1932. In 1934 he became chief of the Städtische Augenklinik Essen (that became later University Clinic), he accepted a position as Professor Extraordinarius at the Düsseldorf Academy (now University) in 1936 and remained there until his retirement. As a pupil of the famous Bielschowsky, naturally Jaensch concentrated his research mainly on paralytical strabismus and on eye damage caused by industry. (about the last named he wrote *Augenschädigungen in Industrie und Gewerbe* Stuttgart 1949. He authored *Das Schielen und seine Behandlung* 1933 and

Diagnose und Therapie des Schielens 1956. Jaensch founded in 1955 at the eye clinic of Essen an orthoptic department and was involved from the start in the regulation about schooling and examination of orthoptists in Germany (at that time West Germany). He also authored *Das augenärztliche Gutachten* (The ophthalmic expertise) Stuttgart 1958. Later, being professor in Düsseldorf , he wrote *Einführung in die Augenheilkunde* which third edition was published by Thieme Stuttgar in 1957. Jaensch was co-author of the following monographs *Repetitorium der Augenheilkunde* (with Bielschowsky, 7th edition 1932), *Glaukom* (with R. Thiel), *Irisdiagnostik* (with Rohen, Schreck and Huerkamp), *Berufswahl und Auge* (with J. Kaiser, 3rd edition 1958). He published 214 papers. JPW

Jaesche, Georg Emanuel (1815-1876) Russian general surgeon and ophthalmologist, inventor of the basic portion of the well-known Jaesche-Arlt operation for trichiasis. Born at Dorpat, Russia , son of the professor of philosophy at Dorpat University, he received his medical degree at the same institution. After a year of further study in Paris, Vienna, Prague and Berlin, he returned to Russia and settled as general practitioner in Minsk. A few years later he was called to Pensa as chief physician to the City Hospital in that place. In 1844 he was appointed to a similar position at Nishni-Novgorod where he died in 1876. His chief ophthalmologic writings, aside from numerous case reports, are: 1. Ein Neues Verfahren bei der Operation von Distichiasis und Trichiasis. *(Russian Med. Times,* 1844.) 2. *Beiträge zur Plastischen Chirurgie*. (Mitau, 1844.) American Encyclopedia of Ophthalmology,Vol.9, p.6703

Jaesche, Gottlieb Emanuel (1821-1907). Russian ophthalmologist, younger brother of Georg Emanuel →Jaesche. Born at Dorpat, he received the degree of M. D. in 1847, For the next nine years he was engaged in medico-military service, being present at the siege of Sebastopol and at numerous independent battles. In 1856-7 he spent a year of study in Germany and France, chiefly under Albrecht von →Graefe, →Arlt, and →Desmarres. Returning to Russia, he was made physician to the Foundling Hospital at Moscow; in 1873 he moved to Dorpat, where he practised as ophthalmologist until his death. His most important ophthalmologic writing is a book entitled "*Das Räumliche Sehen*" (Stuttgart, 1879).American Encyclopedia of Ophthalmology,Vol.9, p.6703. The Ophthalmoscope, London 1907.

Jago, James (1815-1893) British physician. Jago was born near Falmouth, England. He first studied mathematics at Cambridge and later turned to medicine at Oxford, receiving his M.B. in 1843. Later he settled at Truro as physician. He made important investigations on various optical defects of the human eye. He wrote: *Ocular spectres and structures as mutual exponents* London 1856 and *Entoptics, with its uses in physiology and medicine* London 1864. Albert.BMC.

James, Bushrod Washington (1836-1903) American homeopathic ophthalmologist of Philadelphia. Born at Somerton, Pa., (now a part of Philadelphia) a son of Dr.David James, a graduate of the University of Pennsylvania, he received from the Hahnemann Medical College the degrees of M.D. and H.M.D. He at once engaged in practice in Philadelphia, and there continued in active service until his death, long after. One of the earliest of homeopathic physicians in this country to turn his attention to surgery, he soon abandoned both general surgery and general medicine in order to become a specialist on the eye, ear, nose and throat. He was a skilful operator, and had a large practice. For a time Dr. James was surgical editor of the American *Observer* of Detroit, and for two years surgical critic for the *Medical Investigator* of Chicago. He contributed numerous articles to the *Hahnemannian Monthly* of Philadelphia and to other professional journals, and was also active in literary work for the laity. Thus, among his non-professional articles may be mentioned "*American Health Resorts and Climates*," "*Alaskana*," "*Echoes of Battle*," "*Alaska, its Neglected Past, Its Brilliant Future*," "*Alaska's Great Future*," "*Dawn of a New Era*," "*The Political Freshmen*," and "*Rise and Progress of the Masonic Veteran Associations*." James never married. He died, after a long illness, at his residence in Green Street, Philadelphia, Jan. 6, 1903, leaving most of his real estate, together with $55,000.00 in cash, for the maintenance of the Bushrod Washington James Eye and Ear Institute. American Encyclopedia of Ophthalmology,Vol.9,p.6704-6705.

James, Horatio Gates (1788-1855) American surgeon, of some importance in ophthalmology. Born at York, Pa., he received his medical degree at the University of

Maryland in 1813. Settling at once in Baltimore, he was soon distinguished in both the general and the special field. He was for many years editor of the Maryland *Medical Recorder,* and was the founder (in 1827) of the Medical Department of Washington College (afterward Washington University School of Medicine) at Washington, Pa. In this school he held the chair of surgery for about seven years. Jameson's most important writing is " *Observations upon Traumatic Hemorrhage, Illustrated by Experiments upon Living Animals*"-a valuable work on the use of animal ligatures. Jameson devoted considerable attention to diseases of the eye, and was widely known as an operator for cataract. He also wrote a considerable number of ophthalmologic articles. Jameson´s more important ophthalmologic writings are: 1. *The Pathological Sympathy Between the Eye and the Larynx*. (Maryland *Med. Recorder,* 1831, II, 117.) 2. *A Case of Enlargement of the Eye Following the Entrance of Steel into the Eye*. *(Ibid.,* p. 601.) 3. *Two Cases of Ossification of the Lens with Luxation Through the Pupil*. (Ibid., p. 608.) 4. *Amaurosis Associated with Inordinate Thirst*. (Ibid., p. 664.) 5. *An Encysted Tumor of the Orbit*. (Am. *Med. Recorder of Phila.,* XII, 340.) American Encyclopedia of Ophthalmology, Vol.9,p.6705

James, Robert Rutson (1881-1959) British ophthalmologist, editor from 1924 to 1948 of the BJO. Educated at Winchester College he was an admirable example of "*manners makyth man*". From Winchester he went to St. George's Hospital and qualified in 1905; in 1906 he gained the F.R.C.S. In 1907 he worked at Moorfields Eye Hospital under William→Lang and Sir John→Parsons and at the Royal Westminster Ophthalmic Hospital under Brewerton and →MacMullen. He was appointed to the consulting staff of St. George's at the early age of 28, and he became dean of the medical school (1918-22) and also its treasurer (1926-31). As an eye surgeon Rutson James was meticulous, and in clinical work his powers of observation were acute, shrewd, and accurate at a time when the instrumental aids to the minute examination of the eye were simple and less elaborate than they are to-day. He was an erudite scholar who maintained throughout his life a love of classical iterature, history, and archaeology, spending much time in antiquarian research. Apart from his ophthalmological papers he was the author of several historical works each showing the evidence of wide research- *The School of Anatomy adjoining St. George's Hospital, 1830-1863* (1933), *Studies in the History of Ophthalmology prior to 1800 A.D.* (1933), and *Practitioners in the Diocese of London, 1529-1735* (1935). In addition to the editorship of the *British Journal of Ophthalmology,* he was editor of the *Transactions of the Ophthalmological Society of the United Kingdom* from 1939 to 1945. He was secretary of the society (1918-21) and Bowman librarian (1927) and was accorded the rare distinction of being elected an honorary member (1936). His writings were in impeccable English and his annotations charged with whimsical wit. BJO 1959,43:704

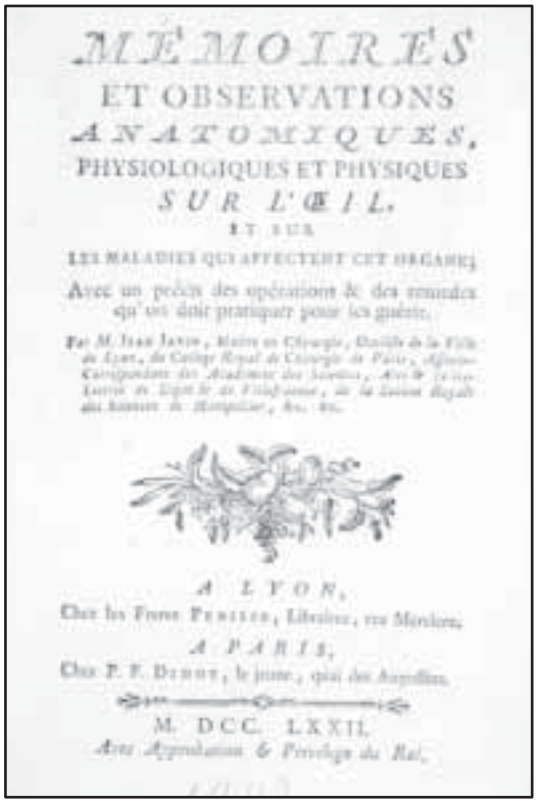
James, Thomas (1856-1911) English ophthalmologist who was born in 1856 and who, in a fit of depression, committed suicide by cutting his throat with a razor. His body was found at his home in Harley Street, London, and the corner's verdict, delivered three days later, was "Suicide while temporarily insane." Dr. James was a member of the Ophthalmological Society of the United Kingdom, and was for a time surgeon at the Central London Ophthalmic Hospital. American Encyclopedia of Ophthalmology, Vol.9, p.6705-6706.

Jameson, John Evans (1871-1941) British ophthalmologist. Evans early education was at St. David's College School, Lampeter, and Queen Elizabeth's Grammar School, Carmarthen. When he decided on medicine as a career he went to Edinburgh University and graduated in 1892 M.B , C.M. with honours. In 1899 he became F.R.C.S. England, and in 1903 M.D. Birmingham. After qualification Mr. Jameson Evans spent three years at the Carmarthen County Infirmary and then went to Birmingham where, after three years, he was appointed Honorary Ophthalmic Surgeon to the Birmingham & Midland Eye Hospital and continued to serve in that capacity till 1934 when he became Consulting Surgeon. In addition he was Consulting Ophthalmic Surgeon to Birmingham General Dispensary and Ophthalmic Surgeon to Hallam Hospital, West Bromwich, for many years: he was also Honorary Ophthalmic Surgeon to the Birmingham Royal Institution for the Blind. On different occasions he was President of the Midland Medical Society ; of the Birmingham branch of the British Medical Association, and of the Midland Ophthalmological Society ; and VicePresident of the ophthalmic section of the British

Medical Association, and of the Ophthalmological Society of the United Kingdom. He served on the council of the Oxford Ophthalmological Congress, of which he was a foundation member, for nineteen years, and held the position of Lecturer in Ophthalmology in the University of Birmingham for twenty-five years. He was Middlemore Lecturer on several occasions and his numerous publications covered a wide range of ophthalmic and related subjects. BJO 25,505,1941

Janin de Combe-Blanche, Jean (1731-1811) French ophthalmologist of Avignon, inventor of the well known "*Janin's ophthalmic ointment*" and "*Janin's vesicatory plaster*," but especially renowned for his combination of the highest degree of operative skill with the grossest and most unblushing charlatanry. Born at Carcassonne, June 12, according to Magnus and Pagel, but, according to Truc and Pansier, July 12, 1731, he studied, first, in the Carcassonne Hospital and, later, at the school in Montpellier, where he devoted special attention to ophthalmology. In 1756 he settled in Calmette near Nimes, and was very successful. He then removed to Avignon, and, while there, began to advertise, not only blatantly but untruthfully. Here are three of these advertisements which Truc and Pansier inserted in their work, "*Histoire de l´Ophtalmologie à l´ Ecole de Montpellier*," taken from the "*Courrier de Montpellier"* and the *"Courrier d'Avignon*." On the 17th of August, in the *"Courrier d'Avignon* Janin de Combe-Blanche advertised as follows: "M.Janin, physician-oculist, animated by zeal for assisting the unhappy, has just restored sight to a dozen poor persons who are on the common charity of this city. Some of whom had cataract or other blemishes, which had deprived them for a number of years of the power to see even the most distinct objects, and these cures have been affected by virtue of a Specific Water of his invention, which excites the admiration of connoisseurs. This happy discovery, reserved for the cares and labors of M. Janin, will cause him to be honored by posterity; he has applied himself to the understanding of simples, to the study of their properties, to the finding out about their mixtures, to the prescription of their uses and the discovery of their effects. Experience has responded to his study, and success to his hopes. He has not limited his researches; and his continual observations have given occasion to a discovery not less essential. Five persons in the same house experienced its excellent effects; these were attacked for a number of years by frequent fits of epilepsy, called vulgarly *'mal caduc,'* or '*le haut mal*' and these have been completely delivered from this fearful disease. The same sieur Janin offers his consultations to all who shall find themselves in a position to require them, with the disinterestedness and the generosity proper to a person who has always been solely occupied in securing for himself the esteem and good will of everyone. Those who consult him by letter will please be sure to prepay the postage to Avignon, place St-Didier, where he now resides. He will tell such persons exactly what they will have to do to bring about a complete recovery. In the same lay journal, on the 25th of October, 1757, he publishes the following even more remarkable passage: "*M. Janin, physician oculist, sustains here perfectly the reputation which he has long enjoyed. The large number of cures which he has just performed with his Eau Spécifique, dissolving cataract and restoring sight to those who have had the ill-luck to be deprived thereof for a long time, excites the admiration of every person. Connoiseurs behold with astonishment the enduring health of those whom he has cured (announced in the Courrier on the 1st of September last), and especially the great virtues of his Melanagogic Pilules, with which M. Janin cures radically those who are afflicted with the most violent mental diseases, even when their mania has extended to the most extraordinary things imaginable; as he has demonstrated by several persons of every age and both sexes, who had been suffering from insanity, and who are today sound in spirit and understanding. . .*

. The price of each vial of Specific Water (for the diseases of the eye) is six francs." As the third and last illustration of Janin's "literature," the following" passage is taken from the *"Courrier de Montpellier"* for Jan. 9, 1760: "*M. Janin, physician oculist, operated on the 9th of last month in the University of this city and in the presence of a numerous assembly of connoiseurs, upon the sieur Michel, gardener, who has been deprived of sight for three years; he removed from him the cataract with so much dexterity that one would swear he*


MÉMOIRES
ET OBSERVATIONS
ANATOMIQUES,
PHYSIOLOGIQUES ET PHYSIQUES
SUR L'ŒIL,
ET SUR
LES MALADIES QUI AFFECTENT CET ORGANE;
Avec un précis des opérations & des remedes
qu'on doit pratiquer pour les guérir.
Par M. Jean Janin, Maître en Chirurgie, Oculiste de la Ville
de Lyon, du Collége Royal de Chirurgie de Paris, Affocié
Correspondant des Académies des Sciences, Arts & Belles-
Lettres de Lyon & de Toulouse, & de la Société Royale
des Sciences de Montpellier, &c. &c.
A LYON,
Chez les Frères Perisse, Libraires, rue Mercière.
A PARIS,
Chez P. F. Didot, le jeune, quai des Augustins.
M. DCC. LXXII.
Avec Approbation & Privilege du Roi.

had carried the manual of this operation to the highest perfection possible. He presented, yesterday, his patient to Messrs. the Chancellors and Professors of Medicine who, when they had carefully tested him, as well as a large number of spectators whom he had not had present the day of the operation, they, being perfectly convinced that the patient had recovered his sight, being able to distinguish colors and the properties of the very smallest objects which were presented to him, have accorded to M. Janin this attestation of cure under the seal of the University." Janin, however, in spite of his quackish advertising, was a really remarkable ophthalmologist. Though no epoch-making invention or discovery can be assigned to the active ingenuity of this person, he nevertheless developed and most thoroughly amplified a very large number of the discoveries and inventions of others. As a swift and accurate operator he seems to have had no equal. He was, moreover, a clear and forceful writer, and his books and articles were pondered deeply by all the ophthalmologists of his day. Among his more important writings, both general and ophthalmologic, are the following: 1. *Observations sur une Fistule Lacrymale, Occasionnée par un Coup de Feu*. (1765.) 2. *Observations sur Plusieurs Maladies des Yeux*. (Lyons, 1768.) 3. *Lettre écrite de la Région des Morts par Daviel, ci-devant Oculiste du Roy, Actuellement Inspecteur de la Librairie des Ecrits de Pluton, au sieur G(uerin), Chirurgien à Lyon, sur les Bords du Styx. Chez la Vigilance et Compagnie de la Vérité*, 1769. (36 pp. small 8vo. A curious affair, the authorship of which is a little doubtful.) 4. *Mémoires et Observations Anatomiques, Physiologiques et Physiques sur l'Oeil et les Maladies qui Affectent cet Organe.* (Lyons, 1772. This book contains an account of the very first experiments with glasses of complementary colors before the two eyes,.) 5. *Réflections sur le Triste Sort des Personnes qui sous une Apparence de Mort ont été Enterrées Vivantes*. (Paris and the Hague, 1772.) 6. *L'Antiméphitique ou Moyen, de Détruire les Exhalations Pernicieuses et Mortelles des Fosses d'Aisance*, etc. (Paris, 1781 and 1782.) 7. *Réponse à M. O'Ryan sur le Magnétisme Animal*. (Geneva and Lyons, 1784,) Janin was ennobled in 1787, and died June 12, 1811. American Encyclopedia of Ophthalmology,Vol.9, p.6706-6708.Albert.

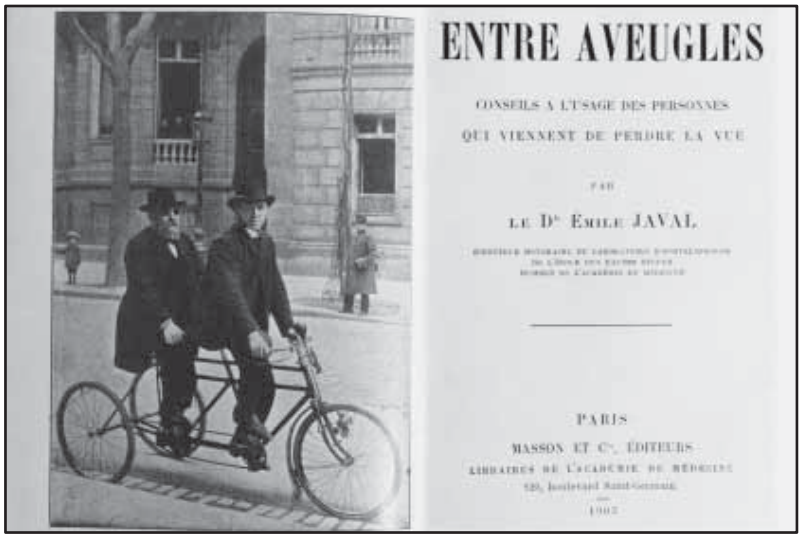
Jardine, Philip (1914-1997) Scottish ophthalmic surgeon, born in Edinburgh. Jardine was a resident at Moorfields 1942-1944 under Ida →Mann´s tutelage. Having obtained his Edinburgh fellowship, his appointment by the Bristol Eye Hospital was delayed by service with the RAF. Jardine is remembered for his bilateral cataract surgery. He *first* inserted an intraocular lens in 1951 and passed through a variety of techniques to finish with endocapsular surgery in 1981. He supported research in 1958 on B12 and tobacco amblyopia and in 1960 work on toxocariasis. Jardine was President of the South Western Ophthalmological Society in 1969-70. BJO 1997, 81, p.335.

Jaumes, Alphonse (1839-1906) French ophthalmologist, who wrote an important work on glaucoma, and who, in later life, gave up ophthalmology for legal medicine. Born at Montpellier, son of Anselme Francois Jaumes, professor of general pathology at Montpellier from 1850 to 1868, he received his degree in medicine in 1861, at the school in which his father was teaching. His graduation thesis, entitled "Glaucôme," was crowned by the Faculty of Montpellier, and brought to the young ophthalmologist a letter of felicitation from the Minister of Public Instruction. It was also one of the most important means of bringing to the attention of the ophthalmologic world the rather recently invented ophthalmoscope (→Helmholtz, 1851), as well as the much more recently devised iridectomy for glaucoma (von →Graefe, 1857). Jaumes settled in Montpellier (having studied for a time with →Sichel, →Desmarres, and →Follin at Paris) and soon had a wide reputation as an operator on the eye. He was appointed in 1866, to the extraordinary chair of surgery in the University, and, eight years later, to the full professorship of legal medicine and toxicology. The latter position he held till 1895. In 1880 he abandoned the practice of ophthalmology entirely, in order to teach and practise legal medicine. In addition to the thesis on glaucoma, Jaumes' ophthalmic writings are as follows: 1. *Contusion Oculaire Droite, Nevrite Optique Consécutive, Diminution Binoculaire de la Vision*. (1881. Supplementary Reports, 1884 and 1891.) 2. *Plaie Contuse du Cuir Chevelu, Ophtalmie, Phlycténulaire Consécutive, Perte de I'Oeil Droit*. American Encyclopedia of Ophthalmology,Vol.9,p.6708-6709

Emile Javal

Javal, Louis Emile (1839-1907). French ophthalmologist, blind in his later years, inventor of the Javal ophthalmometer, and author of the widely known "*Manuel du*

Strabisme." Born at Paris, he became, first a student at the School of Mines and, then, an engineer. Having, one day, a commission to consult von →Graefe concerning a case of strabismus in one of his near relatives, he became so touched and fired by the master's zeal and enthusiasm for medicine in general and for ophthalmology in particular, that he gave up engineering and began the study of medicine. He received his degree at Paris in 1868. The same year, he wrote *Du Strabisme dans ses applications a la Physiologie de la Vision*. In this little book, he titles himself "Docteur en Medecine and…" *Ingénieur civil des Mines*". Having served in the Franco-Prussian war, he turned his attention to ophthalmology. In 1878 he became Director of the Ophthalmologic Laboratory at the School of Higher Studies, and in 1885 became a Fellow of the Academy of Medicine. He was a great investigator and teacher, but not an especially brilliant operator. In fact, his greatest services were rendered ophthalmic science in the difficult field of physiologic optics. Most of his writings appeared in the *Annales d'Oculistique*, and are nearly of uniform value. He wrote, however, in addition to articles, the widely celebrated "*Manuel du Strabisme*,"(1896) and, a work of even higher character, the "*Mémoires d'Ophtalmometrie*."(1886) There was, besides, a still more wonderful little volume, of which we shall speak hereafter. Then, too, Javal made a masterly translation into French (the first to appear in that language) of Helmholtz's *"Handbuch der Physiologische Optik"*: *Optique Physiologique*, Paris 1868. Javal was widely known as an inventor of optical instruments. The chief of these is the once almost universally employed Javal, or Javal-Schiötz ophthalmometer. Helmholtz had invented a similar instrument which depended for its action on two glass plates. Coccius had made an improvement by substituting for the plates a double refraction crystal. Javal retained the crystal, but improved the device as a whole most wonderfully, making it indeed (by the aid of his pupil and afterwards first assistant, Schiötz) a practical and highly useful instrument. A Jew of the finest type, Javal was absolutely possessed by the thought of the intellectual life, by the high idealism so characteristic of his race. He was, in fact, one of the greatest scientists of his day, living, moving, and having his being in his work as ophthalmologist. Yet, like many a lesser and less faithful man, he was subject to innumerable trials and tribulations and petty and wholly unnecessary vexations. Of these the chief, no doubt, was the famous libel suit which was brought against him by a firm of (perhaps) well-meaning opticians. These people had invented a so-called "isometric" lens for spectacles, for which they claimed certain remarkable advantages. Javal, having made a careful study of the lens, "*reported to the Academy of Medicine that the difference 'between the baryta glass [of which these lenses were composed] and ordinary glass was quite insignificant, and that the lenses were no better than those made from ordinary glass*." The court decided for Javal, holding "that a scientific man is at liberty to criticise, any manufactured article for which special advantages are claimed, and that his observations may be published in the public's interest." Not long after the decision in the case, Javal began to go blind. He was suffering, in fact, from chronic bilateral glaucoma. There is something especially touching, as it seems to the writer, about the passage into darkness of any celebrated ophthalmologist. One cannot resist the feeling, in such cases, that an absolute reversal occurs of poetic justice." That a man whose hand has given the light to hundreds of his suffering fellows, should himself be condemned relentlessly, mercilessly and inexorably to everlasting, hopeless, helpless, rayless darkness, is just about the peak and pinnacle of the irony of fate. And Javal, the greatest ophthalmologist of his nation for two decades, was subjected to just such a doom. All that human hands could do for him was done as a matter of course, and yet, in a very brief period, he was blind. Instead of repining at his fate, this practical philosopher, as well as master ophthalmologist, began to direct his attention toward the little which he could do by way of rendering the lot of blind folk


ENTRE AVEUGLES

CONSEILS A L'USAGE DES PERSONNES
QUI VIENNENT DE PERDRE LA VUE

PAR

LE Dr EMILE JAVAL

PARIS
MASSON ET Cie, ÉDITEURS

Emile Javal, blind, sitting on a tricycle.

generally a trifle less unhappy. The result of his cogitations, considerations and inventions appeared at length in a precious little volume of extreme originality, entitled *"Entres Aveugles,"* (Paris 1903) or, as it is called in the excellent English translation of Carroll Edson, "*On Becoming Blind*. " This work was the first to appear at any time or in any language on its very important subject-that of the modes, the means, the different sorts of appliances, etc., for rendering the lot of the blind endurable or as nearly so as possible. A strong point made in the volume was that doctors ought to train such patients as are certainly doomed to blindness for the ordeals which they are afterward to undergo. While the patient still retains a modicum of vision, he can learn with far greater quickness, thoroughness, and effectiveness, the things he will later need to do., than ever could be the case if his training were neglected till he once had entered the darkness. In the words of Javal himself : " . . . . *they call it humane and I call it barbarous-to leave these patients in hope while amusing them with injections of strychnine, sittings of electricity, or useless internal treatment, the employment of which, even if given gratuitously, does not increase the reputation of him who makes use of them. To give, by a placebo treatment, consolation to an incurable, is to prevent him from arranging his life in anticipation of the fatal outcome*." Not many years ago there appeared in a leading ophthalmologic journal a vigorous attack upon these views of Javal, the position taken being that the hopes and expectations of a person going blind are of wellnigh inconceivable value and delight to him. But the passage which I have quoted from Javal himself is a sufficient refutation of such shallow reasoning. The efforts of the placeboists are, indeed, not humane, " but simply barbarous." This little volume of Javal, "*On Becoming Blind*," though written for scientific purposes and in the style of a self-contained philosopher, possesses, I think, for all who look beneath the surface, a pathos which is really almost intolerable. In fact the very calmness with which the work is written but serves as a foil to the black, the hopeless, the despairing agony of its incidental revelations. What a desolateness of existence, for only a single example, is displayed (in the very midst of happy human intercourses at that) by the following brief passage: "*What makes the position of the blind most particularly trying in company is that he does not know when his interlocutor leaves. If he has some one with him, his guide should inform him; but this is a hard task for the companion. In a salon one who speaks to a blind person, and by rare chance has taken pains to tell his name at the beginning of his conversation, never thinks to say again who he is when he comes back after a short interval. When I can, I like to take my place on a sofa which allows me to take very lightly between two fingers, quite unseen, a fold of the person's garment with whom I am talking, and who then cannot leave without my knowing it. "It is not given to every one to have a faithful companion who knows how to make him hear the name of whoever comes to him with good affectation, and as if addressing them to wish them good day; who knows how in a conversation to make the needful remarks to save him from addressing someone who has just left or from calling him to witness; who knows how to keep him in touch with the movements of the guests, so as to save him that hateful thing, speaking to empty space. "That hateful thing, speaking to empty space, has, in fact, been often mentioned to me by those who have long been blind as one of the bitterest of all their bitter experiences. Thus, a great giant of a man, who was more than forty years of age, and who had been quite blind for the greater portion of his life, informed me that, whenever he found himself conversing with the empty air, there suddenly arose within him such a longing and yearning as only the tender caresses of his mother could completely dispel*." So the great ophthalmologist continued both to do and to teach, even after he had calmly and serenely gone down into the valley of the shadow of blindness. In this valley of innumerable terrors, he dwelt for a number of years, always patient, always kind, and almost ,always genial, a source of very great pleasure to all who continued to, cultivate as many did his acquaintance. He proposed in 1877 a new numbering of lenses in his "*Numérotage des Verres de Lunettes*" and wrote also "Physiologie de la Lecture" of which a second edition appeared in 1906. A further book written by him is: *Hygiene des Ecoles Primaires* Paris 1883. His collection of Japanese Illustrated books were sold in 1927-28,


DU STRABISME

DANS SES APPLICATIONS

A LA PHYSIOLOGIE DE LA VISION

PAR

ÉMILE JAVAL

PARIS

VICTOR MASSON ET FILS

Javal´s book on strabismus. Under his name he still used his title "Mining Engineer"

his medical library, containing an exceptional beautiful copy of Bartisch´s Ophthalmodouleia*, went to the French Society of Ophthalmolgy. American Encyclopedia of Ophthalmology, Vol.9, p.6709-6713. Albert.The Ophthalmoscope, London 1907, p.180-181.* The woodcuts of Javal´s copy of Bartisch were used to make facsimili of its colored engravings for the first English translation of that book. *See* Bartisch. JPW

Javate, Reynaldo M. (1954-) Filipino Ophthalmologist, Associate Professor of Ophthalmology, University of Santo Tomas Hospital. He graduated from University of Santo Tomas, Espana, Manila in 1979 and received his M.D. degree. He completed his residency training at the Department of Ophthalmology and served as the Chief Resident in 1981-1985. He studied Oculoplastic and Reconstructive Surgery at the Instituto de Investigaciones Oftalmologicas "Ramon Castroviejo" y En El Centro Especial Ramon y Cajal, Madrid, Spain under Prof. Juan→Murube Del Castillo in 1985 and then at the Manhattan Eye, Ear and Throat Hospital under Dr.Albert→Hornblass during 1988-1992. On his homecoming he was appointed to the present position as above and is the Chief of the Oculoplastic and Orbital Services at the Department of Ophthalmology, Faculty of Medicine and Surgery of University of Santo Tomas since 1994. He also served as the Secretary to the Department, as the Chairman of the Bioethics Subcommittee and the member of the Residency Training Committee. He has joint appointment as the Vice-Chairman of the Department of Ophthalmology and the Chief of the Oculoplastic and Reconstructive Surgery at the Hospital of Infant Jesus, Manila. He has published many scientific papers and made presentations at many congresses: some examples are "*Endoscopic radiofrequency assisted dacryocystorhinostomy and the Griffiths collar button*. Operative Techniques in Oculoplastic, Orbital and Reconstructive Surgery 1998" and "*The endoscope and the radiofrequency unit in dacryocystorhinostomy surgery*. The Journal of the American Society of Ophthalmic Plastic and Reconstructive Surgery as well as "*Radiosurgery - A New Approach to Eyelid Orbital and Lacrimal Surgery*". International Journal of Aesthetics and Restorative Surgery. He is also a member of the Editorial Board of The Journal, Operative Techniques in Oculoplastic Orbital and Reconstructive Surgery. He is the President of the Philippine Society of Ophthalmic Plastic and Reconstructive Surgery (1996-), Vice-President of the International Society of Cosmetic Radiosurgery (1994), and a member of many National and International Societies. He is a recipient of many Award of Excellence from the National Organizations. (University of Santo Tomas Hospital: Espana, Manila 1008 Department of Ophthalmology Office (632) 7315383 ; Fax: (632)7327481 ; email: rmjavate@usinc.net)

Jeffries, Benjamin Joy (1833-1915) American ophthalmologist, the first to direct attention emphatically to the dangers of color-blindness, as, for example, in the railway service. Born in Boston, Mass., March 26, 1833, he came of old New England ancestry. His father, Dr. John →Jeffries (1796-1876, Harvard A. B., A. M., M. D., Brown M. D.) was a very distinguished physician and close friend of Daniel Webster, who practised in Boston for more than fifty-seven years. He married Anne Geyer Amory, a descendant of Hon. Jonathan Amory, speaker treasurer and advocate-general of South Carolina, as well as of Arthur Mackworth, one of the original patentees of Maine. Joy Jeffries' grandfather, Dr. John Jeffries (1745-1819, Harvard A. B., A. M.; Aberdeen M. D.; Harvard Honorary M. D.), was the originator (or, as some will have it, the re-introducer) of the use of cold baths and ice in the treatment of fevers. He was an ardent royalist throughout the Revolution, his house, at the outbreak of the struggle, being the royalist headquarters in America, while Jeffries himself was surgeon-general of the British forces, and a baron of the Cinque Ports. In 1785 he crossed the English channel by balloon, and was the first in history to accomplish the dangerous feat. Dr. Joy Jeffries' greatgrandfather, David Jeffries (1714-1785, Harvard A. B., A. M.) who married a daughter of Chief Justice Jaffrey, of New Hampshire, was for more than thirty years treasurer of the old town of Boston. His father, David Jeffries (1690-1716) was first in his class at Harvard, and his father, the great-great-great-grandfather of the subject of this sketch, was David Jeffries (1658-1742), the first of the family to come to America. He was born at Rhoad, Wiltshire, England, and married Elizabeth Usher, daughter of John Usher, lieutenant-governor New Hampshire, and treasurer and receiver-general for New England, who personally paid the expenses of several Indian wars. The matter of Dr. Jeffries' ancestry is given thus much space (and might have been given a very great deal more) because of a certain historic dinner, which

will long be carried in memory by the ophthalmologists of New England. Dr. Benjamin Joy Jeffries, the subject of this sketch, received his early education at the Boston Latin School and at Harvard University, at the latter institution receiving the degree of A. B. in 1854. He then studied medicine at Harvard, receiving his degree in 1857. The next two years, which were spent in Europe, chiefly at Vienna, were devoted to the study of ophthalmology and dermatology. The teachers who mostly influenced him were von →Arlt and Hebra (a famous Austrian Dermatologist). Returning to America, he settled in his native city, as a specialist on diseases of the eye and skin, in which unusual combination of branches he continued for several years. Together with Dr. Francis P. Sprague, he opened a free dispensary for the treatment of diseases of the eye and skin in Eliot Street. He was also ophthalmic surgeon to the Massachusetts Charitable Eye and Ear Infirmary from 1866 to 1902-more than thirty-six years. He was a member of the New England Ophthalmological Society, of the American Ophthalmological Society, of the Boston Society of Medical Observation, of the Boston Society of Medical History, and of the American Association for the Advancement of Science. He was also one of the founders of the Massachusetts Natural History Society. He belonged to the Somerset Club, the Thursday Evening Club and various yachting associations. At Harvard he belonged to the Porcellian Club and to the Hasty Pudding. Dr. Jeffries was a voluminous writer. Only his works on ophthalmology, however, can here be listed. 1. *I Enucleation of the Eyeball. II Section of Ciliary Nerves and Optic Nerve. III Some Unnecessary Causes of Impaired Vision.* (1868, Boston, D. Clapp & Son.) 2. *Report on Progress of Ophthalmology*. (1871, N. Y., 8 vo.) 3. *The Eye in Health and Disease.* (Alexander Moore, Boston 1871) 4. *On Operations for Breaking up Attachments of the Iris to the Crystalline Lens, or Posterior Synechiae*. (1872, *Report Mass. Char. Eye and Ear Inf.,* XLVI.) 5. White Sarcomatous Intraocular Tumor. Intraocular Tumor. Two Cases of Herpes Zoster Ophthalmicus, Destroying the Eye. Traumatic Rupture of the Choroid, without Direct Injury of the Eye. (All *in Trans. Am. Oph ' Soc.,* 1873.) 6. Records of 105 Cases of Operation for Cataract. *(Boston M. and S. Jour.,* 1874, XCI.) 7. Reports of Sixteen Cases of Cataract Operations. (Ibid., 1875, XCIII.) 8. Incurability of Congenital Color-Blindness. (Ibid., 1878, XCVIII.) 9. Lecture on Color Blindness and its Practical Relations. (1878, Boston.) 10. *Dangers from Color-Blindness in Railroad Employees and Pilots.* (1878, Boston, Rand Avery & Co.) 11. *Relative Frequency of Color-Blindness in Males and Females*. *(Bost. M. and S. Jour.,* 1878, XCIV.) 12. *Color-Blindness and its Practical Relations*. (Lecture, Boston, 1878.) 13. *Color-Blindness; Its Dangers and Detection*. (1879, Boston, Houghton, Osgood & Co. Bound, significantly, in red and green. An authoritative work. Issued as the United States Manual on the subject in 1880.) 14. *Color-Blindness Amongst the Medical Profession*. *(Brit. Med. Jour.,* 1880, II.) 15. *Color-Blindness; Its Examination and Prevalence*. (London *Lancet,* 1880, II) 17. *Hypnotic Color Blindness*. (Bost. *M.* and *S. Jour.,* 1880, CII, 526.) 18. *Color-Blindness and Defective Vision: Their Control*. *(Gaillaird's Med. Jour., N. Y.,* 1881., XXXI, 5-12.) 19. *On Some Points in Regard to Color-Blindness*. *(Jour. Nervous and Mental Diseases, N.* Y., 1881.) 20. *Observations on a Peculiar Expression of the Eyes in the Color-Blind*. *(Tr. Internat. Med. Congress,* London, 1881, III, 121.) 21. *Color-Names, Color-Blindness, and the Education of the Color-Sense in our Schools. (Education,* March, 1882.) 22. *Our Eyes and Our Industries. (Rep. Board of Health of Mass.,*1882.) 23. *Physical Examination of Candidates for the United States Naval and Military Academies*. *(Boston M. and S. Jour.,* 1886, CXIV.) 24. *Some Medico-Legal Cases Under State and National Laws*. (*Tr.Am.Oph..Soc.,*1885-7, IV.) 25. *Report of the Examination of 27,927 School Children for Color-Blindness*. (School Document No. 18, 1889, Boston, Rockwell & Churchill.) 26. *Reports on Worsteds for Holmgren's Test. (Tr. Am. Ophth. Soc.,* 1895.). American Encyclopedia of Ophthalmology, Vol.9, p.6716-6720 .JPW

Jeffries, John (1796-1876) American surgeon and ophthalmologist, co-founder with Dr. Edward Reynolds of the Massachusetts Charitable Eye and Ear Infirmary. Born in Boston he received the degree of A..B. at Harvard in 1815, and of M.D. in 1819. Jeffries was surgeon to the Massachussetts Eye and Ear Infirmary and operated there for eighteen years. He wrote "*Lectures on the Diseases of the Eyes*" which manuscript was discovered among the books left by his son Benjamin Joy →Jeffries , edited by Daniel M. →Albert, and for the *first* time published by Wayenborgh Ostend in 1998. American Encyclopedia of Ophthalmology, Vol.9,p. 6720-6721; JPW.

Jeremy, Harold Rowe (1875-1938) British ophthalmologist. Mr. Jeremy was born at Merthyr Tydvil. He was educated at the Merthyr Grammar School, and entered as a medical student at the London Hospital Medical College in October, 1896. He gained several prizes, and, after qualification in 1901, became Clinical Assistant to the Surgical Out-patient and Ophthalmic Out-patient Departments. He was House Surgeon to Mr. T. H. Openshaw in 1903. Soon afterwards Jeremy settled in general practice in Walthamstow, and, at the same time, served as Clinical Assistant to A. B. Roxburgh at the London Hospital and to →Treacher Collins at Moorfields, where he subsequently became a Chief clinical Assistant. In 1911 he took the Fellowship of the Royal College of Surgeons. In March, 1919, he was elected Assistant Surgeon to the Western Ophthalmic Hospital, a post he resigned in January, 1923. In March, 1920, he became Assistant Ophthalmic Surgeon to the London Hospital and full surgeon in 1926. Jeremy published several papers on ophthalmological subjects and was one of the first to draw attention to the association of Mongolism and cataract in 1920, the morphological characteristics of which were subsequently described by Koby. He also was an early observer of lens opacities in cretinism and following thyroidectorav. For nearly twenty years Jeremy taught regularly at the London Hospital, where he endeared himself to successive generations of medical students. BJO 1938,22:637; Brit med J. 1938,2:476

Ji, Xun Chuan (1933-) Chinese Ophthalmologist, Professor of Shanghai Medical University (SMU). He graduated from Shanghai Medical University in 1955 and began to study Ophthalmology under Prof. Guo Bing Kuan. He served as the Professor of Ophthalmology in SMU from 1986 to 1994. And was invited to be a Visiting Professor of the Ophthalmology Department of Pacific Medical Center of San Francisco , U. S. A. during 1982-1983. In the professional societies, he worked as the president in the Ophthalmologic Society of Shanghai Branch of Chinese Medical Association from 1986 to 1994, as the vice-president in the Ophthalmologic Society of Chinese Medical Association from 1986 to 1994 , and as the Member of the Advisory Committee for the International Congress of Ophthalmology from 1985 to 1994. He has served as the editor to many journals of China, such as *Chinese Journal of Ophthalmology*, *Recent Advances in Ophthalmology*, *Foreign Medical Sciences*, *Ophthalmology in China*, Chinese Edition of *Archives of Ophthalmology*, *Chinese Journal of Practical Ophthalmology* and *Chinese Journal of New Drugs and Clinical Remedies* etc. He has published more than 15 original papers, such as "*the appearance of the chamber angle and the mechanism of lowering intra-ocular pressure after trabeculectomy*", 1981, "*Lens anaphylactic endophthalmitis*", 1981, and "*Cup-disc ratio and its genetic interaction in twins*", 1987, etc. (The Eye and ENT Hospital, Shanghai Medical University. Address: Fenyang Road 83#,Shanghai 200031. The R.P China. Phone: 86-21-64377134-706; Fax: 86-21-64377151) (SM)

Jin, Xiuying (1923-) Chinese Ophthalmologist, Professor of Ophthalmology, Tong Ren Hospital, Senior Researcher of Beijing Institute of Ophthalmology. He graduated from the Medical School of Beijing University in 1945 and studied Ophthalmology under Prof. Luo Zongxian of Union Medical University and Prof. Zzhan Xiaolou of Capital Medical College. He extended his study at Kitasato University Medical School, Japan and Beth Israel Medical Center, New York, U. S. A. He served as the Associate Professor of Ophthalmology (1977-1979), Chairman of Department of Microbiology (1979-1985) and Professor of Ophthalmology and Director of the Beijing Institute of Ophthalmology (1985-1987) , and currently he works as the Professor and Senior Researcher at the Institute since 1988 and also the Tutor of the graduate of Capital Medical University (1979-). He is advisor of Corneal Disease Society in the Chinese Ophthalmological Society, Member of International Association of Contact Lens Educators (IACLE) and Vice-President of the Asia-Pacific Region of the IACLE. He published more than 30 papers and wrote many books: some examples are "*Local therapy of corneal allograft rejection with cyclosporin*. Am. J. Ophthalmol. 1995, 119:189", "*Microbiology of the eye*. *System of Ophthalmology*, People Health publisher, 1996", *Sexual transmitted diseases of the eye*. *Modern Ophthalmology*, Beijing Science and Technology Publisher, 1996" and "*Investigations of recombinant human epidermal growthfacter in treatment of corneal injury in rabbits*. Chin. J. Ophthalmol. 1998, 34: 215". He received Awards 20 times for his scientific achievements. (Beijing Institute of Ophthalmology, 17 Hou Gou Lane, Chong Nei Street, Beijing 100005, P. R. China. phone: +86-10-65288424; fax: +86-10-65125617, 65130796) (SM)

Joannes Artuarios. See **Actuarius, John.**

Jobert de Lamballe, Antoine Joseph (1799-1867). A famous French surgeon, who was first to close recto-vesical and vesico-vaginal fistulas. He was also said by some to have been the inventor of "Autoplastie par glissement"-i. e., autoplasty by the sliding flap-a claim which has been vigorously contested. He was, further, a man of some importance in ophthalmology. Born in Matignon (Côte-du-Nord), he received his medical degree at Paris in 1828. In 1830 he was associate to the Faculty, and in 1831 surgeon to the Hôpital Saint-Louis and consulting surgeon to the King. He was a brilliant operator, especially for cataract and the various lacrimal affections, on both of which subjects he published articles in the *Annales d'Occulistique.*American Encyclopedia of Ophthalmology, Vol.9, p.6723.

Johannes, Jacobi. A 14th century French physician of Montpellier who devoted some attention to ophthalmology. The dates of his birth and death are not known. In 1364, however, he was appointed chancellor of the University. In 1384 he was physician to Pope Clement VII, and, shortly afterward, he died. Four of Johannes's writings are still extant. The only one, however, containing ophthalmic matter, is the "*Secretarium Practicae Medicinae*" (Biblioth. Nationale, Paris). This work, which was written in 1378 by order of King Charles V, consists of six divisions or parts, the second of which is devoted to the eye. This ocular division is again divided into ten chapters as follows: Chap. I, on Ophthalmia; Chap.II, On the Ulceration Consecutive to the Aposteme, Treatise on the Ulcer, Foreign Bodies, Leucomata; Chap. III, On Pannus; Chap. IV, On Lacrimation; Chap. V, Subconjunctiva,l Ecchymosis; Chap. VI, On Entropion; Chap. VII, On Weakness of Vision, and on Nyctalopia; Chap. VIII, Dilatation of the Pupil; Chap. IX, On Lacrimal Fistula; Chap. X, On Cataract. The entire division devoted to the eye is extremely brief; in fact, each chapter consists of merely the barest mention of the diseases in question, followed by a suggestion of cure by some collyrium or slight mechanical procedure. American Encyclopedia of Ophthalmology, Vol.9,p.6724

John of St. Paul. Johannes de Sancto Paulo was a medical author of the middle ages, who is said by some to have flourished in the 13th century, by others in the 12th. Some authorities have even questioned whether he lived at all. There seems to be, however, very little reasonable doubt as to his having existed, or as to his having been the author of a work called "*Liber Virtutum Medicinarum Simplicium*" This is merely a short treatise on therapeutics, one chapter of which, entitled "*De Clarificationibus Visum,*" consists of a mere enumeration of the commoner remedies at that time employed for the diseases of the eye.American Encyclopedia of Ophthalmology, Vol.9, p.6725

John the Actuary. See **Actuarius, John.**

John, King of Bohemia (1296-1346). Was crowned in 1311. Concerning this potentate there runs an historical passage of especial interest to ophthalmologists. John was plainly going blind (and entirely lost sight in 1340.) So he sent to France for an oculist. The unfortunate eye-doctor arrived, but, proving unable to cure the monarch, he was sewn up in a sack and cast into a river. An Arabian oculist was next sent for. He, also, was unsuccessful, and would no doubt have suffered a like fate with that of his French confrère, except that he had been clever enough to arrange in advance for a "safe conduct." Then the king betook himself to Montpellier, there to consult the great Guido, otherwise known as Guy de Chauliac. Guido, however, would not undertake the case. Instead, he wrote for his royal patient a little work, entitled "Manner of Life for Cataract Patients"-not now extant. The king, however, does not seem to have been greatly cheered by the volume which his calamity had called into existence, and becoming, shortly afterward, stone blind, he purposely sought and quickly found "the greater darkness still" in the battle of Crécy. American Encyclopedia of Ophthalmology,Vol.9, p.6724-6725

John, Master of Mainz. An almost wholly unknown oculist who, in 1351, operated successfully for double-sided cataract on the Abbot Gillion le Muysit at Tournay, Belgium.American Encyclopedia of Ophthalmology,Vol.9, p.6725

Johnson, Christopher Turner. The place and date of his birth are unknown. In 1809, however, he settled in Exeter, England, as surgeon and ophthalmologist. Here, too, he taught anatomy, and here he died, of a dissection wound, March 4, 1811.American Encyclopedia of Ophthalmology, Vol.9, p.6725

Johnson, George Henry Sacheverell (1808-1891) British mathematician, astronomer and clergyman. Johnson was born at Keswick, England, and studied mathematics at Oxford receiving his M.A.. in 1833. He later lectured in Oxford and was there professor of astronomy from 1839 to 1842. From 1854 he was dean of Wells Cathedral. He wrote: *Optical investigations* (2 pts) Oxford 1835.

Johnson, George Lindsay (1853-1943) British ophthalmologist from South Africa. Johnson was born in Manchester, but much of his education was taken in Germany, and he was in Strasbourg when the Prussians seized it in 1870. After spending a year on a ranch in Australia where he had relatives, he studied at Owen´s College,Manchester and at Göttingen University, Germany, at Caius College, Cambridge and St.Bartholomew´s Hospital. He took the M.D. Cantab. in 1890 and the F.R.C.S. in 1884. His ophthalmic career started when he acted as Registrar at the Royal Westminster Ophthalmic Hospital, and later he worked at the Royal Eye Hospital with Brudenell→Carter. Much of his spare time was spent at the zoo where he studied the comparative anatomy of the eye. Papers on the *mamalian eyes* appeared in the *Phil.Transactions of the Royal Society London* in 1901, and on *reptilian and amphibian eyes* in 1924. Johnson was a pioneer in colour photography and maintained his interest to the end of his life. He left England for South Africa in 1911 and practiced for a time in Johannesburg. He spent much of his time devising optical instruments and performing photographic experiments. Johnson wrote a pocket *atlas and textbook of the fundus oculi* (1911) which went trough a second edition, and also "*A new method of treating chronic glaucoma based on recent researches into its pathology*," London 1884 and *Photographic Optics and Colour Photography*, London 1909, *Photography in Natural Colours*, London, 4 editions until 1922, *Photography in Colours, A textbook for Amateurs* London 1914. BJO 1944; 28:370-371. Albert. C.R.Keeler; LFRCS 1930-1951: 427-428, JPW.

Jokl, Alexander (1895-1965) South African of Johannesburg. Alexander Jokl qualified in medicine in Austria, taking his M.D. in Vienna in 1919, and then post-graduated ophthalmology and research there and in Uppsala, where he obtained the M.D. of that University. He later studied in England, where he qualified M.R.C.S., L.R.C.P. in 1930 before coming to South Africa, where he devoted himself to ophthalmology in Johannesburg for close on thirty-five years. Jokl was one of the earliest members of the Ophthalmological Society of South Africa, and was a Past-President of its Southern Transvaal Branch. His ophthalmological library was his special interest and he bequeathed it to the Southern Transvaal Branch of the Ophthalmological Society of South Africa, who in turn have donated it to the Library of the Medical School in Johannesburg in his memory. Jokl's great interest in ophthalmological literature and the contributions he made to it in former years, made it fitting that he should have been an Associate Editor of Ophthalmic Literature, the Quarterly Review of Ophthalmology and Ophthalmologica (formerly: *Zeitschrift für Augenheilkunde* [JPW]).Brit.J.Ophthal.1965, 49:385

Jones, Samuel Jones (1836-1901). American ophthalmologist of Chicago, Ill. Born at Bainbridge, Pa., son of Dr. Robert H. Jones, a native of Donegal, Ireland, and of Sarah M. Ekel Jones of Swiss American ancestry, he received the degree of Bachelor of Arts at Dickinson College, Carlisle, Pa., in 1857. In 1860 he received from his *alma mater* the degree of A. M. and in 1884 that of LL. D., *honoris causa.* In 1860, at the University of Pennsylvania he received his medical degree, after a three years course of study. In 1860 also (the year of his graduation) he entered as Assistant Surgeon the United States Navy. On May 8, 1861, the frigate to which he had been assigned, "The Minnesota," sailed under sealed orders from Boston as the flagship of the Atlantic blockading squadron. For 21 months the Minnesota was in active service, one of her most exciting experiences being the memorable engagement at Hampton Roads with the death-dealing Merrimac on March 2, 1862. In 1867 he was assigned to duty as surgeon of the frigate Sabine. In 1868 he was promoted to the rank of Surgeon, but, before the year was out, resigned from the naval service, and proceeded to Europe, there to study ophthalmology and otology. Returning to America, he settled in Chicago, and soon was made professor of ophthalmology and otology in the Northwestern Medical School-a position which he held for many years. In this capacity he gave clinical instruction at Mercy Hospital and at the South Side Free Dispensary. He was also ophthalmic and aural surgeon to St. Luke's Hospital. For several years he was editor of the *Chicago Medical Journal and Examiner*-a

publication which prospered greatly under his management. Dr. Jones was a member of numerous medical societies, both general and special. In 1876 he was a delegate from the Illinois State Medical Society to the Centennial International Medical Congress, held in Philadelphia. In 1881 he was a delegate from the American Medical Association and the American Academy of Medicine to the Seventh International Medical Congress, which met in London. In 1887 he was President of the Otological Section of the Ninth International Medical Congress, at Washington. Dr. Jones was twice vice-president of the American Academy of Medicine, and in 1890 its president. His skill as an ophthalmic operator was undeniable.American Encyclopedia of Ophthalmology, Vol.9, p. 6725-6727

Jones, Sydney (1830-1913). British surgeon who became the first appointed *ophthalmic surgeon* to St.Thomas´s Hospital in London. The Ophthalmoscope, London 1914,p. 122.

Jones, Thomas Wharton (1808-1891) English ophthalmologist. Born in St. Andrews, Scotland, he studied at Edinburgh and Paris, and settled in London in 1838 as general practitioner. He was for a time Professor of Physiology at the Charing Cross Hospital and at the Royal Institution. Later, turning his attention to ophthalmology, he became Ophthalmic Surgeon and Professor of Ophthalmology at the University College Hospital. He was particularly celebrated as an ophthalmic diagnostician. For a time he lived in retirement at Ventnor, Isle of Wight, where he later died . Wharton Jones was a man of slight physique, yet of impressive presence, mainly because of his earnest, almost eager manner. His enthusiasm was, in fact, contagious.*[The true Lumen siccum of science glowed in every proposition which fell from the lips of the pale little man, as he stood with downcast eyes, and fingering his watch chain, at one corner of the table.*"*-Thos. H. Huxley.]*. Outside his lectures he was extremely shy and reserved, and to only a few was it given to be admitted to his intimacy. The poorer classes loved him, and always called him "The Old Professor." Many of the charity patients were never satisfied until they had seen "*The Old Professor*." If nothing else, they must at least shake hands with him. Strange as it seems, his private practice was always small, and he was, at times, poor even to the point of destitution. In the winter of 1881 he was found in a starved and almost frozen condition by one of his former pupils. The facts were reported to Dr. Ringer, Mr. Erichsen, and William Jenner, who, conjointly, and very slyly, paid in a goodly sum to Jones credit at his former bankers. Jones was then promptly notified, and, even to his dying day, was firmly of the opinion that he had forgotten a certain sum of money which he himself, a long time previously, had deposited in the bank. Jones' ophthalmic writings are as follows: 1. *The Black Pigment of the Eye. (Edin.Jour.*, No. 114, pp. 77-83.) 2. *The Movements of the Pupil*. (Ibid., No. 118, pp. 10-42.) 3. *Defects of Sight: Their Nature, etc.* (London, 1856; 3d ed., 1877; edited with additions, by Laurence Turnbull, Philadelphia, 1859.) 4. *The Principles and Practice of Ophthalmic Medicine and Surgery* 1847 (3d ed., 1865; three American editions, 3rd by Prof. Atlee; one French trans. by Prof. Faucher.) This may be regarded as Wharton Jones' most important service to ophthalmology. It was the leading textbook on its subject both in England and America until the appearance of *"A Treatise on Diseases of the Eye*," by →Soelberg Wells, the first edition of which appeared in 1869. Hirschberg criticises with some severity the work of Jones, chiefly because of his failure to recognize the value of the ophthalmoscope. Aside, however, from this one great failure, the work is truly excellent, being simple, clear, and reasonably thorough. 5.*Failure of Sight from Injuries of Spine and Head.* (1869.) 6. *Report on the Ophthalmoscope. (Brit. and For. Medico-Chirurgical Rev.*, October, 1854, p. 549.) In this article, also, as well as in his "*Principles and Practice*, " Jones discloses a strange inability to appreciate the value of the ophthalmoscope. Thus, on p. 554, he says: "*The little help which the therapeutics of the eye has as yet derived from the ophthalmoscope appears evident from the results of the observations contained in the works before us.*" In this same article, however, occurs a passage of great historic importance-the extremely belated announcement, in fact, of →Babbage's anticipation of →Helmholtz in the invention of the most important instrument in ophthalmology. The passage, in full, is as follows (p. 551): *"Dr. Helmholtz, of Königsberg, has the merit of specially inventing the ophthalmoscope. It is but justice that I should here state, however, that seven years ago Mr. Babbage showed me the model of an instrument which he had contrived for the purpose of looking into the interior of the eye. It consisted of a bit of plain [sic] mirror, with the silvering scraped off at two or three small spots in the middle, fixed within a tube at such an angle*

that the rays of light, falling on it through an opening in the side of the tube, were reflected into the eye to be observed, and to which the one end of the tube was directed. The observer looked through the clear spots of the mirror from the other end. This ophthalmoscope of Mr. Babbage, we shall see, is in principal essentially the same as those of →Epkens and →Donders, of →Coccius and of →Meyerstein, which themselves were modifications of →Helmholtz's." 7. Wharton Jones supplied with his own hand a number of the drawings for William Mackenzie's *"A Practical Treatise on the Diseases of the Eye,"* notably the frontispiece which, in its time, was the best which had yet appeared upon the eye in a sectional view. Jones also wrote, 15 pages of excellent matter in explanation of his drawing, which, also, was published in the book of Soelberg-Wells. 8.*Anatomical introduction explanatory of a horizontal section of the human eyeball* 1840. 9. *The wisdom and beneficence of the Almighty as displayed in the sense of vision*. London 1851.10. *Failure of sight from railway and other injuries of the spine and head with a physiological and pathological disquisition into the influence of the vaso-motor nerves on the circulation of the blood in the extreme vessels*. London 1859. American Encyclopedia of Ophthalmology, Vol.9, p. 6727-6729.Albert.BMC

Laurent Joubert

Joubert, Laurent (1529-1583) French surgeon of the 16th century, who devoted considerable attention to diseases of the eye, but whose writings are tinctured with the grossest superstition. Born at Valence (Drôme), he studied his profession at first in his native city. Later, however, he migrated to Montpellier, there receiving the bachelor's degree in medicine in 1551. He practised first at Aubenas, then at Montbrison. Later, he studied at Paris, Turin, Padua, Ferrara, and Bologna. In 1558 he received the degree of Doctor in Medicine at Montpellier. In 1567 he composed a competitive thesis entitled "*An Visio Fiat Emittendo Potius quam Recipiendo*. " Shortly afterward he married Louise de Guichard. In 1583 he died at Lombert, on a journey from Montpellier to Toulouse. His writings are twelve in number, but, with the sole exception of the dissertation mentioned, none is devoted exclusively to the eye. Here and there are brief ophthalmologic passages, but none is of any merit.American Encyclopedia of Ophthalmology, Vol.9, p. 6729.

Joule, James Prescott (1818-1889) This scientific investigator, one of the most distinguished experimental philosophers, was born (1818) at Salford, England. His earliest notable experiments were made with reference to electromagnetic engines; from which he passed to quantitative determinations regarding heat, and the transformation of various forms of energy. He is justly entitled to be considered as the experimental founder of the modern theory of conservation of energy-the grandest generalization ever made in physical science. His collected scientific papers were published (1885-87).

Joux, Louis (b. 1888-1949) Belgian ophthalmologist. Joux became M.D. in Brussels in 1911 and specialized in ophthalmology in Paris, Munich and London (St. Mary's Hospital). Thereafter he became assistant and adjunct departmental head at the Brussels University under Emile→Gallemaerts and Henri→Coppez. In 1940 he leaded the Military Ophthalmic Institute and transferred it to Berck-Plage. He published on the *opsonic index in phlyctenular conjonctivitis* (1912), *treatment of gonococci conjunctivitis by milk injections* (1923), *palsy of the 6th nerve by rachicocainisation* (1923), *radiotherapy of a deep intraorbital tumour* (1924). (Verriest)

Jugler, Johann Heinrich (1758-1812) German physician, who paid considerable attention to the eye. Born at Lüneburg, he studied at Leipsic, Göttingen, Berlin, and Bützow, at the last named institution receiving his degree in 1784. His dissertation on this occasion was: "*De Collyriis Veterum Variisque Eorum Differentiis*." He settled first in Boizenburg then, in 1778, at Wittingen, where he became Landphysicus. In 1795 he removed to Lüchow, and in 1809 to Lüneburg, where he later died. Jugler's ophthalmologic writings are as follows: 1. *Bibliothecae Ophthalmicae Specimen Primum*. (Hamburg, 1783.) 2. *Opuscula Bina Medico-Litteraria: Alterum Specimen Bibliothecae Ophthalmicae Primum, Recensens Auctores, Qui usque ad Q. Sereni Sammonici Aetatem in Medicina Oculari Unquam Claruere, etc.* (Leipsic and. Dessau, 1785.) 3. *Hippocratis de Visu Libellus*. (Helmstädt, 1792.) American Encyclopedia of Ophthalmology, Vol.9, p. 6730-6731

Juler, Frank Anderson (1888-1962) British ophthalmologist. Juler was educated at St. Paul's School, Trinity College, Cambridge, where he gained a first in the Natural Sciences Tripos, and then at St. Mary's Hospital, at which he obtained an Entrance University

Scholarship, he was soon one of the top flight of ophthalmologists, with Staff appointments at Moorfields and St. Mary's. He served in both world wars: in the first, as a Captain in the R.A.M.C., he was a member of Sir William Lister's group of ophthalmic specialists at Etaples, and in the second, he was consulting ophthalmic specialist to the B.E.F. in France. Juler had many other appointments, among them Surgeon Oculist to the households of King George VI and Queen Elisabeth II. He was awarded the C.V.0. in 1947 and in the following year became President of the O.S.U.K. He was also President of the Ophthalmic Section of the Royal Society of Medicine. BJO 1962,46:319

Juler, Henry Edward (1842-1921) British ophthalmologist, brother-in-law of William Adams →Frost, descendant of a Huguenot family, he received his medical education at St. Mary's Hospital, London, where he held the posts of demonstrator of anatomy (1877) and medical superintendent of the Hospital. While holding the former he had gained some experience of general practice by assisting a Dr. Gibson, at that time surgeon to Newgate Prison, and he then passed the examination for the fellowship of the Royal College of Surgeons of England. He studied in Paris and Berlin and decided to devote himself to eye work. Upon his return to London he was appointed clinical assistant to the Royal London Ophthalmic Hospital. He went into practice in Wimpole Street, and received the appointment of pathologist to the Royal Westminster Ophthalmic Hospital. In those days, although clinical material was abundant, there was no systematic teaching at that hospital, but Juler with the help of his colleagues speedily laid the foundation of a school of ophthalmology, and was the first to encourage students from Charing Cross Hospital to attend the neighbouring ophthalmic hospital. In 1884 he was appointed to the staff of St. Mary's Hospital as junior to Sir Anderson →Critchett, and in 1901 when Sir Anderson retired, Juler became senior ophthalmic surgeon to the Hospital. Juler's chief contribution to the literature of ophthalmology was his "*Handbook of Ophthalmic Science and Practice*" (1884), a well-written, careful compendium, adorned with many illustrations. It was written when Juler was comparatively young, and firmly established his reputation as a keen clinical observer. It has gone through three editions in England and three in America. BJO 1921,5:286-288.Albert.

Julesz, Bela (?-) American scientist of Hungarian origin, state of New Jersey Professor of Psychology, and Director of the Laboratory of Vision Research, Rutgers University. In 1950 he received a Diploma of Electrical Engineering from the Technical University, Budapest; The Hungarian Academy of Sciences granted him his Ph.D. in1956. From 1956 until 1989 he worked at the (AT&T) Bell Laboratories. Dr. Julesz taught and did research in communications systems for several years prior to 1956. Since joining Bell Laboratories, he has devoted himself to visual research, particularly depth perception and pattern recognition. He is the originator of the Random-dot Stereo image technique and of the method of studying texture discrimination by constraining second-order statistics. He has written extensively in the area of visual and auditory perception, and is author of *Foundations of Cyclopean Perception* (1971, University of Chicago Press), and a second monograph *Dialogues on Perception* (1995, Bradford/MIT Press). Dr. Julesz was Head of the Sensory and Perceptual Processes Department from 1964 till 1982, and in 1983 became Head, Visual Perception Research Department. In January 1989 after 32 years at Bell Laboratories he retired and became a State of New Jersey Professor of Psychology and Director of the newly established Laboratory of Vision Research at Rutgers University. He has been a visiting professor of experimental psychology at M.I.T. and other universities. In 1983 he received (for five years) the MacArthur Fellow Award for his work in Experimental Psychology and Artificial Intelligence. He was a Fairchild Distinguished Scholar at the California Institute of Technology from 1977 to 1979 and in 1987. Fellow, AAAS, OSA, and American Academy of Arts and Sciences; Corresponding Member of the Goettingen Academy of Sciences and Honorary Member of the Hungarian Academy of Sciences. In 1982 he was elected Neurosciences Associate of the Neurosciences Institute for nine years. In January 1985 was awarded Dr. H. P. Heineken Prize by the Royal Netherlands Academy of Arts and Sciences. From 1985 through 1993 he was Continuing Visiting Professor at Caltech's Biology Division during the winter semesters. In 1987 he was elected member of the National Academy of Sciences. In April 1989 he received the Karl Spencer Lashley Award by the American Philosophical Society and was elected Fellow of the Society of Experimental Psychologists. He is a member of

the advisory board of the Santa Fe Institute. Papers: Julesz published 210 papers between 1950 and 1995 (to be found in the internet at: *http://zeus.rutgers.edu/julesz_bibl.html.* Received patents: B. Julesz, 2,974,195, Economy in TV Transmission, dated March 7, 1961; C.C. Cutler, B. Julesz, K.S. Pennington, 3,543,237, Pattern Recognition Apparatus and Method, dated Nov. 24, 1970; B. Julesz, B.T. Kerns, M.E. Terry, 4,023,911, Stereopsis Test Patterns for Adjustment of Stereomicroscopes in the Inspection of 3-D Objects, dated May 17, 1977; B. Julesz, 4,032,237, Stereoscopic Technique for Detecting Defects in Periodic Structures, dated June 28, 1977. Address: B.Julesz, LVR, Psychology Bldg. Busch Campus, Piscataway, NJ 08854, telephon: (908) 445-6660, fax: (908) 445-6715, e-mail: julesz@cyclops.rutgers.edu (JPW)

Junge, Eduard (1832-1898) Russian ophthalmologist who was born at Riga, and who received his early professional education at the University of Moscow, and then proceeded to study ophthalmology under Albrecht von →Graefe. From 1860 until 1882 he was full professor of ophthalmology at St. Petersburg, as well as a member of the Upper Military-Medical Court and Fellow of the Military-Medical Committee. These positions he resigned in 1882, for the purpose of undertaking, in the following year, the reorganization and supervision of the St. Petersburg Academy of Forestry and Agriculture. He died in Jalta. Junge wrote, in Russian: "*The Mechanical Center of the Eye,*" and "*Measures to be Taken by Troops against Conjunctivitis and Trachoma;*" in German: "*Zur Histologie der Glashäute..... Die Getigerte Netzhaut..... Ueber Netzhautverengerung bei Cirrhose*. "American Encyclopedia of Ophthalmology, Vol.9, p. 6732.

Jüngken, Johann Christian (1793-1875) German ophthalmologist of Berlin, pupil and assistant of Carl Ferdinand →Graefe and the first to perform an ophthalmic operation under general anaesthesia. Born at Magdeburg, Germany, the son of a physician, he began to study medicine at Göttingen about 1812. For a time his studies were interrupted by his military services, which he rendered in a medical capacity. In 1816, however, he was back in Berlin, again at his medical studies and also assistant to von →Graefe. In 1817 he received his degree, presenting the dissertation "*De Pupillue Artificialis per Coreoncion Graefianum Conformatione*." The very same year he qualified as privatdocent at Berlin for surgery and ophthalmology, and, the year following, enjoyed a year of scientific travel. In 1825 he was made Extraordinary Professor of Ophthalmology at Berlin, and three years later was appointed head of the newly-founded Clinic for Ophthalmology in the Charity Hospital-a position which he held for forty years. In 1834 he became Professor of Surgery and Ophthalmology. After the reception of numerous honours of the highest character through a period of many years, he celebrated, in 1867, the semi-centennial of his doctorate. Though not a great inventor, Juengken was an excellent teacher and operator. He was a warm-hearted, clear-headed, and very helpful man, and, therefore, the idol of his students. His most important ophthalmologic writings are: 1. *Das Coreoncion. Ein Beitrag zur Künstlichen Pupillenbildung*. (1818. A German translation by himself of his graduation thesis, above mentioned.) 2. *Die Lehre von den Augenoperationen, etc.* (1829.) 3. *Die Lehre von den Augenkrankheiten, etc*. (1832; 2d ed., 1836; 3d ed., 1842.) 4. *Mém. sur l´Ophtalmie qui Règne dans I'Armée Belge*. (Brussels, 1834. Germ.trans., same year.) 5. *De Blennorrhoeis Oculi Humani*. (1837.) 6. *Ueber die Anwendung des Chloroforms bei Augenoperationen*. (1850.) 7. *Die Augendiätetik oder die Kunst, das Sehvermögen zu Erhalten und zu Verbessern*. (1870.) American Encyclopedia of Ophthalmology, Vol.9, p. 6730

Jung-Stilling, Johann Heinrich (1740-1817) German poet, novelist and ophthalmologist. Born at Grund, Germany, he began at first to work as apprentice at the trade of charcoal-burner, but soon tired of it and devoted himself to tailoring. Shortly afterward, though chiefly self-instructed, he became a schoolmaster. A failure in this profession, he became a private tutor; but soon determined to study medicine. In accordance with this resolution he studied from 1770-72 at the University of Jena, whither as he states, he had gone with "*half a French dollar*," and where he became acquainted with →Goethe, Herder, and other fellow students, who were later to become famous. In 1772 he settled in Elberfeld as a, general practitioner, devoting, however, his chief attention to ophthalmology. He was soon renowned as a highly skilful operator, but, at the end of only six years, because of the unfortunate issue of a cataract operation which he performed on the eye of a prominent citizen, relinquished medical practice and accepted an invitation to the chair of economy,

finance, and statistical science at the University of Marburg. While here, however, he did not wholly abandon the practice of ophthalmology. In 1804 he accepted a similar appointment at Heidelberg. Still later he moved to Carlsruhe, where he became a Privy Councilor and where he later died. Jung's life is well described and at considerable length in Goethe's *Dichtung und Wahrheit*. His more important writings were: "*Günstige Erfolge mit dem Daviel'schen Verfahren der Cataract-Extraction, Sendschreiben an Herrn Hellman in Magdeburg, etc.*" (Frankfurt a. M., 1775) and "*Methode den Grauen Staar Auszuziehen und zu Heilen*." (Marburg, 1791), both of them valuable publications.American Encyclopedia of Ophthalmology, Vol.9, p. 6732-6733.Albert.

Jurin, James (1684-1750). British physician of some importance ophthalmologically. Born in London, he studied at Trinity College, Cambridge, and settled as physician in London about 1712. He became, in succession, Fellow, Secretary and President of the Royal Society. He was much interested in the application of mathematics to the field of physiology; hence his attention to physiological optics. His most important writings are: 1. *Physico-Mathematical Dissertations*. (London, 1732.) 2. *An Essay upon Distinct and Indistinct Vision*. (Cambridge, 1738: an appendix to Robert Smith's " *Optics.")*American Encyclopedia of Ophthalmology, Vol.9, p.6733.

K

Kabir, Md. Humayun (1939-) Bangladesh Ophthalmologist. He was born on 13th December, 1939 in a respectable Muslim Family of village Keshabpur, Thana-Daudkandi, Dist. Comilla. His father Late Moulana Abdus Zaher was a peer-e-kamel of the locality. He was matriculated in 1955 from the then East Pakistan Secondary Education Board and passed Intermediate Examination from the University of Dhaka in 1957. He passed MBBS from Dhaka Medical College in 1962. He passed FCPS (Ophthalmology) Examination in January 1970 from Pakistan College of Physicians and Surgeons. He is founder fellow of the Bangladesh College of Physicians and Surgeons. Prof. Kabir received higher training in Ophthalmology as a fellow WHO in 1977 and '78 in U.K., France, Germany and Spain. He was awarded FACS from the American College of Surgeons in 1987. He received FRC Ophth. of the Royal College of Ophthalmologists, UK in 1989. He joined the Government Service in the then East Pakistan Health Services (Upper) on 19th March, 1963 in the Mitford Hospital, Dhaka as Assistant Surgeon. He worked in the Department of Ophthalmology of the same Hospital in different capacities till April 1967. He then joined the Institute of post Graduate Medicine and Research, Dhaka for FCPS course. After he got his Fellowship in Ophthalmology he joined the Department of Ophthalmology, Chittagong Medical College in February 1970. In the middle of 1971 he joined as Consultant Ophthalmologist in the Modernized District Hospital of Comilla and worked till June, 1976. On the 6th July Dr. Kabir joined Barisal Medical College as Associate Professor of Ophthalmology. In the middle of 1977 Prof. Kabir was awarded fellowship by WHO for higher training in Ophthalmology in U.K., France, Germany and Spain. Back home in 1978 he again joined Barisal Medical College and worked there till middle of 1982. He then joined Sylhet Medical College and worked there till October, 1984. Prof Kabir joined as Professor of Ophthalmology on 21st October, 1984 in Barisal Medical College. On 12th September, 1985, Prof. Kabir joined as Prof. of Ophthalmology in Institute of Post Graduate Medicine and Research, Dhaka and worked till 10th February, 1991. On 10th February, 1991 Prof. Kabir joined as Director-cum-professor, National Institute of Ophthalmology, Dhaka. On 26th September, 1993 he joined as Professor of Ophthalmology in IPGMR again and then joined as Director-cum-Professor, National Institute of Ophthalmology in 1995 from where he retired in 1997. Now he is member of the Academic council of Banga Bandhu Sheikh Mujib Medical University. He is frequently appointed as examiner of MBBS, DO, DCO, MCPS, FCPS & MS (Ophthalmology) examination by the different Universities and Bangladesh College of Physicians and Surgeons. He was also appointed as External Examiner of MS Ophthalmology by the Tribhuvan University, Kathmandu, Nepal. Prof. Kabir was appointed as External Examiner FCPS Ophthalmology final part by the College of Physicians and Surgeons of Pakistan. Prof Kabir was also appointed as Observer Examiner of the final FRC Ophth. Exam. in the Royal College of Ophthalmologists, U.K. Prof. Kabir is the life member of the Ophthalmological Society of Bangladesh (OS B), Bangladesh Medical Association, Bangladesh National Society for the Blind, Jalalabad Blind Welfare Association, Sylhet. He was Vice President and Secretary General of OSB for two terms each Professor Kabir has been elected as President of the

Bangladesh Academy of Ophthalmology. Then he was elected as the President of the Ophthalmological Society of Bangladesh. He was an Apexian and he was in Lionism and served as Multiple District Sight first chairman in the District 315, Bangladesh. He has been organising rural Eye Camps regularly for the last more than three decades in the country. He has established one 20 bedded Eye Hospital and one Mother & Child Hospital at his village home in the Daudkandi Thana of District Comilla. He also established one Primary School and one Girls School at his village. Prof. Kabir has more than 40 publications at home and abroad. His special interest is anterior segment, specially cataract and IOL implantation and glaucoma. He attended XIII Congress of APAO in Kyoto, Japan 1991, SAARC Ophthalmic Conference in Kathmandu 1991, SAARC & Non Aligned countries Ophthalmic Conferences in Delhi and IAPB Regional Assembly in Delhi 1992. He attended XVII APAO Congress in Manila in 1999. He visited India, Nepal, Thailand, Hong Kong, Japan, U.K., France, Germany, Spain, Rome, Tehran, Pakistan, K.S.A. and Phillipines. (AB)

Kaestner, Abraham Gotthelf (1719-1800) German mathematician, son of a professor of jurisprudence, was educated (philosophy, mathematics and physics) at the University of Leipzig, where he taught (1739-1756) mathematics, logic and natural law, before becoming professor of mathematics and physics at Göttingen (1756-1800). Kaestner published extensively on mathematics and its applications in optics, dynamics, and astronomy. His most popular work was *Mathematische Anfangsgründe* (4 parts) Göttingen 1757-1800. He also wrote a history of mathematics: *Geschichte der Mathematik* (4 vols.) Göttingen 1796-1800 and *Catopricae analyticae de focis et aberrationibus*. Leipzig c.1750. Albert.DSB.

Shigeru Kagoshima

Kagoshima, Shigeru (1882-1953) Japanese Ophthalmologist, Professor Emeritus of Kumamoto University. He graduated from Chiba University Medical School in 1906, and studied Ophthalmology under Prof. J.→KOMOTO for 2 years and then he practiced in the city of Ohmuta in Fukuoka Prefecture for 3 years. He came to Tokyo in 1916 to study Pathology at Tokyo University under Prof. T. OGATA for almost 10 years. He received his Doctor of Medical Sciences from Tokyo University in 1923, with the thesis "*Xerophthalmia, Rickets and Vitamin A*". During his study at Tokyo University he visited Europe, and helped Prof. J.→HIRSCHBERG pack his voluminous library in order to ship it to Tokyo (see KOMOTO Jujiro). On homecoming, he was appointed the Professor and Chairman of the Department of Ophthalmology of Kumamoto University in 1926 and served until 1941, when he retired and practiced in the city of Kumamoto. During his tenure he served as the President of 45th Congress of the Japanese Ophthalmological Society. (SM)

Kaiser, Hermann (1815- ?) German ophthalmologist. Born at Erbach, Odenwald, he studied at Giessen and practised, successively, at Biblis, Ulrichstein, Seligenstadt, and Dieburg. The date of his death is not procurable. Kaiser's ophthalmologic writings are numerous but not specially important, and deal, for the most part, with physiologic optics. American Encyclopedia of Ophthalmology, Vol.9, p. 6738

Mutsuo Kajiura

Kajiura, Mutsuo (1912-1997) Japanese Ophthalmologist and Professor Emeritus of Fukushima Prefectural Medical College. He graduated from Okayama University in 1938, studied Ophthalmology under Prof. B.→HATA and was granted Doctor of Medical Sciences in 1942. He was appointed the Assistant Professor in1943. In 1948 he was invited to Tokyo Medical and Dental University and then in 1951 he was promoted to be the Professor of Ophthalmology of Fukushima Medical College. His main interest was Ophthalmic Optics, and he designed many optical instrument, e.g. Kajiura Binocular Great Ophthalmoscope, an improved version of Gullstrand´s Binocular Ophthalmoscope, Kajiura Slit-lamp Microscope, non-spherical Lens for Ophthalmoscopy, and these instruments were used throughout Japan. His experiences in Ophthalmic Optics were condensed in his Special Lecture "*Slit-lamp Microscopy of the Fundus-its Theory and Practice*" at the 81st Congress of the Japanese Ophthalmological Society in 1977: this Lecture was awarded with the Highest Prize of the Japan Medical Association of the year. His interest also covered contact lenses and he served as the President of the Joint Scientific Meeting of the Japan Contact Lens Society and the Contact Lens Association of Ophthalmologist in 1968. He was also the President of the Ophthalmological Optics Society of Japan and the

President of the 30th Congress of the Japanese Society of Clinical Ophthalmology 1976. He retired from the University in 1979 and was entitled Professor Emeritus of the University. In recognition of his contribution, the Government conferred the Third Order of the Rising Sun upon him in 1987. (SM)

Kalevar, Vasundhara (1936-) Indian Ophthalmologist, former Professor of Ophthalmology, BJ Medical College, Ahmedabad. She graduted from M.G.M. Medical college, Indore in 1960 and did her postgraduation in opthalmology in1963. She studied Ophthalmology under Prof. DHANDA R.P. and worked with him for 38 years. She has specialized her practice in corneal diseases and surgery since 1962. She is the first Indian ophthalmologist to be awarded *Fight for Sight* International Fellowship in 1966 sponsored by National Council to Combat Blindness, New York. She worked at Wilmer Institute, Johns Hopkins Baltimore on '*Histopathology of Tropical Cornea*' with Dr.A.F.Maumenee and Dr.J.R.Duke Jr. This study, on return to India, was continued under a research grant by Indian Council of Medical Research. She was selected by National Institutes of Health, Bethesda U.S.A. as a postdoctoral Fellow for a project on Keratoprosthesis under the guidance of Dr. C.H.→Dohlman in Boston in 1970-1971. She actively participated in all Corneal surgery training programmes with Dr.Dhanda at Indore and Ahmedabad, India. She has been the first Professor in Eye-Banking and Corneal surgery in India. She has been co-author with Professor Dhanda for the book on *Cornea* published in Boston by Little,Brown and Co. and later in India. Her contribution in the *Textbook of Clinical Ophthalmology* as a co-author is significant. There is perhaps no other team of ophthalmic surgeons who have worked together for 38 years (1960-1998) in general ophthalmology and Corneal surgery in particular. Dr.Kalevar has been the third lady President of All India Ophthalmological Society (AIOS) in 1997. She was editor for the *Proceedings of AIOS* annual conferences from 1987-1992, two consecutive terms as an elected office bearer of the Society. She has been awarded Gold medals by AIOS and five other state Ophthalmic societies for her work on cornea. She has many publications in national and International ophthalmic literature, some examples are "*Donor Cornea for preservation*. Br. J. Ophthalmol.52: 695, 1968", "*Viability of Donor Cornea in Tropics*. Trans. Asia-Pacific Academy of Ophthalmol. (1968), p. 188" , "*Blood stained Cornea - Clinico-pathological evaluation and scope of keratoplasty*. Conc. Ophthalmol. (1974), Vol 2, p. 737" and "*Glyco-protein (mucus) content of tears from normals and dry eye patients*. Exp. Eye Res. 22: 359, 1975, with C. H.Dohlman". (107 Sapna Chambers, 12/1. Sarju Prasad Marg, Indore-452001 India; e-mail: appalto@bom4.vsnl.net.in) (SM)

Kalt, Eugene (1861-1941) French ophthalmologist, born in Landser (Alsace) near Mulhouse and Basle. He went to the high school of Belfort where he was received as bachelor in 1879. He studied medicine first in Besancon, moving after one year to Nancy, and joining the medical school of Paris, becoming physician there in 1882. In 1886, he sustained, under Ph.Panas, his doctoral thesis " *Recherches anatomiques et physiologiques sur les opérations de strabisme* ". The same year he won, by contest, the position as deputy chief of the Eye Clinic under Panas. After a new contest, in November 1889, he becomes chief of the Eye Clinic of the famous Quinze-Vingts, a position he was to retain for the next 52 years. For a new treatment of the eyes, he was named, in 1909, Chevallier de la Légion d´Honneur and later, in 1921, promoted to Officier de la Légion d´Honneur. His interest being focused on Histology, he was considered, in France, the inventor of ocular patho-histology. Due to his very long career, he was probably the French ophtalmologist who performed the highest number of cataract operations. Kalt was a founding member of the Société d´ophtalmologie de Paris (1888). He was an editor of the Annales d´Oculistique, in which he published a great number of papers. He also was a collaborator to Lagrange and Valude´s great *Encyclopédie Française d'Ophtalmologie* published 1903. Kalt was a promoter of new cataract operations: suture of the corneal cut of the cataract, of the intracapsular extraction of the lens (1894), and of the so-called " *forceps of Kalt* " for its extraction (1910-1925). He was also a promoter of a treatment of the gonococcal ophtalmia of the newborn and the adult by irrigation with permanganate of potash with the help of a funnel of his invention. Heitz *History of Contact Lenses*, Ostend Wayenborgh 2002-2003. JPW

Sadayoshi Kamiya

Kamiya, Sadayoshi (1916-1992) Japanese Ophthalmologist, a graduate from Osaka Medical College in 1939 studied Ophthalmology at Osaka University under Prof. B.

→NAKAMURA and Prof. Y. →UYAMA. He was appointed the Professor and Chairman of the Department of Ophthalmology of Nara Medical University in 1953. His clinical research covered flicker fusion, dark adaptation, light sense, keratoplasty, eye drops, amblyopia etc. In 1962, he opened an Eye Camp in Nepal at the request of a Nepalese student. Subsequently, he visited Nepal many times and carried out Eye Camp Activities. He retired from the University in 1971. In 1990 the King of Nepal conferred upon him a decoration of High honor (*Suprabala Gorakha Dakshinabahu*), in recognition of his service for the prevention of blindness in Nepal.(SM)

Kämpf, Moritz K. (1835- ?) Austrian physician born in Friedeberg, Austria. Kämpf was a physician at the military hospital in Vienna for some years, then, retiring, he became 1878 an ophthalmologist in Krems an der Donau. He wrote: *The causes and prevention of near-sightedness*. Translated from the *Wiener Zeitung* by Henry W. Williams. Boston 1871;*Ueber die sogenannte ägyptische Augenentzündung* (Zeitschrift f.praktische Augenheilkunde 1872); *Regeneration des grössten theils der Hornhäute* (same journal 1868). Albert.Fischer.

Kanai, Atsusi (1937-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Juntendo University, Director of the WHO Collaborative Centre for Prevention of Blindness. He graduated from Juntendo Univeristy in 1963, studied Ophthalology under Prof.→NAKAJIMA Akira and received his Doctor of Medical Sciences in 1968 (thesis: *Electron Microscopic Study of Keratoconus*. J. Jpn. Ophthalmol. Soc. 72: 902-918, 1968). He extended his study at the University of Florida in 1968-1971 and at Louisiana State University 1979-1980 and worked with Prof. H. Kaufman (a joint work: *The Fine Structure of Sclerocornea, Invest.* Ophthalmol. 10: 687-694, 1971). He was promoted to be the Assistant Professor of Juntendo University in 1979 and to the present position as above in 1989, as the successor of Prof. Nakajima Akira. He holds key positions in many professional societies: President of the Japanese Society of Keratoplasty, Board of Trustees of Japan Eye Bank Association, Japan National Society for the Prevention of Blindness, Japan Contact Lens Society, Japanese Society of Ophthalmic Surgeons (President of the 20th Congress) and Japanese Society of Ocular Inflammation. He is also a Councillor of the Japanese Ophthalmological Society and many other National Societies, and also of the Asia-Pacific Academy of Ophthalmology. The WHO Collaborative Centre for Prevention of Blindness has been placed in this Department since 1989. He also serves many Government Councils and Committees. His research interest is in cornea, keratoplasty, contact lens, refractive correction and sports vision, and he has many publications, e.g. "*Future contact lens*. special lecture to the 40th Congress of Japan Contact Lens Society, J. Jpn. Cont. Lens. Soc. 39: 271-278, 1997", "*Corneal dystrophy. System of Ophthalmology* 2A: p.231, Nakayama Publ. Co. Tokyo 1996". He has been active in the Prevention of Blindness activities in Asia-Pacific Region, and received an Honor Award for International Prevention of Blindness Program from the Ministry of Health, Thailand(1997) and Vietnam Red Cross Medal (1997). (Department of Ophthalmology, Juntendo University, 3-1 Hongo, Bunkyo-ku, Tokyo, 113-8413, phone: +81-3-3813-3111, fax: +81-3-3817-0260)(SM)

Charimet Kanchanaraya

Kanchanaraya, Charimet (1936-1985) Thai Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Ramathibodi Hospital, Mahidol University. He graduated from the Faculty of Medicine, Siriraj Hospital, University of Medical Sciences, and received his M.D. degree in 1960. He continued his study in the U.S.A. from 1964, at New York Eye and Ear Infirmary and Retina Foundation, Boston: he received the Diploma of the American Board of Ophthalmology in 1967 and the Diploma of the Thai Board of Ophthalmology in 1972. He came home in 1968 and joined the teaching staff of the Ramathibodi Hospital, Mahidol University, and he was promoted to Assistant Professor (1976), Associate Professor (1978) and then to the Professor in 1983. He worked as the Chairman of the Department of Ophthalmology of Ramathibodi Hospital during 1978-1985. His professional activities were very active: he served as the Executive Member of the Committee of the Faculty of Medicine of Mahidol University (1978-1985), Member of the Committee of the Ophthalmological Society of Thailand (1975-1985), Executive Member of the Thai Board of Ophthalmology (1976-1985) and the Executive Member of the Committee of the Eye Bank of Thai Red Cross (1972-1985). He contributed to the 8th Congress Asia-Pacific Academy of Ophthalmology as a Member of the Organizing

Committee. He published many scientific papers in his field of retinal diseases and also of general Ophthalmology, e.g. "*Harada's Disease*" J. Med. Ass. Thai. 53: 524. 1970, "*Cases of ocular angiostrongyliasis associated with eosinophilic meningitis*. Am. J. Ophthalmol. (1971): 931 and "*Natural history of rhegmatogenous retinal detachment among Thai patients*." Trans. Asia-Pacific Acad. Ophthalmol. 8: 581, 1981. (SM)

Dang Kanchanaraya

Kanchanarnaya, Dang (1905-1971) Thai Ophthalmologist, Professor of Ophthalmology, Siriraj Hospital Medical School of Chulalongkorn University. He graduated from Siriraj Medical School of Chulalongkorn University and received his M.D. degree in 1926, and received Ophthalmology training at the Hospital. After having completed further study in India (1929-1930), he founded the Department of Ophthalmology of Siriraj Hospital in 1930 and served as the Head of the Clinic. He was then appointed the Professor of Ophthalmology of Siriraj Medical School. He is the founding member of the Ophthalmological and Otolaryngological Society of Thailand since 1956. He was also a Founding Member of the Asia-Pacific Academy of Ophthalmology in 1960. He educated many students, who are currently contributing not only to the eye care but also to the public health in Thailand. In recognition of his service, the King of Thailand conferred on him " *The Knight Commander of the most exalted Order of the White Elephant*". (by PRACHAKVEJ Prachak). (SM)

Fumio Kandori

Kandori, Fumio (1904-1981) Japanese Ophthalmologist, Professor Emeritus of Tottori University. He was a graduate of Kyushu University in 1932. He studied Ophthalmology under Prof. Y.→SHOJI and received his Doctor of Medical Sciences from Kyushyu University in 1941 after graduating from the Postgraduate School of Medicine. He was sent to Chintao (now Qingdao, China) Medical School as the Professor of Ophthalmology and worked until the end of the World War II. He returned to Japan in 1946 and was appointed the Assistant Professor of Yonago Medical School (now Tottori University). In the next year he was promoted to be Professor and Chairman of the Department of Ophthalmology of Tottori University. He stayed in this position until retirement in 1970 and then became Professor Emeritus of the University. During his tenure, he served as the President of the 70th Congress of the Japanese Ophthalmological Society in 1966 and delivered a Special Lecture "*Electron Microscopic Studies of Cataract and Medical and Surgical Managements*" at the 73rd Congress of the Society in 1969. He reported rare cases with many small yellow flecks in the Fundus in 1959 (*Jpn. J. Clin. Ophthalmol*. 13:382) and similar cases with hemeralopia in 1966 (*Yonago Acta Med*. 10:98): this disease is now called *Flecked Retina of Kandori*. The Government honored him in 1975 with The Third Order of the Rising Sun. (SM)

Kaneko, Akimichi (1938-) Japanese Physiologist, Professor and Chairman of the Department of Physiology of Keio University. He graduated from Keio University Faculty of Medicine in 1962, studied retinal physiology under the guidance of Prof. TOMITA Tsuneo and received his Doctor of Medical Sciences in 1968. He spent 2 years, 1968-1970, as a Postdoctoral Research Fellow at the Department of Neurobiology, Harvard Medical School. He served as the Professor and Chairman of the Department of Information Physiology of the National Institute for Physiological Sciences in Okazaki Japan and as the Dean of Life Science Faculty of the Institute (1988-1990). He has served in the present position as above since 1991. He is the Chief-Editor of *Jpn. J. Physiol*. since1987, and serves as a Member of Editorial Board of Biomedical research, Neuroscience Research, Vision Research (1985-1990), Neuron (1989-1994), NeuroReport and News in Physiological Science. He served as Visiting Professor to Marine Biological Laboratory Woods Hole (1980) and to the Department of Neurobiology of Northwestern University (1988). He is a recipient of *Paul Kayser International Award of Merit in Retina Research* from the Retina Research Foundation (ISER 1996). His many publications embrace "*Physiological and morphological identification of horizontal, bipolar and amacrine cells in goldfish retina*. J. Physiol. 207: 623, 1970" and "*Transient calcium current of retinal bipolar cells of the mouse*. J. Physiol. 410: 613, 1989". (Department of Physiology, Keio University, Shinano-machi, Shinjuku-ku, Tokyo, 160-0016, Japan; phone: 81-3-5363-3748, fax: 81-3-3359-0437, e-mail: kaneko@physiol.med.keio.ac.jp)(SM)

Kani, Kazutaka (1939-) Japanese Ophthalmologist, Professor and chairman of the Department of Ophthalmology, Shiga University of Medical Science. He graduated from

Kobe University in 1963, studied Ophthalmology at the Graduate School of Medicine of the University under Prof. IMACHI Jo, and received his Doctor of Medical Sciences in 1968 (thesis: *Electrophysiological study on the visual pathway. Effects of blood circulatory arrest and pressure on cat optic nerve*. J. Jpn. Ophthalmol. Soc. 72: 1880,1968). He has been in the present position as above since 1989. His research interest is in Neuro-ophthalmology, Psychophysics, Visual Optics and Visual field, and he has many publications in this field, e.g. "*An analysis of human visual receptive fields using perimetric method*. in Ed. Lakshminarayanan: *Basic and Clinical Applications of Vision Science*, p. 238-286, Kluwer Academic publishers, Netherlands, 1997" and "*Spatial extent of binocular suppression in normal and strabismic subjects*. Strabismus 4: 175-187,1994", "*Perimetry under television ophthalmoscopy"* in Documenta Ophthalmologica Proceeding Series 14: 231-236, 1977 and "*A new fundus perimeter by which the target can automatically pursue eye movement*. Ed. Wall & Heijl: *Perimetry Update 1996/1997*, p. 75-79, Kugler Publications, Netherlands, 1997". He is a Councillor of the Japanese Ophthalmological Society (JOS), Board of Trustees of the Japanese Society of Neuro-ophthalmology, of Japanese Society of Strabismus and Amblyopia, Japanese Society of Ophthalmological Optics and Secretary to the Japan Society of Vision and to the Japan Society of Perimetry. He is a member of the International Perimetric Society, International Society of Neuro-ophthalmology and International Society of Strabismological Association. (Department of Ophthalmology, Shiga University of Medical Science. Seta Tsukinowa-cho, Ohtsu, 520-2192, Japan. phone: +81-7-7548-2276, fax: +81-7-7548-2279, e-mail: kani@belle.shiga-med.ac.jp) (SM)

Karl Theodor, Duke of Bavaria (1839-1910) German ophthalmologist, father of Elisabeth, Queen of Belgium. Karl Theodor was first officer, when he took part in the Bavarian-Prussian struggle in 1866, and then in the war against France in 1870 being in several bloody battles, such as Gravelotte and Sedan. It was this experience which drove him to take up medicine. He quitted the army, studied medicine and received 1872 his diploma of medicine. Since he was particularly interested in ophthalmology , he went to Vienna and attended Professor von →Arlt´s lectures and received special instruction in ophthalmology and operating from Arlt´s then assistant Dr.Ernst →Fuchs. He made progress and also attended lectures given by the celebrated surgeon Theodor Billroth. Being delicate, he felt himself unequal to major surgery , and soon confined his energies to ophthalmology. Returning to Bavaria, he treated patients in his hospital at Tegernsee, near his summer residence, and in his clinic in Munich during the winter. He also treated patients during a part of the winter in Meran , South Tyrol, where he used to go for his own fragile health. The Archduke operated on more than 5000 cataract patients. During the first years of his medical activity he also occupied himself with histological work , and wrote on changes of the vitreous body in myopia and on inflammation of the retina in nephritis. His daughter, Elisabeth, married the Belgian Prince Albert and became later, a very beloved Queen of Belgians. The Ophthalmoscope, 1910,p.69-70 (by Ernst →Fuchs); JPW.

Karp, Louis A. (1940-1999) American ophthalmologist, chief of the ophthalmology section at Pennsylvania Hospital and clinical professor of ophthalmology at Thomas Jefferson University and the University of Pennsylvania, Philadelphia. Louis Karp, a magna cum laude graduate of Franklin and Marshall College, Lancaster, Pa, received his medical education at Thomas Jefferson University where he graduated in 1965. He completed his residency training in ophthalmology at the University of Pennsylvania under Harold G.→Scheie MD, and later completed a residency in anatomic pathology at the same institution. This was followed by a year of study in ophthalmic pathology at The Armed Forces Institute of Pathology in Washington, DC, where, along with others, he wrote a landmark article on primary intraorbital meningiomas: "Karp LA, Zimmerman LE, Borit A, Spencer W. "*Primary intraorbital meningiomas*." Arch Ophthalmol. 1974;91:24-28. Karp established a large practice to which he dedicated virtually all of his time. Karp won a special award from the residents who appreciated his unselfish devotion to their needs. In larger groups, he was successful as well. He taught a course in slitlamp microscopy for several years at the University of Puerto Rico in San Juan. More recently, he made a trip to Vietnam and was looking forward to establishing a teaching program there. He was highly regarded by his colleagues at Pennsylvania Hospital, where he was active in the continuing medical education program. Arch Ophthal 118,449,2000

Kass, Michael A. M.D. (1941-) American ophthalmologist. Head of the Department of Ophthalmology and Visual Sciences, ophthalmologist-in-chief at Barnes-Jewish hospital. A professor of ophthalmology and visual sciences since 1983, he was vice chairman of the department and director of clinical services from 1992 to 1998. An expert of glaucoma, Kass is the principal investigator and study chairman of the national Ocular Hypertension Treatment Study, a 22-center trial sponsored by the National Institutes of Health to determine whether using eye drops to reduce pressure in the eyes of patients with elevated intraocular pressure prevents delays in the onset of glaucoma. Kass has spent much of his career studying new methods of lowering pressure and looking at whether the benefits of treatment outweigh the risks. He has published more than 130 peer-reviewed scientific articles. Kass is a diplomate of the American Board of Ophthalmology, a fellow of the American Academy of Ophthalmology and secretary for continuing education in the academy. In addition, he is a member of several professional societies and organizations, including the Association for Research in Vision and Ophthalmology, the American Glaucoma Society and Prevent Blindness America. He is a member of the Alpha Omega Alpha, the national honorary medical society, and he is consistently listed as a leading ophthalmologist in "The Best Doctors in America" a book based on a survey of more than 7,000 physicians in the United States. He is a past recipient of the American Academy of Ophthalmology's Senior Honor Award and, in 1987, he was that organization's Recognition Award winner. Kass received his medical degree and a degree in neurophysiology from Northwestern University in 1966. A Chicago native, he was an undergraduate at the University of Michigan. After medical school, Kass completed a one-year internship at Passavant Memorial Hospital in Chicago and served two years in the U.S. Army Medical Corps before coming to Washington University in 1969 as an ophthalmology resident. In 1972, he was chosen to be the chief resident in ophthalmology. That same year, he did a special fellowship in glaucoma, sponsored by the National Eye Institute. He joined the faculty at Yale University in 1973 and was an assistant professor of ophthalmology and director of the glaucoma service there before returning to Washington University in 1975 as an assistant professor of ophthalmology.(AB)

Kato, Keiichiro (1936-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Fukushima Medical University, School of Medicine. He graduated from the University in 1961, studied Ophthalmology under Prof. KAJIURA Mutsuo and received his degree Doctor of Medical Sciences in 1968 (thesis: *Influences of aniseikonia on binocular vision with special reference to depth perception*. J. Jpn. Ophthalmol. Soc.72: 1415, 1968). He has been in the present position, as above, since 1979. His research interest is in physiological optics and its clinical significance. He has many publications in the field, e.g. "Special Lecture: *Accommodation function and its clinical evaluation*. J. Jpn. Ophthalmol. Soc. 98: 1238, 1994". He is a Councillor of the Japanese Society of Ophthalmological Optics, Japanese Society of Cataract Research and Japanese Society of Ophthalmic Surgeons.(Department of Ophthalmology, Fuskushima Medical College, Hikarigaoka, Fukushima, 960-1247, Japan. phone: +81-2-4548-2111, fax: +81-2-4548-2640, e-mail: keikato@mtci.ne.jp)(SM)

Ken Kato

Kato, Ken (1914-1984) Japanese Ophthalmologist and Professor of Ophthalmology of Nihon University. He graduated from Keio University in 1938, and studied Ophthalmology under Prof. S.→SUGANUMA and Prof. M.→UEMURA. He was granted Doctor of Medical Sciences from the University in 1952. In 1956 he was promoted to Assistant Professor of the University, and studied for 2 years, 1961-1963 at the University of Pennsylvania. On return to Japan, he was promoted to be the Professor of Ophthalmology of Nihon University in 1963 and served in this position until retirement in 1980. During his tenure, he served as the President of the Japanese Ophthalmological Society in 1975-1977, and also served as the President of 29th Congress of Japanese Society of Clinical Ophthalmology. He was the Vice-President of the International Symposium of Fluorescein Fundus Angiography held in Tokyo in 1972. He was a Visiting Professor to Pennsylvania University. He also sat on many Government Committees. His research interest was in fundus diseases in hypertension. As one of the Symposists at the 67th Congress of the Japanese Ophthalmological Society, he lectured on "*Findings in the Fundus in Hypertension*", he proposed a Criteria of Classification of vascular changes, and this Classification is most popular throughout Japan. On that subject, he wrote,

assisted by Mizuo Matsui: *Retinal Changes of Systemic Hypertension and Diabetes Mellitus* (2nd edition) Kanehara Tokyo 1966. This work was also published in English "*Hypertension and Diabetes mellitus, their ocular fundus findings*, Kanehara-Syuppan, Tokyo 1966". With Misao Uemura (also spelled Uyemura) as editor, Kato wrote: *Color Atlas of Fundus Diseases* (in Japanese) Tokyo 1961. He also delivered a Special Lecture "*Macular Region and its Abnormalities*" at the 80th Congress of the Society. After retirement from the University, he served as the Professor at Science Research Institute of the University for 2 years. The first edition of his *Atlas of Ophthalmic Surgery* (in Japanese) was published in Tokyo by Kanehara Shuppan in 1969. This atlas was written with the collaboration of Hirohiko Inoue, Mizuo Matsui, Hajime Suzuki, Hiroshi Tomita and Yasuo Uyemura, all from Tokyo. In June 1973, a *Memorial Collection of Ken Kato´s Ophthalmic Papers* was published at the occasion of the 10th Anniversary of his professorship. (SM)

Kinkichi Kato

Kato, Kinkichi (1911-1987) Japanese Ophthalmologist, a graduate of Tokyo University in 1937, studied under Prof. S. ISHIHARA and was granted his Doctor of Medical Sciences from Tokyo University in 1943. He was appointed to be the Professor of Ophthalmology of Tokyo Women's Medical College in 1948 and served until 1974. His main interest was the Color Sense and he has many publications on this subject in Japanese Journals in Ophthalmology. (SM)

Seiichi Kato

Kato, Seiichi (1910-1987) Japanese Ophthalmologist, Professor Emeritus of Shinshyu University. He was a graduate of Tokyo University in 1935. After having completed his thesis for Doctor of Medical Sciences, he was made Professor of Ophthalmology at the Medical School of Karafuto (now Sachalin, Russia) in 1943. After the end of the World War II, he came home and was invited to the Professorship of Ophthalmology of Shinshyu University in 1946 and stayed in this position until 1958. His research interest was Accommodation and he has many papers in Japanese Journals in Ophthalmology. In 1958, he was promoted to be the Director of the University Hospital, and in 1966 he was made the Dean of the Faculty of Medicine. In 1973, he was elected President of Shinshyu University and served for 8 years. In recognition of his outstanding service, the Government conferred upon him the Second Order of the Rising Sun in 1981. (SM)

Kattah, Jorge C. (?-?) American neurologist. Dr.Kattah is Chairman of the Department of Neurology University of Illinois, College of Medicine Peoria, Illinois. Dr. Kattah received his undergraduate education and the degree of Doctor of Medicine in his native Colombia, in South America. He came to the United States in 1972, and undertook specialty training in neurology at Georgetown University in Washington, D.C. Subsequently he joined the teaching faculty and became Professor of Neurology. In 1977 he was a fellow in neuro-ophthalmology at the University of Pittsburgh. Currently, he is Chairman of the Department of Neurology at the University of Illinois College of Medicine in Peoria, Illinois. He is a member of the American Academy of Neurology.

Genjiro Kawakami

Kawakami, Genjiro (1864-1915) Japanese Ophthalmologist and Congressman. He graduated from the Medical School (4-year course) of Tokyo University in 1885, and studied Ophthalmology under Dr. K. UME and Dr. J.→SCRIBA: he published clinical statistics of Tokyo University Hospital in 1886 and also the first statistics in Japan of congenital blindness. He was one of the promoters of the Foundation of the Japanese Ophthalmological Society. He was elected as a Congressman in 1902. He published "*Weekly of Japanese Medicine*" in 1895, and he was one of the Founders of the present Nippon Medical School. (SM)

Kawakami, Riichi (1895-1982) Japanese Scientist for human genetics. He graduated from Chiba University Medical School in 1917. He studied Ophthalmology at the Department of Ophthalmology of Keio University under Prof. S. SUGANUMA, and was promoted to Assistant Professor in 1929. In the following year he moved to the Department of Public Health of the University. After World War II, he worked at the National Institute of Public Health and was interested in human heredity with particular attention to eye diseases. He studied more than 164 cases of Leber's disease and determined that *Lossen-Kitajima* rule was followed without exception in the inheritance of this disease, i.e. the disease is transmitted from the mother and the maternal grandfather is never affected. He also showed that the female carrier develops this disease in almost 60 % of cases, and J.

→IMACHI (see IMACHI Jou) confirmed this. He also studied Oguchi's Disease extensively. Dr. Kawakami gave a Special Lecture "*Ophthalmology as seen from Human Genetics*" at the 53rd Congress of the Japanese Ophthalmological Society in 1949. He wrote a great monograph on heredity in Ophthalmology, as a part of the *Handbook of Ophthalmology*, Kanehara Pub. Co., Tokyo, 1955 (SM)

Kawamura, Satoru (1949-) Japanese Biologist specializing in retinal physiology, and Professor at the Department of Biology, Graduate School of Science of Osaka University since 1996. He graduated from Kyoto University in 1973 and received his Ph.D. degree from the University in 1978. He has been working in the field of Phototransduction and adaptation, and his many publications in the field include "*Calcium-dependent regulation of cyclic GMP phosphodiesterase by a protein from frog retinal rods*, Nature 349:420, 1991" and "*Rhodopsin phosphorylation as a mechanism of cyclic GMP phosphodiesterase regulation by S-modulin*." Nature 362: 855,1993". He is a member of Japanese Society of Physiology, of Biophysics, of Biochemistry and of Zoology. (Department of Biology, Faculty of Science, Osaka University, Machikaneyama, Toyonaka, 560-0043, Japan, phone:81-6-6850-5436, fax: 81-6-6850-5444, e-mail: kawamura@bio.sci.osaka-u.ac.jp) (SM)

Kawasaki, Kazuo (1936-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Kanazawa University. He graduated from Kanazawa University in 1967, studied Ophthalmology under Prof. KURACHI Y. and received the degree Doctor of Medical Sciences in 1967 (thesis: *The early potential in the human electroretinogram*. J. Jpn. Ophthalmol. Soc. 70: 1594,1966). He is in the present position as above since 1988. He has been a Councillor of the Japanese Ophthalmological Society (1987), Executive Councillor of the Society (1997-) and the President of the Japanese Society for Clinical Electrophysiology of Vision (1999-). His research interest has been Electrophysiology of Vision and is a member of the International Society for Clinical Electrophysiology of Vision (ISCEV), International Society for Ocular Toxicology (ISOT). He developed a method for early diagnosis of retinal diseases such as diabetic retinopathy by quantitative analyses of the Oscillatory Potentials (*Electrical responses from diabetic retina*. Progress in Retinal and Eye Research 17: 59, 1998). He is the first in the world to record the early receptor potential in the human eye. He also discovered the Electro-oculogram responses to bicarbonate, diamox and hyperosmolarity that are significant for early diagnosis of the disturbances of the retinal pigment epithelium (*Nonphotic standing potential responses: hyperosmolarity, bicarbonate, and Diamox responses*. *Principles and Practice of Clinical Electrophysiology of Vision*. 125, Mosby YearBook, St Louis, 1991). He was a guest lecturer at the 28th Congress of the ISCEV in 1990 (*ERG rapid off-response in red-green color deficiency and EOG drug-induced responses in Retinal Pigment Epithelium disorders*), at the 2nd Congress of ISOT in 1990) (*Electroretinographical changes due to antimicrobials*) and at the 4th Congress of ISOT (*Ocular toxicology studies using electrophysiological methods in rabbits*) and he also delivered a Special Report at the 102nd Congress of the Japanese Ophthalmological Society in 1998 (*Preretinpathic changes in the oscillatory potential in diabetic retina: interpretation and significance*). In recognition of his meritorious service, he was granted the "Hokkoku Culture Award" in 1997. (Department of Ophthalmology, Kanazawa University, 13-1 Takaramachi, Kanazawa 920-0934, Japan. phone:+81-7-6262-8151, fax: +81-6222-9660, e-mail: DZB13566@nifty.ne.jp) (SM)

Keeler, James Edward (1857-1900) American Astronomer born at La Salle, Ill., who graduated from Johns Hopkins University in 1881. He accompanied the Colorado solar eclipse and the Mt. Whitney expeditions. In Germany he studied optics under Quincke at Heidelberg and →Helmholtz in Berlin. He was assistant in the Lick Observatory in 1886 and became its astronomer in 1888; its director in 1898. Among his writings are *Spectroscopic Observations of Nebulae.* He also wrote numerous papers for the *Astrophysical Journal.* American Encyclopedia of Ophthalmology, Vol.9, p. 6742.

Keeler, Richard Charles (1937-) British ophthalmic instruments manufacturer. After qualifying as a dispensing optician, Richard Keeler joined the family firm in 1959. He started in instrument sales, introducing the Kowa hand-held fundus camera in 1962, the first of its kind. Keeler was made an Honorary Fellow of the Royal College of

Ophthalmologists in 1993. He was made curator of the museum and library of the Royal College of Ophthalmologists in 1999. He is a trustee of the Keeler Scholarship Foundation, provider of one of the larger academic awards in ophthalmology in the UK. He has written on ophthalmic subjects, a recent publication being *'The Ophthalmoscope, Atlas*, part of the Julius Hirschberg Series on the history of ophthalmology. Other recent papers are: *The Evolution of the British Ophthalmoscope* (Documenta Ophthalmologica 94:139-150, 1997), *150 years since Babbage's Ophthalmoscope* (Archives of ophthalmology Vol.115, Nov.1997). Also *The Keeler Micro Ophthalmic Surgical Unit* (Microsurgery of the Eye, 1st Symposium oph.Microsurg. Study Group, Tübingen 1966. Adv.Ophthalm 20: 51-61.) and *Report on Changes since 1966 of the Keeler Micro Surgical Unit* (Microsurgery in Glaucoma. 2nd Symposium oph.Microsurg.Study Group, Burgenstock 1968. Adv.Ophthalm. Vol.22: 17-19.) and *Retinal Photography in Animals* (Brit Journal of Ophthal 1968, 52:200). Keeler collects old ophthalmoscopes and related instruments as also ophthalmoscopic literature in first editions. Address: 1 Brookfield Park, London NW5 1ES, England. Tel:++44.(171) 485.7451 Fax:++44 (171) 267.8311
Email: richard@rkeeler.co.uk AB

Keeney, Arthur H. (1920-1996) American ophthalmologist. His higher education began at the College of William and Mary, where he received the BS degree. Thereafter, he earned the MD degree from the University of Louisville and the DSc in Ophthalmology from the University of Pennsylvania. Additional professional training was obtained as an ophthalmology resident at the University of Louisville and at Wills Eye Hospital in Philadelphia. Early in his medical career, Keeney served in the Medical Corps of the United States Army and was assigned to the 71st Station Hospital in Pusan, South Korea. During off duty hours and on weekends, he provided voluntary care to patients in a Korean provincial leper colony. After returning to the United States, Keeney continued to work with the armed forces as Consultant to Army and Navy Hospitals. After undertaking academic positions in the Department of Ophthalmology at the University of Louisville from 1951 to 1965, Keeney was appointed Ophthalmologist- in-Chief at Wills Eye Hospital and Professor and Chairman of the Department of Ophthalmology at Temple University. He relinquished these positions in 1973 to accept appointment as Dean and Professor of Ophthalmology at the University of Louisville School of Medicine. In 1980, Keeney was honored by appointment as Dean Emeritus and Distinguished Professor of Ophthalmology at the University of Louisville. As an ophthalmic scientist, Keeney completed important studies on the utilization of ultrasonography as a diagnostic modality. However, most of his research and outstanding organizational skills were focused on prevention of blindness through the development of safety standards for road signs, driver visual acuity, safety equipment for automobiles, and safety lenses. He was Chairman of the American National Standards Institute Z.80 Committee on Ophthalmic Standards for 16 years. In this capacity, he earned the respect of industrialists, manufacturers, and vision specialists through effective advocacy of standards to prevent eye injury and through his work to promote assistance for the visually handicapped. Keeney authored more than 300 publications in the ophthalmic literature, presented at least 20 named lectures, and served as officer of many professional and volunteer organizations. Among these, he was Vice-President of the American Academy of Ophthalmology and President of the Kentucky Academy of Eye Physicians and Surgeons.He wrote *Ocular Examinations, Basis and Technique*, St.Louis 1970; *Lens Materials in the Prevention of Eye Injuries*, Springfield 1957(?) and edited *Industrial and Traumatic Ophthalmology-Symposium of the New Orleans Academy of Ophthalmology*, St Louis 1964. AJO 1997,123:155-156; Arch Ophthalmol 1997,115:437.JPW

Kelly, Thomas Stuart-Black (1911-1996) British ophthalmologist. He graduated in Medicine at the Manchester University in 1934 and begun training in neurosurgery. During the Second World War he served as a squadron leader with the Royal Air Force. There he was involved in pioneering aviation medicine. His interest in the working of the human eye was enhanced by his work on night bombing training aids and how the eye could assess a distance in the air at night without landmarks or horizon to assist. After the war he became Fellow of the Royal College of Surgeons in Edinburgh and completed further training in ophthalmology in Bristol. He settled in Hereford. In 1959 he moved to Bath where he was appointed eye surgeon at the city´s eye infirmary(now part of the

Royal United Hospital). From then and after his retirement Kelly pioneered many treatments for eye disorders. In 1962 he drove to Prague to obtain soft contact lenses who where at that time only produced there. He also, in 1965, was the first to introduce the eye laser into Britain.Kelly was the first to accurately measure the length of the human eyeball using ultrasound. He also was the first to introduce the treatment of myopia. (The Times, Jan 6, 1996)

Kelman, Charles D. (1930-) American ophthalmologist, born in New York. Charles Kelman pioneered several exciting techniques in ophthalmology, but he is best known as the father of phacoemulsification, a method of using ultrasonic vibrations to break up a cataract inside the eye. This revolutionized cataract surgery because it enabled surgeons to extract a cataract through a tiny incision, greatly reducing the size of the wound. For this technique, he was awarded the National Medal of Technology by President George Bush in 1992. Kelman has also designed numerous ophthalmic instruments and intraocular lenses and has made significant contributions to plastic surgery. Kelman wrote: *Atlas of Cryosurgical Techniques in Ophthalmology*, St.Louis 1966 and *Cryosurgery*, Boston 1967. In addition to his surgical skills, he is an accomplished Broadway producer, composer, and jazz saxophonist. JPW

Kendall, William (?-1942) British ophthalmologist. His education was received in Ireland where he qualified M.B., B.Ch. in 1893 and where he proceeded to his M.D. in 1895. He held honorary appointments at Hitchin and St. Albans and was a regular member of the Oxford Ophthalmological Congress and the Ophthalmic Section of the Royal Society of Medicine. Early in his career he had worked at Moorfields as Chief Clinical Assistant and during the 1914-18 War he was an ophthalmic specialist to the Army with the rank of Captain, R.A.M.C. Later he served as ophthalmic surgeon to the Ministry of Pensions. Kendall was interested in professional organization and was a member of the City Division of the British Medical Association, of which he had been President in 1929. He contributed some papers to the Proceedings of the Section of Ophthalmology of the Royal Society of Medicine. As oculist to the Hertfordshire County Council Schools and to the London Teachers Association he knew well the problems connected with vision, both of scholars and teachers.BJO 26,239,1942

Kennedy, Peter (1685- ?) English surgeon, who, ill in his youth, had suffered much from sore eyes, and who, thereby, had his attention directed to the subject of ophthalmology. He traveled extensively in France, Italy, and Holland and wrote : *Ophthalmographia, or a Treatise of the Eye* (London, 1713); *Supplement to Ophthalmographia against Bracken, Porterfield, Cheselden, Jurin and Sharp* (London, 1739) and *An essay on external remedies* etc...London 1715. American Encyclopedia of Ophthalmology, Vol.9, p. 6743. Albert.BMC

Kepler, Johann. See **Keppler.**

Johannes Kepler

Keppler (or Kepler), Johannes (1571-1630) This immortal theologian, astronomer and physicist, was born at Weil, in the duchy of Würtemberg, Germany. He received his bachelor's degree at Leonberg, and, in 1588, entered the University of Tübingen, with the intention of becoming, ultimately, a minister. Here he received instruction in the new Copernican astronomy of the great Michael Maestlin. Thus far he had felt but little inclination for natural science. In 1594, however, being offered the chair of astronomy in the school at Graz-a Lutheran institution-he accepted, and, soon after, was "immersed in the science of the stars." In 1598, owing to the edict of the Archduke Ferdinand, directed against all Protestant preachers and professors, he fled to Hungary. In 1600, at the invitation of his friend, Tycho →Brahé, he departed for Prague, there to become the assistant of this celebrated astronomer. The association, however, proved to be uncongenial. Keppler was irritable and supersensitive, and the elder man was snobbish and overbearing. Tycho Brahé died in 1601, and, from that time forward, Keppler shone as the bright star of the astronomical heavens. In 1630, after a long and exhausting horseback journey, he died at Ratisbon, aged only 59. It is absolutely unnecessary here even to enumerate the astronomical achievements of Johannes Keppler. To think of the man himself, is to think also of his astounding astronomical discoveries and inventions. His services, however, to the world of ophthalmology-which are almost all expounded in his two great optical works, " *Ad vitellionem paralipomena, quibus astronomiae pars optica*

traditur ... de modo, visionis, & humorum oculi usu, contra opticos & anatomicos Francofurti 1604 " and *"Dioptrice seu demonstratio eorum quae visui & visibilibus propter conspicilla non ita pridem inventa accidunt* ... Augustae Vindelicorum 1611" are very little known even to ophthalmologists. To be as brief as possible, and yet convey some definite idea of the nature and extent of these services, we may state, formally, that the following optical facts, either absolute or approximate, were by him expressed either for the very first time, or else for '*the first time* clearly and distinctly. 1.A retinal image consists of as many couples, or pairs, of lightcones (placed base to base at the lens), as there are points in the object looked at. (Keppler did not, contrary to the assertion of Baas, in his *"History of Medicine*," Eng. trans. by Henderson, p. 539, recognize the function of the lens as a part of the optic system of the eye, thus overturning the entire doctrine of the ancients which had hitherto prevailed, that sight took place by means of the lens." This work was done by →Maurolycus in 1597, in his great work entitled, *"Photismi de Lumine et Umbra*," and Plater, soon afterward conceived and published the notion of the screen-light function of the retina.) 2.The central point of the retina possesses the sharpest vision. 3.Eccentric vision does not give satisfaction, but merely invites the eye to turn in this or that direction for the purpose of securing a sharper view. 4.It is the vitreous humor that holds the retina taut. 5.The crystalline humour presents, behind, a hyperbolic surface, in front, a spherical-which produces a better refraction. 6.Every eye possesses a point, externally, of sharpest vision. The bundle of rays which sets out from this point, unites in a point again upon the retina. Every object which lies beyond this point, appears to be indistinct. 7.Eyes that see far objects plainly, but near ones dimly, are helped by convex lenses. 8.Those, on the other hand, which see far objects dimly, but near ones plainly, are benefited by concave glasses. 9.The convex lenses assist by altering the rays which pass to the eye from near objects in such a manner that they become like to those which proceed from objects more remote. 10. The concave lenses, on the contrary, alter the rays which come from distant objects in such a fashion that they seem to proceed from points that are near at hand. 11.Without the concave lenses, rays which come from a distant point would intersect one another in front of the retina, and, having still farther to proceed, would disperse themselves into a certain breadth, instead of a sharp point. 12.When sunlight shines upon a prism, there arise three kinds of rays: (1) the unchanged; (2) those of the color of the glass; (3) rainbow colored. 13.A plane-sided right-angled prism does not permit the rays falling parallel to a cathetus to pass through. 14. An object looked at through a prism, appears to have been moved in the direction of the edge. 15.Every distant point emits rays in all directions. As to the eye, however, or as to any lens, whose diameter is negligibly little in comparison with the distance, the most external of the rays which strike upon the eye or the glass, may be regarded as parallel. 16.Of all the rays in any pencil that impinges on a curved surface, only one can be regarded as vertical thereto. 17.Rays proceeding from a near point, diverge as they pass toward the pupil of the eye. Of rays proceeding from different points on the same object, however, many necessarily converge as they move toward the eye. One should carefully distinguish between the bundle of rays emitted by a simple point, and the different rays sent out by several points. In addition to establishing all these highly important facts, Keppler also considerably enriched the optical nomenclature. Thus, to him, we owe at least in their optical acceptations the terms, *prism, lens* [The crystalline body, or humor, of the eye, was first denominated lens by Govert Bedloo, of Amsterdam, in 1685.] and *meniscus.* "*Prisma*" before his time, meant, simply, "*sawingblock*; *lens* " meant a "*lentil*" and "*meniscus*" the"*half-moon*". Altogether, we may say that no one, probably, has done so much, even to the present day, for the development of optics, physical or physiological, than did Johannes Keppler. American Encyclopedia of Ophthalmology, Vol.9, p. 6743-6746.Albert.DSB.BMC.

Kerr, James (?- 1941) British physician, born in Glasgow. From there he went to Manchester Grammar School. Thence he went to St. John's College, Cambridge, with a science scholarship. He justified that scholarship, for he got first class honours in the Natural Science Tripos. Then he went to St. Bartholomew's Hospital in London as a senior science scholar. He gained all his degrees, and the D.P.H. at Cambridge. He started practice in Bradford, and soon got on the staff of some of the hospitals there. One of these was the Bradford Eye and Ear Hospital. In that city he became linked with school work, and was made medical superintendent of the Bradford School Board. He did a fine piece of work in

organising a school medical service. That brought him to London, where he was the first medical officer of the old time London School Board; which ultimately was absorbed into the London County Council. In that office he started the greatest school medical service that has ever been known. He called a number of young eye men who were working as clinical assistants at Moorfields and other hospitals, to help him in an investigation of the vision of the London school children. Each of the chosen ophthalmologists was allotted an area of schools and were to give three half-days a week to the work of testing their visual acuity with a test card, to record their findings so that they can be made use of in a general record of the state of the eyes of the children. That early work, based on Dr. Kerr's idea, was immensely fruitful, as every school medical officer knows, and as many ophthalmic surgeons know. In 1924 American engineers and architects produced a good work : " *The Code of Lighting School Buildings*." This was commented upon and extended in a masterly paper by Dr. Kerr at the meeting of the London Illuminating Engineering Society in London, 1926. He dealt with natural lighting. This paper of his became a real standard of reference. His book on "*School Vision and the Myopic Scholar*", and his great work " *The Fundamentals of School Health*," were notable pieces of work.BJO 25, 592-593, 1941

Kersten, Ferdinand Leopold (1804-1853) German physician, who devoted considerable attention to ophthalmology. Born in Magdeburg, he received the degree of M.D. at Berlin in 1828, his dissertation being "*Nonnulla de Dacryolithis seu potius Rhinolithis*." He settled in Magdeburg, there became Assessor of the Provincial Medical College, and, a little later, Medical Councillor. He died of some affection of the liver at Carlsbad. In addition to his graduation dissertation, Kersten wrote the following: 1. *Ueber Steinerzeugung aus der Thränenflüssigkeit* (Dacryolithen). (Hufeland's Jour., 1843.) 2. *Ueber die Freiwilligen Blutungen aus den Augen* (Rust's Mag., 1841.) American Encyclopedia of Ophthalmology, Vol.9, p. 6844.

Kettesy, Aladar (1893-1983) Hungarian ophthalmologist, until his retirement director of the Eye Clinic of the Medical University of Debrecen, Hungary. Kettesy's last name was originally Kreiker. He changed it to a name with a Hungarian ring, as was expected of anyone who wished to enter public life. He received his medical degree in 1919 at the University of Pozsony (now Bratislava) and began his ophthalmologic career in the department headed by Professor→Imre. Two years later, Kettesy became the assistant of Professor →Blaskovics at the Ophthalmological Department of the University of Debrecen. Blaskovics put him in charge of the eye clinic there. In 1926 the 33-year-old Kettesy was promoted to a professorship. Kettesy spent a total of 61 years in Debrecen, and his accomplishments were intertwined with historical changes. In 1921 there was not a single ophthalmologist in the area. Two general physicians treated patients with ocular problems. Today, in addition to those working in the eye clinic, several ophthalmologists are available at various outpatient clinics as a result of Kettesy's role as a teacher. Two university professors and several chiefs of ophthalmology at various hospitals in Hungary were once his students. Kettesy and his students probably treated hundreds of thousands of patients throughout the years. His textbook on ophthalmic surgery, written in German (his second mother tongue) was for several decades the "Bible" of European eye surgeons. The Spanish version of this book was widely used throughout South America. Thousands of medical students were introduced to ophthalmology through his textbook. His "*Physiological Optics*" was indispensable for the Hungarian ophthalmologist preparing for his Boards. Kettesy was one of those rare individuals able to make lasting contributions to ophthalmology in several different areas. Some of the surgical procedures he introduced 30 to 40 years ago are still used with little modification. His research into physiologic optics has also proven to be of lasting value. Some of his histologic findings are still quoted. In Hungary every patient undergoing refraction is tested with the Kettesy chart. Kettesy's mastery of his subject and the way in which he was able to present it account for his immense popularity as a teacher. In the years after his retirement from active teaching, he wrote 14 papers that summed up a lifetime's experience in his chosen and beloved field. AJO 1983,96:104-105

Keyser, Peter Dirk (1835-1897) American ophthalmologist, founder of the Philadelphia Eye and Ear Infirmary and for a long time Dean of the Faculty of the Medico-Chirurgical College of Philadelphia. Born in Philadelphia, of German ancestry, he received his education in the arts and sciences at Delaware College, and from 1852 till 1854, studied

chemistry in the laboratory of Dr. F. A. Genth, Philadelphia. During these two years of chemical study, he published a number of analyses in the American *Journal of Sciences*, which were afterwards reprinted in Dana's *Mineralogy.* He then studied medicine in Germany for four years. Returning to America in 1858, he practised medicine for a time in Philadelphia, but on the outbreak of the war, he entered as captain of the 91st Pennsylvania regiment. After the battle of Fair Oaks, in which he had been severely wounded, he resigned from the army, and returned to Germany for further study. Entering first the University of Munich, he soon moved to Jena, and there received his medical degree in 1864. After a year of further scientific study in Berlin, Paris, and London, he returned to America, and, after a brief period of military service, settled as ophthalmologist and otologist in Philadelphia. In 1864 he founded the Philadelphia Eye and Ear Infirmary, the name of which, in 1869, was altered to the Philadelphia Eye and Ear Hospital. In 1868 he gave a course of graduate instruction on the eye. Two years later he delivered "*the first regular course of lectures upon ophthalmology ever given in Philadelphia*." He soon was made Professor of Ophthalmology at the Medico-Chirurgical College of Philadelphia, and, not long afterward, its dean. In 1887 he was vice-president of the Ophthalmological Section of the Ninth International Congress, and again, in 1890, of the Tenth Congress. He was widely known as the inventor of the *Keyser clinical ophthalmoscope*. Among Dr. Keyser's numerous ophthalmologic articles may be mentioned: "*On Persistent Pupillary Membranes*" "*On the Measurement of the Prominence of the Eye with a New Instrument therefor* " "*Reports on Cataract Operations;*" "*On an Instrument for Measuring the Face and Nose for Fitting Spectacle Frames, and a New Scheme for Recording Cases of Refraction*." and *Glaucoma: its symptoms, diagnosis, and treatment*. Philadelphia 1864. American Encyclopedia of Ophthalmology, Vol.9, p. 6844 –6845.Albert.BMC

Khadka, K. B. (1944-) Nepalese Ophthalmologist, Ophthalmologist at Lumbini Rana Ambika Eye Hospital, Bhairahawa, Nepal. He graduated from N.R.S. Medical College of Calcutta with MBBS in 19733 and received MD degree from the All India Institute of Medical Sciences, New Delhi in 1985. He works at the present post since 1997.(SM)

Kham, Phan Duc (1928-) Vietnamese Ophthalmologist Professor. He was born in Ha Tinh. He graduated Hanoi Medical College in 1960. He worked at National Institute of Ophthalmology from 1954 to 1979 as the Head of Eye Traumatic Department and Head of Training and Science Research Department. Later, he worked at 108 National Army Hospital as the Head of Eye Department. He participated in teaching on ophthalmology at Hanoi Medical College and Army Medical Institute. He is Vice-President of Vietnam Ophthalmological Society from 1984. He was a member of French Ophthalmological society. He published 63 articles, mostly on diagnosis and treatment of eye trauma (in the war as well as in the peace). He was contributors of some ophthalmological textbooks. He is awarded the title the Eminent doctor, order of Resistance first degree. He was very active on prevention of blindness (trachoma, cataract). He attended some international ophthalmological conferences (in France 1979, in Canada 1985). He worked in Congo as an ophthalmological consultant in 1988-1989. (SM)

Khan, Akhtar Jamal (1944-) Pakistani Ophthalmologist, founder surgeon at Akhtar Eye Hospital (Pvt.) Ltd. Postgraduate Teaching Hospital for Ocular diseases. "He received M.B.B.S. in 1967 from Liaquat Medical College, Hyderabad (University of Sindh), DO (London) 1971 , F .R.C.S. (England). His postgraduate medical training included Junior House Officer Surgery Oldham & District Hospital Management Committee -Oldham Royal Infirmary , London, 1969- 70, Senior House Officer and Registrar Birch Hill Hospital Rochadale, England 1970- 72, Medical Assistant Ophthalmology and Locum Consultant Edgware General Hospital, England 1972- 76, Consultant Ophthalmologist EI-Maghrabi specialist Hospital, Saudi Arabia 1976-82 and Consultant and Medical Director Akhtar Eye Hospital, Karachi. He has been the Member of American Intraocular Implant Society, USA, member of Keratorefractive Society of USSR, Member of Asia Pacific Academy of Ophthalmology and member of the Ophthalmological Societies of U.K. He has attended many courses, seminars and congresses e.g. International Congress of Ophthalmology, Japan 1978, International Congress of IX Asia -Pacific Academy of Ophthalmology in Hong Kong 1983, International Congress of Ophthalmology, Rome 1986, International Vitreoretinal Surgery Symposium, Cairo, Egypt 1987, International

Cataract, Implant, Microsurgical & Refractive Keratoplasty Meeting, Singapore 1987, Annual meeting of the American Academy of Ophthalmology, Dallas, USA (1987) and Annual Congress of Ophthalmological Society of the UK , Harrogate, UK (1988). He also attended advance courses like Advanced Vitreous Surgery Course -Duke University Medical Center, Durham, North Carolina (1984), and Radial Keratotomy Course - University of Moscow. He has vast teaching experience. Since 1982 had been engaged in teaching postgraduate students in Ophthalmology in MCPS courses held at College of Physician and Surgeon of Pakistan. Since January 1988, he has been involved in teaching the undergraduate students at Aga Khan University, Karachi. His publications are numerous which include three publications in national and thirty-seven publications in international journals of repute in Ophthalmology. (Address: Akhtar Eye Hospital, FL-1 (4/ C), Block 5 Gulshan-e- Iqbal, Karachi, Pakistan.
Phone: Office: +92-463368; +92- 463647) (SM)

Khan, Mohammad Daud (1948-) Pakistani Ophthalmologist, Professor of Ophthalmology, PGMI, Hayatabad Medical Complex, Peshawar (1997). He passed "Matric from Government High School Miran Shah in 1962 and Premedical from Islamia College Peshawar, Pakistan. He received M.B.B.S. degree from Khyber Medical College Peshawar in 1969. His postgraduate Qualifications include Diploma in Ophthalmology from University of London (1971). Fellow, Royal College of Surgeons, Edinburgh, UK (1976), Fellow of Royal College of Ophthalmologists, London, U .K. (1989), Fellow of American Academy of Ophthalmology, USA (1989), and Fellow, Pakistan College of Physicians and Surgeons (1994). His current appointment is Rector, Khyber Institute of Ophthalmic Medical Sciences Hayatabad Medical Complex, Peshawar. He is also Chairman, National Committee for Prevention of Blindness, National Coordinator for WHO Prevention of Blindness Programme for Pakistan, President Asia Pacific Academy of Ophthalmology for years 99-200I. His teaching appointments have been Assistant & Associate Professor of Ophthalmology, Khyber Medical College (1977-1984), Associate Professor & Professor of Ophthalmology, PGMI, Lady Reading Hospital, Peshawar 1984-1997, Professor of Ophthalmology, PGMI, Hayatabad Medical Complex, Peshawar since 1997. He has been the Member/ fellow of 30 national and international professional societies and organizations, chairman/ member of more than 31 national and international committees in the field of Ophthalmology and Prevention & control of blindness. He acted as Administrator, Lady Reading Hospital 1990-1992 and as Administrator/Chief Executive, Hayatabad Medical Complex (92-2000). His editorial assignments include editorship of ten national and international journals of Ophthalmology. His academic & research activities include, attendance of more than 32 international conferences on Ophthalmology, presented 17 papers in such conferences, attended 26 national conferences on Ophthalmology and presented 50 papers in such conferences. He is the author of 35 scientific papers published on many aspects of Ophthalmology in various national and international journals of Ophthalmology. He runs a four years Residency Programme for Postgraduate students in Ophthalmology and has so far produced 30 specialists in Ophthalmology. He also runs one year M.Sc course in Community Ophthalmology, runs a Postgraduate Diploma Course in Ophthalmology for Nurses and runs a one year Ophthalmic Technicians' Course for Paramedics in Ophthalmology. He is an examiner in Ophthalmology to 8 national universities, colleges of Physicians and Surgeons Pakistan and National University of Malaysia. On the social work side, he has so far conducted 30 outreach programmes in various far off districts/ agencies of NWFP, is on the board of trustees of Layton Rahmatullah Benevolent Trust under which he established two charity hospitals in NWFP (Akora Khattak & Swat), is on National Management Board of Al-Basar Foundation, under which he established a charity hospital in Jalalabad, Afghanistan, is working as Patron of Khyber Eye Foundation under which a charity eye hospital is being established in Peshawar ,is working as senior vice President of Pakistan Eye Foundation under which human eyes are imported from Sri Lanka for free transplantation to corneal blinds in NWFP. He is also on the board of newly constituted Raja Mumtaz Trust and is the Vice-Chairman "IAPB" EMR. region. His major achievements are, he assisted in the establishment of Department of Ophthalmology, Khyber Teaching Hospital, Peshawar, established the Department of Ophthalmology at Lady Reading Hospital, established the Department of Ophthalmology, Hayatabad Medical Complex, established Pakistan Institute of Community Ophthalmology at Hayatabad Medical Complex, is

instrumental in the establishment of Khyber Institute of Ophthalmic Medical Sciences at Hayatabad Medical Complex, prepared the 1st National Eye Care Programme for Pakistan in 1994, prepared a revised National Comprehensive Eye care Programme for Pakistan for 2000 and onward, established a very close liaison with WHO and many national and international NGOs and successfully involved them in training, research and development of district Comprehensive eye Care Programmes in the country, is in the process of constituting a consortium of various donor agencies in support of National Comprehensive Eye Care Programme, established Ophthalmologic Society of Pakistan Research Foundation, established and is currently heading Pakistan Glaucoma Interest Group under Ophthalmological society of Pakistan , established National Guidelines for Management of Glaucoma in Pakistan. He is a recipient of many Awards. He obtained the President Award for outstanding position in final MBBS exam. 1969, won a merit scholarship for postgraduate studies in Ophthalmology in UK, awarded the highest award in Ophthalmology, the "President of Pakistan Ramzan Ali Syed Gold Medal in Ophthalmology (1992), awarded OSP Golden Jubilee Medal in 1997, awarded the best services award by Asia Pacific Academy of Ophthalmology in Hong Kong in 1995, awarded the Best Paper award in International Congress of Ophthalmology in Singapore in 1990, delivered the prestigious "Susruta Lecture" in the Asia Pacific Academy of Ophthalmology meeting at Manila (March 7-12) 1999 , elected President of AP AO in March 1999 , awarded the President of Pakistan Pride of Performance award. on March 23, 2000. His hobbies include reading specially Ophthalmic sciences, history , biographies and travelling. He has visited India, Saudi Arabia, UAE, Bahrain, Maldives, Thailand, Philippine, Japan, Korea, Hong Kong, Singapore, Malaysia, Greece, Italy, Sweden, Denmark, Switzerland, Yugoslavia, Bulgaria, Turkey, Iran, Afghanistan, France, Ireland, U.K. , Gambia, Kenya and USA. His address is 49, J-2, Phase 2, Hayatabad, Peshawar NWFP, Pakistan. Phone No. Clinic: +92-91-211259; Hosp: +92-91-9217188; Fax: +92-91-814438; E-mail: pico@pes.comsats.net.pk) (SM)

Khoo, Chong Yew (1939-) Singaporean male ophthalmologist. Visiting Consultant, Singapore National Eye Centre and Department of Ophthalmology, National University Hospital, Singapore. MBBCh (1965, Belfast) DO (1969, Dublin) FRCSE (1971, Edinburgh) FAMS (1973, Singapore) FRACS (1982, Australasia) FRCOphth (1988, UK) PBM (1996, Public Service Award, Singapore). Clinical Teacher, National University of Singapore. Chairman, Ethics Committees of the Parkway group of hospitals, of the Singapore National Eye Centre and of the Singapore Eye Research Institute. Besides general ophthalmology, his special interest has been in the field of contact lenses. He is Chairman of the International Contact Lens Council of Ophthalmology, and of the Organizing Committee of the International Medical Contact Lens Symposium in Sydney in the year 2002. He delivered the Javal Gold Medal Lecture ("*Complications of Contact Lens Wear - An Asian Perspective*") at the ICO in Toronto in 1994, and the Prof G. Peter Halberg Honour Lecture ("*The Effect of RGP Contact Lens Wear on the Cornea and Axial Length in Ten-Year Old Myopic Children*") at the ICO in Amsterdam in 1998. He was awarded the Distinguished Service Medal by the Asia Pacific Academy Of Ophthalmology in 1987, and the Singapore National Eye Centre Gold Medal in 1997. Publications include "*Corneal Blindness in Singapore*", Asia Pacific Journal Of Ophthalmology, Vol 4 No 2, p.20, 1992" and "*A 3 Year Study on the Effect of RGP Contact Lenses on Myopic Children*", Singapore Medical Journal Vol 40 No 4 p.230, 1999". With Prof. Montague Ruben, he co-authored the book "*Contact Lenses Medical Aspects*", PG Publishing, Singapore, 1989. He was editor of the book "*New Frontiers in Ophthalmology*," proceedings of the XXVI ICO, Excerpta Medica, Amsterdam, 1991. He is a Board Member of the Singapore National Eye Centre, Singapore Eye Foundation, World Eye Surgeons' Society, and the Asia-Pacific Academy of Ophthalmology. He is also a member of the Singapore National Committee on Ophthalmology, the Contact Lens Practitioners' Board, and Specialists' Training Committee for Ophthalmology, and is an examiner for the FRCS Edinburgh/M Med Singapore examination. Dr Khoo was president of the Singapore Medical Association (1985—87), Chairman of the Medical Advisory Board of the Mt Elizabeth Hospital (1985—87), Singapore, and member of the Singapore Medical Council (1990—93). He is currently a member of the inquiry committees of the Singapore Medical Council (since 1998) and the Law Society (since 1986). Since 1995, he has led annual medical missions to Cambodia. (Dr Khoo Chong Yew Gleneagles Hospital, #02—38

Annexe Block, 6A Napier Road, Singapore 258500, Phone: (65) 7379877; Fax: (65) 7333360) (SM)

Kiep, Walter (1886-1944) Scottish ophthalmologist, born in Glasgow. Kiep studied medicine at the Glasgow University graduating M.B., Ch.B., with commendation in 1908. After holding various house appointments, he became assistant surgeon to the Ophthalmic Institution and Honorary Oculist to the Royal Hospital for Sick Children in Glasgow. His clinical outlook for ophthalmology was greatly influenced by the teachings of Maitland →Ramsay, with whom he worked in very close association. During the war in 1915-16 he was specialist in ophthalmology in Malta. After the war he became professor of ophthalmology to the Medical School at Cairo, and relinquished this office on his appointment as honorary ophthalmic surgeon to the Royal Eye and Ear Hospital, Bradford, in 1923. He was elected President of the North of England Ophthalmological Society in 1936. Kiep wrote many contributions in the *Transactions of the Ophthalmological Society of the United Kingdom*.BJO 1944; 28:102-103.

Kieser, Dietrich Georg (1779-1862) German physician, ophthalmologist and botanist. He was also an authority on anatomy and embryology. Born in Harbourg, Hanover, he studied at Göttingen and Würzburg, returning to Göttingen in 1804 to receive his degree. His dissertation on this occasion was entitled "*Commentatio Physiologica de Anamorphosi Oculi*." From 1804 to 1806 he practised at Winsen a.d. Lube. From 1806 till 1812 he was official physician for town and country at Nordheim, near Göttingen. In 1812 he was made extraordinary professor of medicine at Jena, but two years later entered the army in his medical capacity, and saw much service in the military hospitals at Paris, Leyden, Liège, and Versailles. After the war he taught again at Jena and held many official positions. In 1836 he was president of the Fourteenth Convocation of German Scientists and Physicians at Jena. From 1831 till 1847 he was Superintendent of the Medico-Chirurgical and Ophthalmiatric Private Hospital. In 1854 he celebrated the fiftieth anniversary of his doctorate, on which occasion he was awarded the Doctor Honoris Causa of Philosophy. In addition to works of a general character and the thesis above mentioned, Kieser wrote the following: 1. *Ueber die Metamorphose des Thier-Auges*. (Himly und Schmidt's *Ophth. Bibl.*, 11, 3, 73-124, 1804.) 2. *Clerophthalmos.* (Himly und Schmidt's *Ophth. Bibl.*, III, 3, 79-94, 1807.) 3. *Ueber die Natur, Ursachen, Kennzeichen und Heilung des Schwarzen Staares*. (Göttingen, 1811.). 4.*System der Medicin* (2 vols.) Halle 1817-1819. 5.*System des Tellurismus oder Thierischen Magnetismus* (2 vols.) Leipzig 1822. American Encyclopedia of Ophthalmology, Vol.9, p. 6845-6846**.** Albert.BMC

Kikkawa, Yoshizo (1913-) Japanese Ophthalmologist, Associate Professor of Osaka University (1963-1974), Director of the Clinical Examination Department of Osaka National Hospital (1974-1981). He graduated from the Faculty of Science of Tokyo University in 1940, and then from the Faculty of Medicine of the University in 1949. He studied Ophthalmology under Prof.→HAGIWARA Hogara and received the degree Doctor of Medical Sciences in 1958 (thesis: *Submicroscopic structure of rabbit cornea studied by polarization optics and thermoelasticity*. Jpn. J. Physiol.5: 167 1955, *Elastic double system and selective permeability to cations in the stroma of the rabbit cornea*. Ibid. 6: 300 1956, *Diffraction spectra produced by the rabbit cornea*. Ibid.8: 138 1958). His interest has been cornea and contact lens, and he has published many articles, e.g. "*Light scattering studies of the rabbit cornea*. Jpn. J. Physiol. 10: 292 1960", "*Intracellular potential of the corneal epithelium*. Exp. Eye Res.3: 132, 1964", "*Effects of light-dark cycle and a corticosteroid on the diurnal variation in corneal thickness*, ibid. 18: 157, 1974" and "*Soft contact lens kinetics*, Ed.Rubin et al. Contact Lens Practice, p 113, Chapman & Hall Medical, London 1994. He is one of the Founders of the Japanese Chapter of the International Society for Eye Research, and is a member of the ISER and ARVO.(SM)

Killick, Charles (1875-1923) British ophthalmologist of Bradford. Killick was born at Rawdon, Yorkshire. Charles Killick was educated at Rossal Preparatory School, Montreux, and Bradford Grammar School. In due course he went to Cambridge (Trinity College), and after taking his arts degree with honours in the natural science tripos, he gained a university scholarship at St. Mary's Hospital, London. From the first he showed an inclination towards eye work. He went to Maidstone as house surgeon to the Kent County Ophthalmic Hospital, remained in that town as an ophthalmic surgeon, and was appointed

to the staff of the Ophthalmic Hospital. During the war Killick served with the First Home Counties Ambulance, as lieutenant, captain, and major (T.D.). He was given a specialist appointment, and five ophthalmic centres were placed in his charge. Later he was stationed at Aylesbury, and while there placed upon the staff of the Royal Buckinghamshire Hospital in that town. He was appointed ophthalmic surgeon to the Bradford Royal Eye and Ear Hospital in 1919, and put on the staff of the Bradford Royal Infirmary in 1922. He had served upon the Pensions Board (Bradford) as specialist since 1919. BJO 1923,7:303-304

Kim, Chung Whan (1928-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Korea University. He graduated from Severance Medical College (now Yonsei University) in 1950 and received training in Ophthalmology at the Air Force Hospital in his military service years (1952-1955). He received the degree Doctor of Medical Sciences from Soo Do Medical College (now Korea University College of Medicine) in 1964. He was appointed Assistant Professor at the Department of Ophthalmology, Soo Do Medical College in 1961, and served as the Chief of the Editorial Board of the Korean Ophthalmological Society (KOS) (1963-1966). He was appointed the Associate Professor (1964) and the Chairman of the Department of Ophthalmology, Soo Do Med. College (1965). He worked as a visiting fellow at the Department of Ophthalmology and the Department of Pathology, Sabbatsberg Hospital and Karolinska Institute, Sweden (1966-1967). He served the KOS as the President (1968-1970) and the Korea Medical Association as a Member of the Editorial Board (1972 - 1974). He was appointed Professor and Chairman of the Department of Ophthalmology, Korea University College of Medicine in 1971: the position he had held until retirement in 1976. He also worked as the Chief of the Board of Education and Training of Interns and Residents, Korea University Hospital (1973- 1974). Currently, he is practicing at his private clinic in Seoul.(SM)

Hee Jun Kim

Kim, Hee Jun (1907-1979) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Korea University. He graduated from Seoul Medical College (now Seoul National University) in 1932 and received the degree Doctor of Medical Sciences from Kyoto University, Japan in 1940. He worked as a Clinical Instructor of Ophthalmology at Seoul Medical College in 1940. He was appointed the Professor and Chairman of the Ophthalmology Department, Seoul Women's Medical College (present Korea University College of Medicine) in 1941. He served the Korean Ophthalmological Society (KOS) as the President in 1951. In the same year he was also appointed Clinical Instructor of Ophthalmology at Seoul National University. He was then promoted to the Chairman of Soo Do Medical College Hospital (now Korea University Hospital) in 1958. He served as the Dean of Soo Do Medical College (now Korea University College of Medicine) in 1961: the position he had held until retirement in 1962. For his great contribution of surgical eye care to those who were in dire needs and could not afford treatment, the President of the Republic of Korea granted him the High Award in 1974, and he was also a recipient of the Award of the President of the International Lions Club in 1978. He had worked for Korea University as Clinical Professor of Ophthalmology (1962-1978). (SM)

Kim, Hong Bok (1935-) Korean Ophthalmologist and Professor of the Department of Ophthalmology, Yonsei University College of Medicine. He graduated from Yonsei University College of Medicine in 1960 and completed his residency at the Department of Ophthalmology, Yonsei University College of Medicine during the years 1963 to 1967. He received his Ph.D from Yonsei University in 1974 and completed his fellowship at the Proctor Foundation, Department of Ophthalmology, UC San Francisco Medical Center in 1974-1975. He served as the Chairman of the Department of Ophthalmology at Yongdong Severance Hospital in 1983-1984 and acted as the Chairman of the Department of Ophthalmology, Yonsei University College of Medicine during the years 1984 to 1990. He served as the Chairman, Executive Board of Trustees of the Korean Ophthalmological Society during 1986 to 1988 and also was the President of the Korean External Eye Disease Society during 1993 to 1995. He is the Director of the EYE and ENT Hospital in Yonsei University College of Medicine. Some examples of his publications are "*Behcet's disease in Korea*, J. of the Korean Ophthalmological Society vol 29, 1988", "*Ophthalmologic manifestation of Behcet's disease*. Yonsei Medical J.

1977.", "*Quantitative antibiotic sensitivity determinations of Staphylococcus aureus isolated from eye cultures*. Arch Ophthalmol. 1977 vol 95(6)." (Department of Ophthalmology, Yonsei University College of Medicine, 134 Shinchon-Dong, Sodaemoon-ku, Seoul, Korea; phone: +82-2-361-8450, fax: +82-2-312-0541)(SM)

Kim, Jae Ho (1936-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Catholic University and Dean of the Graduate School. In 1960, he graduated from the Catholic University of Korea Medical College after the graduation of Seoul National University College of Education (Biology), and received training in ophthalmology under Prof. SOHN Chung Kyoon and Prof. KOO, Bong Sool. He was appointed a full-time Instructor of Ophthalmology, Catholic University of Korea in 1967 after full 3 years service as a military captain. In the next year he was granted the Doctor of Medical Sciences from the Catholic University of Korea. He carried out research as an Ophthalmic Research Fellow at the Wilmer Institute Johns Hopkins University Hospital, as a grant awardee of US NIH Post-doctoral Fogarty Fellowship (1970 –1971). He was also granted the visiting professorship from the Japanese Society for Promotion of Science (JSPS) and conducted research on fluorescein dynamics in the eye, at the Department of Ophthalmology, Tokyo University Faculty of Medicine in 1975. He was then promoted to full Professor of Ophthalmology in 1978 and was appointed the Chief of the Ophthalmology Department (1980 - 1994), with Associate-Director of Kangnam St. Mary's Hospital Catholic University (1980-1982). He was then appointed the Professor and Chairman at the Department of Ophthalmology of the Catholic University of Korea (1991-1997). During his university tenure, he served as the Director of the University Hospital (Kangnam St. Mary's Hospital) (1986-1988), Director of the Clinical Research Institute of Catholic Medical Center (1988-1994) and the Dean of the Graduate School of the Catholic University of Korea (1994 - 1999). He is a recipient of many honor awards such as "*Dong-Baek-Chang*" a National Medal in recognition of his contributions through charity eye surgery and through his scientific contributions (1986), and several prizes on his best academic articles and distinguished services from the University, National and International Ophthalmic Societies and Corporations. He also served as Chairman of the Korean Ophthalmological Society (1988-1990) and a Board Advisor of the Society since 1990. He delivered a *Special Lecture on keratoplasty and immunology* at the 39th Annual Meeting of the Korean Ophthalmological Society (1977). He served as the Chairman of the Organizing Committee of the 4th ICIMRK Meeting (1991), Planning Board Director, the 12th Congress of the Asia-Pacific Academy of Ophthalmology (APAO) in Seoul (1989), and the Founder and President of the Korean External Diseases Study Society (1995 - 1997), Presidents of the Korean Contact Lens Study Society (1996 - 1998), Korean Intraocular Lens Study Club (1989 - 1993) and Korean Association of Eye Banks (1995 - 1997). He also served as Regional Secretary of APAO (since 1991), Chairman of the Korean Chapter of Excimer Laser Surgery (1990 - 1999). Representative of International Society of Refractive Society (since 1993) and also the President of the Korea-Japan Joint Meeting of Ophthalmology (1997 - 2001). He is the founding members of the International Intraocular Implant Club (IIIC) and Asia-Pacific Intraocular Implant Association (APIIA) since 1986. He has many editorial assignments for professional journals: J. Korean Ophthalmol. Soc., Afro-Asian J. Ophthalmol., J. Refractive Surgery, Annals of Ophthalmol., Bull. Catholic Clinical Institute, Ocular Surgery News International edition and many others. He has published about 400 professional articles in National and SCI-international journals and has written sixteen books on Ophthalmology including *Textbook of Ophthalmology*, *Cornea*, *RGP Contact Lens*, *Excimer Laser and Small Incision Cataract Surgery* etc. Professor Kim is currently serving as the Director of the Eye-ENT Centre, Kangnam St. Mary's Hospital Catholic University, and Chairman of the Catholic Foundation of Eye Research. He is also a well-known pioneer surgeon on keratoplasty, eye-banking, scleral grafting, Excimer laser refractive surgery, and small clean corneal incision of phaco-surgery etc. (Department of Ophthalmology, Catholic University Medical College, Kangnam St. Mary's Hospital, 505 Banpo-Dong, Seocho-ku, Seoul 137-040, Korea. Phone:82-2-590-2798, Fax: 82-2-533-6718, e-mail: kimjh@cmc.cuk.ac.kr) (SM)

Kim, Jae Myung (1938-) Korean Ophthalmologist, Professor of Ophthalmology of Kyung-Hee University, Seoul. He graduated from Seoul National University in 1963 and studied in the Graduate School of Medicine of the University and completed the course in

1967. He received a Ph.D. degree from the University in 1971 (*Studies on the experimental chloroquine retinopathy in rabbits*. Kor. J. Ophthalmol. 11:1, 1970). He obtained his Ophthalmology Board in 1968 and the License to be an Air Force doctor in 1969. He has been in the present position since 1971. He has served as the special member of the Korean Army Medical Association, Permanent Trustee and Editor-in-Chief of the Korean Ophthalmological Association (KOA) (1972-1978), Permanent Trustee and Head of Science Division of KOA (1980-1982) and the Secretary General of the KOA (1983-1985). His research interest is glaucoma and he studied this subject at Osaka Medical College with Prof. AZUMA Ikuo (1985-1986), and he has served on the Executive Board of Trustees of KOA and Korean Glaucoma Society. He is co-author of the "*Textbook of Ophthalmology*, 4th edition, 1995", and "*Glaucoma co-worker*, 1996". (Department of Ophthalmology, Kyung-Hee University. (Department of Ophthalmology, Kyung-Hee University, 1 HockiDong, Dong Dae Mun, Seoul, Korea 130-702. phone: +82-2-958-8458, fax: +82-2-966-7340, e-mail: KDH1135@channel-i-net.)(SM)

Kim, Sang-Ha (1933-) Korean Ophthalmologist, Professor Emeritus of Kyungpook National University. He graduated from Kyungpook University in 1958 and received the DOMS (Vienna) in 1965 and worked as the Scientific Assistant at Johann Wolfgang von Goethe University in Frankfurt and received his Dr.med. from Ruprecht-Karl University of Heidelberg in 1968. On homecoming he worked as the Head of the Eye Clinic of Maryknol Hospital in Pusan in 1972-1976. He was then appointed the Professor and Chairman of the Department of Ophthalmology of Kyungpook National University (1976-1995) and retired from the Professorship of the University in 1998. During his tenure, he served as the Dean of the Medical Research and Education of the University Hospital (1984-1986), Superintendent and Medical Director of the University Hospital (1987-1989). He also served as the President of the Korean Ophthalmological Society (1995-1996), Founder of the Retina Society of Korea and the President (1989-1992), President of Catholic Physicians Guild, Taegu (1992-1996). He is Emeritus Member of International Society of Clinical Electrophysiology, member of the International Society for Eye Research and International Consultant to Highlights of Ophthalmology (1990-). His many publications include "*Myelo-optic neuropathy caused by aconitine in rabbit model* Jpn. J. Ophthalmol 35: 417, 1991", " *Intraocular hemocoagulase in human vitrectomy*. Jpn. J. Ophthalmol. 338: 49, 1994" and " *Electroretinographic evaluation in adult diabetics*. Doc. Ophthalmol. 94: 201, 1998". He delivered a lecture "*The cause-specific prevalence of blindness and care of visually impaired elderly in Korea*" at the HOYA Vision Care the First Asia-Pacific International Conference in 1998 (*Proceedings*, ed. S. →Mishima, p.150, 1998). He is currently the Medical Director and Advisor of the Most Holy Trinity Hospital in Taegu (San 127 Boem-oe-2 Dong Susoeng-ku, Taegu 706-014, Korea, fax: +82-53-756-3070, e-mail: shkim34@channeli.net)(SM)

Kimura, Samuel J. (1912-1979) American ophthalmologist, professor of ophthalmology emeritus at the University of California's School of Medicine in San Francisco. Kimura was born in Stockton, California. After graduation from high school, he entered the University of California at Berkeley where he obtained both the Bachelor of Arts and the Master of Science (anatomy) degrees. He received his M.D. degree from the University of California in 1940, and after a year of internship in Chicago he joined the Army, serving in the Medical Corps in southern Europe. He later returned to California to enter the ophthalmic residency program of the late Frederick C.→Cordes, M.D., in San Francisco. While in this program he made his first contacts with Phillips Thygeson, M.D., and the late Michael J.→Hogan, M.D., men who were to influence his later career in inflammatory diseases of the eye. Kimura was known for his many contributions to the fields of uveitis and external diseases of the eye. In collaboration, with other members of the Francis I. Proctor Foundation for Research in Ophthalmology, he established the importance of lysozyme deficiency in keratoconjunctivitis sicca; he demonstrated the presence of herpes virus in the corneal epithelium by means of fluorescein-tagged antibody; he made significant observations on the pathogenesis of herpetic uveitis and on Fuchs' heterochromic iridocyclitis; he studied and classified many forms of uveitis associated with inflammatory joint diseases; and he contributed to highly significant studies on toxoplasmic retinochoroiditis. He and Robert Weinreb, showed the importance of angiotensin converting enzyme in the diagnosis of sarcoid uveitis. He was the developer of

a flexible metal spatula for the performance of diagnostic scrapings of the conjunctival epithelium, and this instrument still bears his name. He was a member of many scientific societies including the Association for Research in Vision and Ophthalmology (of which he was once secretary treasurer), the American Ophthalmological Society, and the American Medical Association. He was a member of the course faculty of the American Academy of Ophthalmology. He was President of *That Man May See, Inc.*, a private fund-raising organization dedicated to the support of eye research. Kimura wrote, with Ernest K. Goodner *Ocular Pharmacology and Therapeutics and Problems Medical Management*, Philadelphia 1963. AJO 1980,89:149-150. JPW

King Merrill Jenks (1894-1965) American ophthalmologist who was born at Whitewater, Wisconsin. After attending Lake Forest College, he studied medicine at the University of Pennsylvania, obtaining his M.D. degree in 1919. Before deciding on ophthalmology as a career he spent some years in pathology and in bacteriology, working with such distinguished men as Dr. Frank Mallory and Dr. Hans Zinsser at the Harvard Medical School. Completing his residency in ophthalmology at the Massachusetts Eye and Ear Infirmary in 1932, he began private practice in Boston in association with Dr. Allen Greenwood, taking over the practice when Dr. Greenwood died. But his love of research resulted in his devoting half time to the Howe Laboratory, under Dr. Frederick→Verhoeff, where his main interest was ocular tuberculosis. Meanwhile he had joined the clinical staff of the Massachusetts Eye and Ear Infirmary where he eventually became a full surgeon in 1947. He also participated in the teaching of Harvard Medical School Students. During the early 1930's he became intensely interested in the newer methods of retinal detachment surgery brought over from Europe. He was one of the first in Boston to do this operation on a large scale. Another disease which claimed his attention was retrolental fibroplasia, which had made its appearance during World War II. He devoted many hours to the study and treatment of young children with this disease. He was a member of all the major ophthalmologic societies, his membership in the American Ophthalmological Society starting in 1939. He devoted a great deal of time to the American Board of Ophthalmology, which he served for 12 years as secretary. AJO 1966,61:358

King, Clarence (1877-1936) American ophthalmologist born in Newport, Kentucky, who graduated from the Medical College of Ohio in 1901. He put in post-graduate work under Ernst→Fuchs in Vienna and later in Berlin. He started practice in ophthalmology in Cincinnati, but went to India in 1912 to work under Col. Henry Smith. Dr. King served in France during the war as Major A.M.S., first at a Base Hospital and later as consulting ophthalmologist in the Allery Area, in Coblenz. He was surgeon at the Cincinnati General Hospital and Director of the ophthalmic clinic at the Children's Hospital. After having held the post of Assistant Professor of Ophthalmology at the Medical College, University of Cincinnati, for several years he succeeded the late Dr. Victor Ray, sen., as Professor. As Professor he reorganized the department under his care. Clarence King was not a prolific author, but all he wrote reached a very high level as his standard was of the highest. He was succeeded by Derrick T.→Vail. BJO 1937,21:158-159

King, Jr., John Harry (1910-1986) American ophthalmologist. He was born in Washington, D.C., and received his M.D. degree from Georgetown University Medical School in 1933. After internship at Letterman General Hospital in San Francisco, he joined the Army Medical Corps. He subsequently served as Chief of the Ophthalmology Service at Tripler General Hospital and Walter Reed Hospital and was the first medical director of Andrews Air Force Base in Maryland. During World War II he served as a flight surgeon in both the European and Pacific theaters. When he retired as a colonel in 1955, he was the Army's Director of Eye Research. In 1954, King developed the process of preserving corneal tissue for transplantation by dehydrating the tissue and storing it in anhydrous glycerin solution. The tissue, preserved at room temperature, has been used successfully in lamellar transplants after more than 23 years of storage. King was in private practice in Washington from 1955 until 1985. He served as clinical professor of ophthalmology at Georgetown University and associate professor of ophthalmology at George Washington University Medical School. He helped develop the Lions Eye Bank of Washington, D.C., and became its medical director. He then helped organize and served on the first Board of the Eye Bank Association of America. He was an organizer of the Society of Military Ophthalmologists. He formed the International Eye Bank in 1960 to

provide fresh and preserved ocular tissue for corneal transplantation in countries where it was not readily available. In 1969 he founded the International Eye Foundation, which coordinates programs for the prevention of blindness in undeveloped nations. King served as a consultant to the Surgeon General of the Air Force and the Surgeon General of the U.S. Army. He was a director of the National Society to Prevent Blindness and the Pan American Association of Ophthalmology. He was a charter member of the Academia Ophthalmologica Internationalis and received the Honor Award of the American Academy of Ophthalmology and Otolaryngology. The Pan American Association of Ophthalmology gave him the Gradle Medal for Teaching in 1968 and its Distinguished Humanitarian Award in 1982. He was an honorary member of the Ophthalmological Societies of the Dominican Republic, Egypt, El Salvador, Guatemala, Greece, Mexico, Peru, and Turkey. His *Atlas of Ophthalmic Surgery*, written with J.C.→Wadsworth, had three or more editions. Additionally, he was the author of over 100 scientific papers.AJO 1986,102:746

Kinoshita, Jin (1922-) American ophthalmic biochemist. Born in San Francisco, CA. as a second generation of Japanese origin. He received his A.B. from Bard College, Columbia University in 1944 and his Ph.D. from Harvard University in 1952. He was invited by Professor David G. Cogan to join the Howe Laboratory of Ophthalmology, Harvard Medical School in 1952 and rose to the rank of Professor of Ophthalmic Biochemistry in 1970. In 1971, he transferred his research activities to the Intramural Program of the National Eye Institute (NEI) encouraged by Dr. Carl Kupfer, Director of the NEI. Kinoshita began as Chief of Laboratory of Vision Research and then became Scientific Director of the NEI from which position he retired in 1990. Since then, he has been Clinical Research Professor of Ophthalmology at University of California at Davis. Kinoshita's main research interests are summarized in three of his major publications. In 1964, he presented the "*Cataracts in Galactosemia*, Invet. Ophthalmol. 4: 782, 1965" when he was honored with the Jonas S. Friedenwald Award. In 1974, he presented, as the Proctor Medal Award Lecture "*Mechanisms Initiating Cataract Formation*, Invest. Ophthalmol. 13: 713, 1974". His third notable contribution is his XLIII Edward Jackson Memorial Lecture at the American Academy of Ophthalmology in 1986 entitled "*Aldose Reductase in the Diabetic Eye*, Am. J. Ophthalmol. 102:685,1980". He was honored by the Japanese Ophthalmological Society in 1978 by a lectureship. He delivered many named lectures, e.g. V, Everett Kinsey Lecture (1989), Zacharias Dische Lecture (1991), etc. He was a member of Editorial Board of many scientific journals, e.g. *Arch. Ophthalmology*, *Invest. Ophhthalmol*, *Exp. Eye Res*, and many others. He also served as Chairman of the Board of Trustees of the Association for Research in Ophthalmology (1970) and the Vice President of the International Society of Eye Research (1978-1983). He is a recipient of many Awards, e.g. Alcon Research Awards (1983,1984), from the Cataract Foundation of Japan (1985) and from the National Eye Institute and the Japan Society for the Promotion of Science (1989). He is an Emeritus Member of the Japanese Ophthalmological Society and an Honorary Member of the International Society of Eye Research. Since 1992 he is an active Member of the Scientific Advisory Board of Research to Prevent Blindness. In recognition of his outstanding service, President Ronald Reagan, in 1981, presented Kinoshita the Presidential Rank Award for Meritorious Executive, and the Government of Japan conferred on him the Third Order of the Rising Sun in 1994.
(e-mail: jinkinno@davis.com)(SM)

Kinoshita, Shigeru (1950-) Japanese Ophthalmologist, Professor and Chairman of Kyoto Prefectural Medical University. He graduated from Osaka University in 1974, studied under Prof. MANABE Reizo and received his degree Doctor of Medical Sciences in 1983. He has been in the present position as above since 1992. His research interest is in the cornea, and he established, in collaboration with Dr. Richard Thoft, the concept of the stem cells of the epithelium that has given the basis for corneal surface reconstruction (*Sex chromatin of donor corneal epithelium in rabbits*. Invest. Ophthalmol. Vis. Sci. 21: 434, 1981, *Long-term results of keratoepithelioplasty in Mooren's ulcer*. Ophthalmology 98: 438, 1991). He is currently working on the molecular biology of the corneal epithelium (*Apolipoprotein J expression in human ocular surface epithelium*. Invest. Ophthalmol. Vis. Sci. 37: 2285, 1996). He served as the active Director of the World Congress on the Cornea IV in 1996 and Program Committee (Cornea section) member of ARVO in 1996-1999. He is the Chief Editor of "*Atarashii Ganka*: Journal of the Eye" and on the Editorial

Board of "*Cornea*", and is a recipient of the Alcon Research Award 2000. (Department of Ophthalmology, Kyoto Prefectural Medical University, Kajii-cho Kawaramachi, Kamigyo-ku, Kyoto 602-0841, Japan. phone: +81-7-5251-5578, fax: +81-7-5251-5663, e-mail: skinoshi@ophth.kpu-m.ac.jp)(SM)

Kinsey V. Everett (1909-1978) American ophthalmologist, a leading ophthalmic researcher of this century, a pioneer of research ophthalmology in its formative years, he made major contributions to the understanding of the transparency of the Cornea, the secretion of aqueous humor, the pathogenesis of retrolental fibroplasia, and the metabolism of the lens. Kinsey was born in Pittsburgh and received the bachelor of science degree from the University of Pittsburgh in 1931. He then assisted the mathematical biologist Dr. Nicholas Rashevsky in biophysical research at the research laboratory of the Westinghouse Electric Company, and became interested in the effects of x-rays on living tissue. In 1935, he obtained a Ph.D. degree in zoology from the University of Pittsburgh where he studied the biologic effects of x-rays on glutathione, phosphotase, and esterase. The following year he studied the effects of short-wave radiations at the Cancer Research Laboratory at the University of Pennsylvania, and in 1937 and 1938 he worked as a research biochemist at the Sharp and Dohme Biological Laboratories. He investigated methods of purifying antitoxins. In 1938, he became a research associate in the Department of Ophthalmology at the University of Pittsburgh. In 1940, he joined the staff of the Howe Laboratory of Ophthalmology of the Harvard Medical School as an assistant in ophthalmic research. His initial studies on the cornea with David Cogan led to accurate delineation of the movement of water through the cornea and much of our early information on the deturgescent mechanism. For these studies, be shared with Cogan the Warren triennial award of Massachusetts General Hospital. In 1942, he began studies with W. Morton Grant on the kinetics of intraocular fluid transport, which led to our present theories of aqueous humor secretion and the nature of the primary aqueous humor secreted into the posterior chamber. Ocular injuries to arc welders during World War Il led to the study of ultraviolet keratitis. Additional studies concerned the actions of mustard gas on the eye. From 1946 through 1950 be was director of research on retrolental fibroplasia at the Massachusetts Eye and Ear Infirmary. He subsequently headed a collaborative group that studied the role of oxygen in this disorder. For this work be received the Modern Medicine Distinguished Award and the Lasker Award. In 1950 Kinsey turned his attention to the lens. He developed a method to maintain the lens in vitro and demonstrated that the epithelium was responsible for the transport function in this lens. Throughout his life be had tremendous enthusiasm and was responsible for stimulating many individuals to enter ophthalmology. He was unfailingly generous and collaborated with a number of distinguished investigators, many of whom he had initially directed. From 1950 to 1968 be was assistant director of the Kresge Eye Institute of Wayne State University and professor of ophthalmic chemistry. In 1968, he went to Oakland University as the first director of the Institute of Biological Sciences, where be became director emeritus in 1975. In addition to his vision research, Kinsey was active in organizational ophthalmology. He was adviser to the National Society for the Prevention of Blindness on retrolental fibroplasia; be was chairman of the committee on this topic from 1968 until his death. He served as a member of the Society's Committee on Basic and Clinical Research since 1949. He served as a trustee and chairman of the Association for Research in Ophthalmology (now ARVO), as a member of the Sensory Disease Study Section of the United States Public Health Service of the National Institutes of Health, and subsequently on the Council of the National Institute for Neurologic Diseases and Blindness and the Council of the National Eye Institute. He was the first chairman of the National Eye Institute Board of Scientific Counselors. He served on the editorial boards of the Archives of Ophthalmology and Experimental Eye Research. He served as chairman of the Scientific Advisory Board of the National Foundation for Eye Research and as a member of the Scientific Advisory Board of the National Council for the Prevention of Blindness (Fight for Sight!). He was an early advocate of scientists working with clinicians to solve medical problems. He was an honorary member of the New England and the Detroit ophthalmological societies. Kinsey received the Proctor Medal Award of the Association for Research in Ophthalmology in 1952. At that time he expressed the need for tenured positions for full-time, investigators in ophthalmology, adequate laboratory space for experimental studies, and adequate funding. His philosophy was expressed in his remarks made at the acceptance of the Proctor Medal Award (Am.J.

Ophthalmol. 36:7, 1953), and earlier in Science (105: 373, 1947). Science was but one of his interests and he brought leadership and devotion to whatever activity he undertook. He was a director of the Detroit opera theater. He became interested in boating, and became an instructor in a powerboat squadron. He was an analytic thinker, and nothing was more pleasant than to review a day's scientific program with Everett commenting on what should have been done, how data could have been interpreted differently, and the new problems encountered. AJO 1978,86:845-847

Kipp, Charles John (1835-1911) German-American ophthalmologist. Born at Hanover, Germany, he came to the United States at the age of nineteen. Here he received his medical degree at the College of Physicians and Surgeons in the City of New York in 1861. He served in the army from 1862 until considerably after the close of the war; being Acting Assistant Surgeon in 1862, Assistant Surgeon in 1863, Major and Surgeon in 1864, Brevet Lieutenant Colonel and Surgeon in 1865. In Nov., 1867, he resigned. In 1869 he settled in Newark, N. J., as an ophthalmologist. He founded the eye and ear clinic at St. Michael's Hospital and the Newark Eye and Ear Infirmary.He was Chief Surgeon of the Newark Eye and Ear Infirmary and Consulting Surgeon to the German, St. Barnabas, Bayonne, Mountainside, and Somerset Hospitals. In 1885 and 1886 he was President of the New York Ophthalmological Society, in 1886 of the New Jersey Medical Society and, from 1901 till 1906, of the New Jersey State Tuberculosis Sanitarium. In 1907 and 1908 he was President of the American Ophthalmological Society, President of the Otological Society, and Vice-President of the A.M.A. He was also a member of the Heidelberg Ophthalmological Congress. According to Peter Callan, of New York, he was the first to recognize the frequent connection between optic neuritis and otitic thrombosis of the lateral sinus, and was the first to report in America a case of cysticercus in the ocular conjunctiva. Harry V. Würdemann said of him that one of Kipp's notable achievements in science was his discovery of a form of eye disease caused by malaria, to which be was first to call attention, in the early nineties. Kipp was a frequent contributor to periodical literature, and also to the medical encyclopedias. Perhaps his most important writing is the section on diseases of the ear in the *International Handbook. of Surgery.* Among his ophthalmic writings we may mention the following: 1.*On Gonorrheic Irido-Choroiditis. (Med. Rec., N.* Y., 1880, xvii.) 2. On the Significance of the Development of Optic Neuritis in Cases of Purulent Inflammation of the Middle Ear. *(Arch. Otol.,* 1885.) 3. *A Case of Double Vascular Exophthalmos; Recovery under Intermittent Compression of the Right Carotid Artery and the Internal Use of the Iodide of Potassium. Cocaine Conjunctivitis.* (*Tr. Am. Ophth. Soc.,* 1888-90.) 4. *Three Cases of Transient Bilateral Horizontal Nystagmus Occurring in Connection with Purulent Inflammation of the Middle Ear. (Tr.Am.Otol. Soc.,* 1887-90.) 5.*A Case of Acute Purulent Inflammation of the Middle Ear with Double Optic Neuritis, but without Tenderness or Swelling of, etc. (Tr.Am.Otol.Soc.,* 1891.) 6. *A Case of Bilateral Recurrent Inflammation of Ténon's Capsule in Connection with Profound Mercurial Poisoning. (Tr.Am.Ophth.Soc.,* 1891-3.) American Encyclopedia of Ophthalmology, Vol.9, p. 6848-6849. The Ophthalmoscope, 1911,p.305.

Athanasius Kircher

Kirby, Daniel B. (1891-1953) American ophthalmologist from New York. Born in Cleveland, he was educated at the Western Reserve University and an interne at the Toronto General Hospital and the Bellevue Hospital, New York. He entered practice in this city in 1923 in association with John M. Wheeler. He served in the U.S. Navy in the first World War, and became Director of the Department of Ophthalmology of the Bellevue Hospital, and Professor of Ophthalmology at New York University. He was one of the best known figures in ophthalmic surgery in the United States, and his book *The Surgery of Cataract* (1950) was a unique contribution to ophthalmic knowledge of this subject of which his practical experience was immense. He was widely known and had a large circle of friends outside the U.S.A.: an American edition was published in 1953. Another edition was published in 1955 under the title *Advanced Surgery of Cataract*. JPW; AJO 1954,37:443-444

Kircher, Athanasius (1602-1680) German priest, philosopher and scientist. Kircher was born at Geisa, Germany, and was educated at Jesuit schools. He was ordained a priest in 1628. He taught philosophy, mathematics, astronomy, and Hebrew, among other subjects, at the Universities of Würzburg and Avignon. In 1633 Kircher settled in Rome, where he spent the rest of his life, engaged chiefly in independent research and in writing. Kircher's

studies encompassed the fields of magnetism, optics, acoustics, music theory, astronomy, mathematics, philology, chemistry, geography, archeology, theology, philosophy, and medicine. Although he contributed little that was new, his writings furthered the dissemination of knowledge on a wide range of scientific topics. Among many books, he also wrote: *Ars magna lucis et umbrae* Rome1646, another edition was published in Amsterdam 1671; *Ars Magnesis* etc..Herbipoli 1631; *Ars magna sciendi in XII libros digesta*..etc.. (2 vols.) Amsterdam 1669; *China monumentis*..etc. Amsterdam 1667; *Magnes, sive de arte magnetica opus tripartitum* Rome 1641; *Mundus subterraneus, in XII libros digestus*..etc..Amsterdam 1665; *Phonurgia Nova*..etc.Campidonae 1673; *The Vulcanos: or, burning and fire-vomiting Mountains*..etc. London 1699. Albert.BMC

Kirchhoff, Onstav Robert (1824-1887) German physicist. He became professor in Berlin University in 1874, and distinguished himself in the sciences relating to the mechanics of heat, optics, and especially of spectrum-analysis.American Encyclopedia of Ophthalmology, Vol.9, p. 6849.

Naganori Kirisawa

Kirisawa, Naganori (1907-1980) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Tokyo University in 1931, studied under Prof. S. ISHIHARA, and was made the Professor of Ophthalmology of Iwata Medical School in 1920. He was promoted to Assistant Professor of Tokyo University in 1937 and was granted his Doctor of Medical Sciences from the University in 1939. His main interest was the medical treatment of eye diseases and he gave a special lecture "*Chemotherapy in Ophthalmology*" at the 58th Congress of the Japanese Ophthalmological Society. He was appointed the Professor and Chairman of the Department of Ophthalmology of Tohoku University in 1955 and he held this position until retirement in 1971. During his tenure he served as the Director of the University Hospital. In 1969 he was the President of the 73rd Congress of the Japanese Ophthalmological Society, and at the 72nd Congress in 1968 he delivered a special lecture "*Recent problems in medical therapy in Ophthalmology*". He was also interested in uveitis, and discovered a fulminant necrotizing retinochorioiditis of KIRISAWA, where herpes zoster or varicela virus is suspected as a cause. After retirement he was entitled Professor Emeritus of Tohoku University and served as the Director of Nihon Monopoly Bureau Hospital (now JT Co.). In 1983, the Government conferred the Second Order of Sacred Treasure upon him in recognition of his distinguished services. (SM)

Kirkpatrick, Lt-Col. Henry (1872-1958) British ophthalmologist, who spent most of his life in the Indian Medical Service. Kirkpatrick was educated in Dublin, where he qualified in 1894, and did his postgraduate work in St. Mark's Eye and Ear Hospital in that city under the instruction of →Swanzy and →Werner. In 1898 he joined the Indian Medical Service and was appointed to the staff of the General Hospital, Madras, where he acted as physician and professor of pathology. There he came under the influence of Col. R. H. Elliott, whom he succeeded in 1914 as Superintendent of the Government Ophthalmic Hospital and Professor of Ophthalmology in Madras. While in this office he supervised the construction of the Elliot School, a large teaching institution, and spent much of his time in improving the facilities for postgraduate training particularly in pathology. Leaving Madras in 1920, he started consulting practice in London, again initially in association with Elliot, becoming ophthalmic surgeon to the Hospital for Tropical Diseases, and lecturer in ophthalmology at the London School of Hygiene and Tropical Medicine. In 1937 he gave up consulting practice and retired to live in the country in Hampshire. Kirkpatrick was an excellent ophthalmologist, an accomplished surgeon, and a conscientious teacher. His greatest achievement was the advancement of ophthalmology in South India. He made a considerable number of contributions to ophthalmic literature, published two small volumes *Cataract and its Treatment* (1921) and *Diseases of the Eye* (1936)-and collaborated with Elliot in the production of his standard *Textbook of Tropical Ophthalmology* (1920). BJO 1958,42:512

Kirwan, Ernest William O´Gorman (1887-1965) Irish ophthalmologist, who one year after graduating in medicine in Dublin, joined the Indian Medical Service in 1910. After serving in France, Mesopotamia, and the North-West Frontier of India during the First World War, he took up the specialty of ophthalmology and occupied the chair in that subject in Calcutta until his retirement from the Indian Service in 1944~ thereafter he

came to London and became lecturer in ophthalmology at the London School of Hygiene and Tropical Medicine and ophthalmic surgeon at the Tropical Diseases Hospital. After some ten years he retired altogether and spent the last decade of his life happily ill California. .Kirman raised the standard of teaching and investigation in ophthalmology in Calcutta to a level it had not reached before, and was accepted as a world authority on tropical ophthalmic diseases, particularly leprosy, of which he made a special study. Brit.J.Ophthal.1966,50:168

Kishi, Shoji (1950-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Gunma University. He graduated from Gunma University in 1976, studied Ophthalmology at the University under Prof. SHIMIZU Koichi and received his Doctor of Medical Sciences in 1987 (thesis: *Posterior vitreous detachment and the fovea*. J. Jpn. Ophthalmol. Soc. 89: 1251, 1985). He carried out research under Prof. Mark Tso at University of Illinois at Chicago in 1981- 1983. (Kishi S, Tso MOM, Hayreh SS: *Fundus lesions in malignant hypertension I. A pathologic study of experimental hypertensive choroidopathy*. Arch Ophthalmol 103:1189-1197,1985). He has been in the present position as above since 1998. He is a Councillor of the Japanese Ophthalmological Society, and a member of the Vitreoretina Society of Japan, Japanese Society of Ophthalmic Surgeons, Japanese Society of Ophthalmic Diabetology, and a fellow of the American Academy of Ophthalmology, and a member of the Association for Research in Vision and Ophthalmology. His main interest in research has been retinal and vitreous diseases, and he has many publications in this field that include the following two papers: *Vitreous cortex remnants at the fovea after spontaneous vitreous detachment.* International Ophthalmology 9: 253-260, 1986 and *Posterior precortical vitreous pocket.* Arch Ophthalmol.108: 979-982,1990 (Department of Ophthalmology, Gunma University, 3-39-15, Showamachi, Maebashi, 371-8511, Japan; phone: 81-27-220-8338, fax: 81-27-233-3841, e-mail: kishi@akagi.sb.gunma-u.ac.jp)(SM)

Masao Kishimoto

Kishimoto, Masao (1911-1991) Japanese Ophthalmologist, Professor Emeritus of Kyoto University. He graduated from Kyoto University in 1935, studied under Prof. S.→MORI and was promoted to Assistant Professor in 1949. He was elected as one of the symposists at the 60th Congress of the Japanese Ophthalmological Society and gave a lecture "*Fluctuation of the intraocular pressure and aqueous vein: significance of the vein in glaucoma*". He was then appointed the Professor of Ophthalmology of Nagasaki University in 1962 and was invited to be the Professor and Chairman of the Department of Ophthalmology of Kyoto University in 1968: he held the position until retirement in 1975. He served as the President of the 79th Congress of the Japanese Ophthalmological Society in 1975 and delivered a special lecture " *Retinal detachment and its treatment*" at the 78th Congress of the Society in 1973. After retirement he was given the title Professor Emeritus of Kyoto University and served as the Director of Osaka Teishin Hospital under the Ministry of Posts and Telecommunications until 1982. The Government conferred the Third Order of the Rising Sun upon him in recognition of his lifetime services. (SM)

Kitahara, Kenji (1941-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Jikei University School of Medicine. He graduated from Jikei University School of Medicine in 1967, studied Ophthalmology at the University under Prof.→FUNAHASHI Tomoya, and received his Doctor of Medical Sciences in 1980 (thesis: *Measurement of spectral sensitivity of retinal receptors and its clinical application*. Rinsho Ganka (Jpn. J. Clin. Ophthalmol.) 30:323,1976). He extended his studies in 1977-1980 at the University of Michigan, U.S.A. and worked with Prof. Mathew Alpern. They published "*Classical tritanopia*. J. Physiol.335: 655, 1983" and "*The dependence of the colour and brightness of a monochromatic light upon its angle of incidence on the retina*." J. Physiol. 338: 651, 1983. On return home, he served as the Assistant Professor (1984-1990) and he was promoted to the present position as above in 1990. His professional activities include Councillor (1991-) of the Japanese Ophthalmological Society, Executive Director (1990-) of the Japanese Society of Neuro-ophthalmology, Executive Director (1992-) of the Japanese Society of Ophthalmological Optics, Committee Member of the International Perimetric Society (1982-1988), of the International Color Vision Society, and of Commission Internationale de L'eclairage (CIE). He serves as an editor of *Ganka* (Ophthalmology) (1991-). He is an expert in vision physiology, color vision, physiological optics and visual rehabilitation: some examples of his many publications are "*Congenital*

color vision deficiencies, Kanehara & Co. Tokyo, 1999" and "*Dichromatism in Macaque monkeys.*" Nature 402: 139, 1999. (Department of Ophthalmology, Jikei University School of Medicine, Nishi-Shinbashi, Minato-ku, Tokyo, 105-8461, Japan. phone:+81-3-3433-1111, fax:+81-3-3435-7959, e-mail: kkenji@po.iijnet.or.jp)(SM)

Kitano, Shusaku (1925-) Japanese Ophthalmologist, Professor Emeritus of Nihon University. He graduated from Tokyo University in 1949, studied Ophthalmology at the University under Prof.→HAGIWARA Hogara and received his Doctor of Medical Sciences in 1955 (thesis: *An embryological study on the human corneal nerves*. J. Jpn. Ophthalmol. Soc. 59: 262, 1955). He conducted research on the cornea during 1963-1965 at the Retina Foundation, Boston, as Research Fellow with Dr. C. H.→Dohlman and found the roles of keratocytes in reproduction of mucopolysaccharide in the corneal stroma (*Cytoplasmic granules of the corneal stroma cell*. Invest. Ophthalmol. 3: 277, 1966; Cytologic and histochemical changes in corneal wound healing. Arch. Ophthalmol. 76: 345, 1966). He was appointed the Assistant Professor of Nihon University under Prof. →KUNITOMO Noboru in 1958 and then promoted to the Professor and Chairman of the Department in 1973: he served in this position until retirement in 1991. He has served as a Councillor (1973-1991) and a Executive Director (1979-1981, 1985-1989) to the Japanese Ophthalmological Society (JOS), and as a Councillor (1977-1991) and as the Chairman (1984-1988) of the Japan Contact Lens Society and as a Councillor (1977-1999) to the Japanese Association of Ocular Infection (JAOI) (1977-1999). He is one of the Founders of the JAOI and currently serves as the Chairman of the Association. He worked extensively on the cornea and infection of the anterior segment of the eye (*Electron microscopic studies on herpes virus infections*. Jpn. J. Ophthalmol. 16: 233, 1972), and also on the structure and function of the ocular surface. His works have been summarized in his JOS Award Lecture to the 90th Congress of the JOS. (*Ocular surface - physiological and pathological properties.* J. Jpn. Ophthalmol. Soc. 91: 1, 1987) He has served on the Editorial Board of Ophthalmology (Ganka) (1973-1991). He continues to contribute to teaching young ophthalmologists at the University. (Department of Ophthalmology, Nihon University, School of Medicine, 30-1 Oyaguchi-Kamimachi Itabshi-ku, Tokyo 173-8610, Japan. phone: +81-3-3972-8111, fax: +81-3-3554-0479)(SM)

Kitazawa, Yoshiaki (1937-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Gifu University. He graduated from Chiba University in 1961 and studied Ophthalmology under Prof. SUZUKI Yoshitami: he received his Doctor of Medical Sciences in 1967 (thesis: *A Clinical Study on Water-Drinking Tonography (3)- Water-Drinking Tonography in Steroid-induced Ocular Hypertension*-. Acta Soc. Ophthalmol. Jpn. (J. Jpn. Ophthalmol. Soc.) 70: 292-299, 1966). He studied for one year in 1968 at the Wilmer Ophthalmological Institute, Johns Hopkins University with Prof. Maurice E Langham (Kitazawa Y, Langham ME: *Influence of an adrenergic potentiator on the ocular response to catecholamines in primates and man.* Nature 219:1376 - 1378, 1968). He was promoted to the Assistant Professor of the University of Tokyo in 1975 and is in the present position since 1985. His professional assignments are Councillor (1975 -) and Executive Director (1996 - 1999) of the Japanese Ophthalmological Society, Executive Councillor (1986 -) and President (1998-) of Japanese Glaucoma Society, Councillor (1986 -) and Executive Councillor (1993-) of Japanese Society of Ocular Pharmacology, Executive Councillor (1991-) of Japanese Society of Ophthalmic Surgery, Executive Councillor (1997 -) of Japanese Society of Laser Medicine, Executive Councillor (1985 -) and President (1994 - 1998) of the International Society of Glaucoma of the International Congress of Ophthalmology, Executive Councillor (1988 -) and Vice President (1994 -) of the International Perimetry Society, Executive Councillor (1996 -) and President (1996-) of Asian-Oceanic Glaucoma Society. He is also a member of many other national and international societies. His editorial assignments are Editor of Jpn.J.Ophthalmol.(1985-), Folia Ophthalmol. Jpn. (1985 -), Ophthalmology (1995 -), J. Glaucoma (1992 -), Curr. Opin. Ophthalmol. (1990 -), J. Ocular Pharmacol. Ther. (1985 -), Ophthalmic Surg. Lasers (1985 -), Int. J. Ophthalmol. (1977 -). He worked as the Secretary of the First Congress of the International Society of Glaucoma of the International Congress of Ophthalmology in 1978. As the Congress President he organized the Third Congress of Japanese Glaucoma Society and the Tenth Congress of the International Perimetry Society in 1992, the 13th Congress of the Japanese Society of Ocular Pharmacology in 1993, the 19th Congress of

Japanese Society of Ophthalmic Surgery in 1996, the 2nd Congress of Asian-Oceanic Glaucoma Society and the 53rd Congress of Japanese Society of Clinical Ophthalmology in 1999. His main research interest has been in glaucoma, and he wrote "*Clinical Glaucoma*. Kanehara Publ. Co. Tokyo, 1979" and some examples of many recent publications are "*Vascular pathogenesis of normal-tension glaucoma: a possible pathogenetic factor, other than intraocular pressure, of glaucomatous optic neuropathy*; Progress in Retinal and Eye Research, 17:127-143, 1998" and "*Optic nerve and peripapillary choroidal microvasculature of the rat eye*; Invest. Ophthalmol. Vis. Sci. 40: 3084-3090, 1999". In recognition of his contribution, he received the Alcon Research Institute International Award in 1994. He was the 46th Francis I. Proctor Lecturer at University of California, San Francisco in 1994. (Department of Ophthalmology, Gifu University, 40 Tsukasa-machi, Gifu-shi, Japan 5(10-8705, Phone: 81-58-267-2272, Fax :81-58-265-9012, e-mail: yoshikit-gif@umin.ac.jp).(SM)

Kitchiner, William (1775(?)-1827) British physician of London. Kitchiner received his medical degree at Glasgow but, having a private fortune, never practiced. Kitchiner, instead, devoted himself to independent research in optics, the culinary arts, and musicology. He wrote: *The economy of the eyes: precepts for the improvement and preservation of sight* (2 parts) London 1824; *Apicius redivivus: or, the Cook´s Oracle* 1817; The *Art of Prolonging Life, by food, clothes* etc. 1822.Albert.BMC

Isamu Kiyono

Kiyono, Isamu (1848-1926) Japanese Physician, graduated from Tokyo University in 1879 was appointed the President of Okayama Medical School in 1881 and worked for 8 years to establish the education systems of the School (now Okayama University). He was then invited to be President of Osaka Medical School (now Osaka University) in 1889, but he had to retire due to an accidental injury in 1901. Subsequently he practiced medicine in the city of Osaka and founded the Osaka Medical Society. He taught Ophthalmology and his *Textbook of Ophthalmology* is now treasured at Osaka University.(SM)

Klaunig, Friedrich Moritz Hermann (1815- ?) German ophthalmologist. Klaunig was born near Oschatz, Germany, received his M.D. in 1842 at the University of Leipzig, settling in that city as ophthalmologist. He wrote: *Das künstliche Auge* Leipzig 1883 and *Compendium der Augenheilkunde* Leipzig 1871.Albert.BMC

Kleefeld, Georges (1892-1979) Belgian ophthalmologist. Kleefeld obtained his M.D. degree in Brussels and became assistant of von→Hess in Munich. Because of the first World War he had to come back to Brussels, where he was assistant of Emile→Gallemaerts during long years. As a Jew he had to escape in 1940 to Tanger and later to New York, where he settled. He wrote many papers on *improvements of ocular biomicroscopy by means of filters and of dyes*, and even on extraordinary topics as the use of a "*tono-exerciser*" for learning to judge intraocular pressure by the digital method, or the *visualisation of retinal topography by plastic replica of the evaginated visual globe* (1957). (Verriest)

Klein, Harvey Z. (1931-1991) American ophthalmologist. Klein grew up in Pittsburgh, where he received a Bachelor of Science degree from the University of Pittsburgh in 1952. Upon graduating from medical school at the University of Buffalo and completing his internship in Pittsburgh, he served in the United States Navy from 1958 to 1961. After his honorable discharge, he entered Drexel Institute of Technology, where he earned a Master of Science in Biomedical Engineering, before going to the University of Chicago for his ophthalmology residency in 1963. Seventeen years later, Dr. Klein left a successful private practice to enter academic medicine. He completed a retina fellowship at the Manhattan Eye and Ear Hospital and a glaucoma fellowship at the Duke University Eye Center before returning to Chicago in 1983, where he served on the faculties of both the University of Chicago and the University of Illinois. Although he was ill and receiving chemotherapy for most of this time, he served with distinction as a clinician and teacher. Klein was a highly intelligent, thoroughly honest man, who made significant contributions to ophthalmology through his writings and lectures. However, his retiring, humble nature was such that his stature was not widely recognized. An example is his course on gonioscopy, given with Ramesh Tripathi and M. Bruce Shields at the annual meeting of the American Academy of Ophthalmology for five years. AJO 1991,112:481

Klein, Salomon, b. (1845- 1937) Austrian ophthalmologist. Klein was born in Miskolcz, Hungary, and received his M.D. in 1870 at the University of Vienna, where he became assistant to Eduard von→Jaeger (1872-1875), lecturer, and professor of ophthalmology. He authored: *Der Augenspiegel und seine Anwendung in der praktischen Medizin*. Wien 1876; *Augenspiegelstudien bei Geisteskranken* Wien 1877; *Lehrbuch der Augenheilkunde* Wien 1879, 2nd ed.1881; *Das Auge und seine Diätetik im gesunde und kranke Zustande* Wiesbaden 1883; *Grundriss der Augenheilkunde für praktische Ärtze und Studirende*. Wien 1886 and with Dr.Sverlin: *Untersuchungen über den Einfluss des Sympathicus auf die Circulation des Augengrundes*. He also authored under the pseudonym *Klein-Behringer*, small non-medical papers which were published in the newspaper *Neue Freie Presse*.1877 Albert.Fischer.BMC.Mitteilungen der Julius-Hirschberg-Gesellschaft, Mitteilungen 2000, 1:301-309.JPW

Bertha A. Klien

Klien Bertha A. (1898-1978) American female ophthalmologist. Professor of ophthalmology at the University of Chicago. Bertha Klien was born in Burgo, Austria, and received the doctor of medicine degree from the University of Vienna in 1925. After internship at the Allgemeines Krankenhaus in Vienna, she became an assistant at the I.Augenklinik of the University of Vienna. In 1928 she became assistant professor of ophthalmology at Northwestern University and subsequently served as associate professor or ophthalmology at Rush Medical College, University of Illinois, and Northwestern University. In 1955 she became associate professor of ophthalmology at the University of Chicago and full professor in 1959. On her retirement she was named emeritus professor of ophthalmology. At various times she served as attending ophthalmologist at Presbyterian Hospital, Wesley Memorial Hospital, and the University of Chicago Medical Center. Klien specialized in correlating the ophthalmoscopic appearance of ocular lesions with their course and histologic findings. She was an outstanding teacher and artist and her scientific exhibits at the American Medical Association annual meetings were awarded gold, silver, and bronze medals. With the late Alex Krill, she provided the first and thus far the only clinical, histologic correlation of fundus flavimaculatus. She became a diplomate of the American Board of Ophthalmology in 1938. She was awarded the Honor Key of the American Academy of Ophthalmology and Otolaryngology in 1957. In 1963 she was president of both the Chicago Ophthalmological Society and the Verhoeff Society. At the time of her death she served on the editorial boards of *Ophthalmologica* and the American Journal Ophthalmology. Earlier she served as a section editor of the *Survey of Ophthalmology* and prepared reviews on the retina and optic nerve for the *Archives of Ophthalmology* in 1960,1961, and 1962. Klien remained scientifically active until her death. She reviewed fundus slides for staff members of the University of Chicago and participated in Journal editorial activities. AJO 1979, 87:431-432

Klügel, Georg Simon (1739-1812) German mathematician and physicist. Klügel was born in Hamburg and studied mathematics under→Kaestner at the University of Göttingen. He defended his thesis in 1763. Later, Klügel, became professor of mathematics and physics at the University of Halle. His most important books were his *Analytische Trigonometrie* Braunschweig 1770 and Mathematisches Wörterbuch (3 vols.) Leipzig 1803-1808 which was used throughout most of the nineteenth century. He also authored: *Analytische Dioptrik* (2 vols.) Leipzig 1778 and translated Priestleys History of Optics: *Geschichte und gegenwärtiger Zustand der Optik* Leipzig 1776. Albert.DSB.

Kluyskens, Jean (1913-) Belgian ophthalmologist, descendant of Jozef Frans Kluyskens (1771-1843) who wrote on many medical subjects including military ophthalmia (1819). Jean Kluyskens obtained his M.D. in Ghent in 1938 and specialized in ophthalmology with Marnix Van →Duyse, Henri →Coppez and Antoine →De Jaeger. He wrote a report on congenital glaucoma for the Belgian Ophthalmological Society (1950) and published interesting papers on the *visual field in neurosis and in hypnosis*.(Verriest)

Kluyskens, Jean François (1771-1843) Belgian ophthalmologist. Kluyskens was born at Alost, near Brussels, Belgium, and received his medical education at Ghent. Kluyskens, after several years of service as a military surgeon in the Austrian Army. He left the Austrian army after the battle near Jemappes (Belgium) and joined the Dutch army. After the occupation of Holland by the French, he left the army and settled in Ghent. He became chief surgeon of the city hospital and, after Belgium was annexed by the Netherlands

(1815), chief surgeon of the Dutch army. In the latter capacity he established hospitals and initiated various public-health programs and improvements in medical education; he was the founder and editor of a medical journal and the author of a number of medical studies. He wrote: *Dissertation sur l'ophthalmie contagieuse qui règne dans quelques bataillons de l'armée des Pays-Bas*. Gand 1819. Albert. v.Duyse. Hirsch.BMC.

Knapp, Arnold (1869-1956) American ophthalmologist of New York. He was born in New York in 1869, the son of the noted Herman Knapp. Graduating in arts from Harvard in 1889 and from the College of Physicians and Surgeons, Columbia University, in 1892, he filled a surgical internship at Roosevelt Hospital and then proceeded to Europe for his initial training in ophthalmology. On his return from abroad he joined his father in practice and consequent duties at the New York Ophthalmic and Aural Institute. This hospital had been established on the lower east side of New York by the elder Knapp in the year that the younger man entered medical school. It continued under Herman Knapp's direction until he resigned for ill health in 1909, and was succeeded by his son. In 1913, two years after Herman Knapp's death, the institute changed its name to the Herman Knapp Memorial Eye Hospital and moved to West 57th Street. It remained here under the direction of Arnold Knapp until its merger with the Institute of Ophthalmology of the Presbyterian Hospital in 1940. In this year Knapp established the Knapp Memorial Foundation, dedicated to teaching and research in ophthalmology. This made possible the excellent contributions of the Knapp Research Laboratory under the guidance of von Sallmann and the Knapp Laboratory of Physiological Optics under Hardy and his successors. The amount of work done by Arnold Knapp was prodigious. He was director of a hospital for more than 30 years, professor of ophthalmology at Columbia for 25 years, editor of the *Archives of Ophthalmology* (founded by his father the year Arnold was born) for 40 years. In the meantime he found time to conduct a large practice, to write more than 200 papers, to publish a classic book*, to indulge his interest in music, literature, and art, and to add to his collection of Chinese bronzes. He was chairman of the Section of Ophthalmology of the American Medical Association in 1925 and chairman of the American Ophthalmological Society in 1931. In 1946 he delivered the Bowman Lecture, entitled, "*The present state of the intracapsular cataract extraction*," the second American to be so honored. Other distinctions included an honorary doctorate in science from Columbia in 1931, the Howe Medal of the American Ophthalmological Society in 1937, and the Leslie Dana Gold Medal of the National Society for the Prevention of Blindness in 1937. Arnold Knapp was profoundly influenced by the era in which he lived and the distinguished men who made it remarkable. He was a year old when von→Graefe died, 20 years of age on the death of →Donders, and in his forties when the careers of Hutchinson and Lister ended. While he was at Harvard, Oliver Wendell Holmes was still living nearby. During his medical course at Columbia great works were pouring from the pens of Bowman, Huxley, von Helmholtz, Brown-Sequard; Virchow, Paget, and Pasteur. He was already a doctor of medicine when the first X-ray picture was taken and was in practice when Gullstrand was receiving the Nobel Prize. He knew Koch, Saemisch, the Pagenstechers, Javal, Parinaud, Holmgren, and, indeed, most of the illustrious doctors of his time. * Knapp, Arnold *Medical Ophthalmology* Philadelphia: P. Blakiston's Son & Co. 1918. AJO 1956,41:1084-1085. JPW

Knapp, August (1873-1943) Australian optician, born Manchester, England, who died Perth, Australia. Apprentice optician, Brisbane (Cert. Brit. Optical Associate 1900). Optician, Perth, 1897-1943. Associate, Royal Photographic Society, Great Britain, 1925; fellow 1930. He wrote: "*A note on the actinic value of light*." Royal Society of Western Australia. Journal., 11 (1924-25), 21-23.

Knapp, Hermann (1832-1911) American ophthalmologist of German origin. Knapp was professor of ophthalmology at the College of Physicians and Surgeons of New York. He received his M.D. at Giessen 1854. He then studied under various masters of ophthalmology in London, Utrecht, Munich, Würzburg, Paris, Berlin, Vienna and Leipzig. He qualified as Privat-Dozent (Lecturer) in Heidelberg where he founded the Eye Clinic in 1862 and became professor of ophthalmology in 1864. In1868 he paid a visit to New York and emigrated despite protests from students and colleagues in Heidelberg. He founded the New York Ophthalmic and Aural Institute which rapidly became a major center for treatment and teaching. He then founded a large private and hospital practice which he

retained until he was forced by age to resign. Knapp became professor at the New York University Medical College from 1882 to 1888 and a similar position at the College of Physicians and Surgeons from 1888 to 1903.Knapp founded with Moos, the *Archives of Ophthalmology and Otology*, the counterpart of the *(Knappsche) Archiv für Augen-und Ohrenheilkunde* which a few years later, under Julius Hirschberg split into *Archiv für Augenheilkunde* and *Archiv für Ohrenheilkunde*. Knapp wrote:"*Die Krümmung der Hornhaut des menschlichen Auges*." Heidelberg1859. "*Die intraocularen Geschwülste; nach eigenen klinische Beobachtungen und anatomischen Untersuchungen*." Karlsruhe 1868. "*Sechster Jahresbericht über die Augenklinik des Dr. H. Knapp ...* " Heidelberg 1868. "*Die Intraoculare Geschwülste*" Karlsruhe 1868 " *A treatise on intraocular tumors; from original clinical observations and anatomical investigations*." New York 1869. (translation of "*Die intraocularen Geschwülste* "); *"Cocaine and its use in ophthalmic and general surgery*." New York 1885. *First monograph* on cocaine and the first monograph on *local* anesthesia; and "*Über die Vorzüge des binoculare Augenspiegels"* Heidelberger Jahrbücher 1863 (see→Giraud-Teulon). The Ophthalmoscope, 1911,p.545-547. Albert.American Encyclopedia of Ophthalmology, Vol.9, p. 6850-6859[with extended bibliography].Hirsch.

Knies, Max (1851-1917) German ophthalmologist. Knies was born at Kassel, and received his M.D. at Heidelberg in 1874. He pursued his ophthalmologic study under →Kühne and →Becker in Heidelberg, →Saemisch in Bonn, and Johann →Horner in Zürich, before settling in Freiburg as ophthalmologist (1886); Knies became professor at the University of Freiburg in 1888. He is remembered for his research on glaucoma. Knies wrote: *Grundriss der Augenheilkunde* Wiesbaden 1888; *Die Beziehungen des Sehorgans und seiner Erkrankungen zu den übrigen Krankheiten des Körpers und seine Organe* Wiesbaden 1893 American edition: *Relations of diseases of the eye to general diseases* edited by Henry D. Noyes. New York 1895; *Die verschieden Formen von frischen und alten Hornhauttrübungen* (in H.→Magnus *Augenärztliche Unterrichtstafeln*, Issue 6) Breslau 1894 and *Die gonorrhöischen Bindehauterkrankungen und deren Behandlung* (in *Sammlung Abh. Augenheilkunde* Issue 5) Haale/S. 1896. Albert. Fischer.BMC

Knighton, Willis Sackett (1896-1964) American ophthalmologist. He received the M.D. degree from Cornell University Medical School in 1924, interned at the New York Eye and Ear Infirmary, 1925-1927, and practiced in New York City from 1927 until 1962. He was honorary surgeon, New York Eye and Ear Infirmary and associate clinical professor, College of Physicians and Surgeons, Columbia University. Knighton served in the Army Medical Corps during the first world war. He was a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, the New York Ophthalmological Society, a fellow of the American College of Surgeons and the New York Academy of Medicine. He was a member of the Board of Directors, National Society for the Prevention of Blindness, and served as chairman of that organization's Glaucoma Committee from 1948-1961. He was author of a text, *Outline of Refraction*, and of numerous scientific articles on glaucoma and other eye diseases, as well as popular material on eye health. AJO 1964,58:507-508

Choong-Je Ko

Ko, Choong-Je (1926-1991) Korean Ophthalmologist, Professor Emeritus of Hanyang University. He graduated from the School of Medicine, Seoul National University in 1952 and received training in Ophthalmology at the same university. He conducted research on neuro-ophthalmology at Minnesota University Medical School and the Mayo Clinic in 1959. He was granted the Degree of Doctor of Medical Sciences from Seoul National University in 1960, and he was appointed as Assistant Professor at Seoul National University. In 1963, he was appointed the Chairman of the Department of Ophthalmology at Seoul Red Cross Hospital in 1963. And in 1964, he reported 64 cases of clinically successful keratoplasty for the first time in Korea. He was then promoted to the Professor and the Chairman of the Department of Ophthalmology at Hanyang University in 1971. He served the Korean Ophthalmological Society as the Chairman of the Executive Director of Board(1978- 1980), the President(1980—1981) and an Advisor(1981).(SM)

Ko, Lay (1934-) Myanmar Ophthalmologist, President of the Myanmar Medical Association, Mandalay (1993). He graduated from Medical College, Rangoon in 1957, with M.B., B.S. degree. Subsequently he studied at the Institute of Ophthalmology, London (DO, 1961), at American College of Surgeons (FAGS, 1979), at the Royal College

of Ophthalmologists, London (M.R.C.Ophth. 1989), at the Royal College of Ophthalmologists, London (F.R.C.Ophth. 1990) and at the International College of Surgeons, U.S.A. (F.I.C.S. (Ophth), 1997). He holds, besides the present position as above, Vice-President of the Myanmar Medical Association (Central) (1996-), Consultant Ophthalmic Surgeon, and Examiner to postgraduate Master of Medical Science (Ophthalmology) since 1981. He served as Consultant Ophthalmic Surgeon and Lecturer in Ophthalmology, Institute of Medicine, Mandalay (1982-1992). He is Professor of Ophthalmology of the Institute (1992-1994). He has been WHO fellow in Trachoma Control and serves as the Regional Trachoma Officer and Consultant Ophthalmologist for the Prevention of Blindness and Trachoma Control Project, in Meiktila. His many publications embrace *Causes of Blindness in Burma*. Union of Burma J. Life Sci. (1968) 1: 85-87, *Trachoma Control in Burma*, Revue Internationale du Trachome, (1976) 5: 119-156, *Differences in the severity of physical signs in the right and left eyes of patients with trachoma in Syria and Burma*. Bull. World Health Org. (1972) 48: 177-183 and *Prevention of Blindness and Cataract problems in Myanmar*, The vision Care, Proc. Hoya Vision Care First International Conference: 200-208, 1998. (331, 83rd Street, Between 3lst-32nd Street, Mandalay, Myanmar, phone: + 95-2-22232) (SM)

Ko, Liang-Shi (1927-) Taiwanese Ophthalmologist, a graduate of National Taiwan University in 1950. He studied Ophthalmology under Prof. YANG Y.F. and was promoted to Associate Professor in 1963 and to Professor in 1974 and he served as the Chairman of the Department of Ophthalmology during 1983-1989. In 1961, he studied at Juntendo University in Tokyo and in 1967-1968 he studied at the Institute of Ophthalmology in London. His main interest was in refraction, contact lens and neuro-ophthalmology, and his publications include "Pesticides and myopia, a working hypothesis, Acta Ophthalmol. Suppl. 185,66:145, 1988, and "fluid exchange under scleral contact lenses in relation to wearing time. Br. J. Ophthalmol. 54, 486, 1971. He retired from the University in 1993 and entitled Professor Emeritus of the University. In recognition of his contribution to the Asia-Pacific Academy of Ophthalmology, the Academy conferred on him the Distinguished Service Award in 1985.(SM)

Ryousai Ko

Ko, Ryousai (1799-1846) Japanese Ophthalmologist in the Edo Era. He learned Dutch and Japanese Medicine and was an expert in Couching. He studied the practice of Dutch Medicine from Philipp Franz von SIEBOLD in Nagasaki during 1823-1829. He performed optic iridectomy of Joseph→Beer, using Beer's knife and iris hook. He practiced in Osaka and trained many Ophthalmologists who contributed to the evolution of modern Ophthalmology in Japan. (SM)

Koeller, Ferdinand (1834-1915) American ophthalmologist, the first physician in Pittsburgh to make a speciality of diseases of the eye. Born in Feldbach, Austria, he received his medical degree at the University of Graz in 1857. He practised then in lower Austria until 1859, when he began to serve in a general medical capacity in the war with Italy. After the war he was for a time Assistant Professor at the University of Graz.In 1865 he migrated to America, settling in Pittsburgh as an ophthalmologist. He soon had a large practice and a wide reputation. American Encyclopedia of Ophthalmology, Vol.9, p. 6865-6866

Kogure, Fumio (1930-) Japanese Ophthalmologist, Professor Emeritus of Dokkyo Medical University. Husband of KOGURE Mitsuko. He was born the son of an eminent Ophthalmologist in Tokyo and graduated from Tokyo Medical University in 1956, studied Ophthalmology in the Graduate School of the University under Prof. KUWAHARA Yasuharu and completed the course in 1962. He received his Doctor of Medical Sciences the same year by submitting a thesis (*Enzymochemical studies on the transplantation corneal heterograft. Report I*. J. Jpn. Ophthalmol. Soc. 64: 1391, 1960; *Report II*. ibid. 65: 1261, 1961; *Report III*. ibid. 66: 155, 1962; *Report IV*. ibid. 66:238, 1962). The series of these works on the cornea were recognized by the Japanese Ophthalmological Society (JOS) and he received the Shimizu Prize of the Society in 1963. He was promoted the Lecturer of the University in 1964 and extended his study for one year in 1967 at the Department of Ophthalmology of University of Strasbourg (under Prof. Jean→Nordmann). He was appointed Professor of Ophthalmology of Dokkyo University in 1978 and was then promoted to be the Chairman of the Department of Ophthalmology in 1990 and

served until his retirement in 1996. He is one of the pioneers of ocular microsurgery in Japan and he published many papers and some examples are as follows: "*Studies on ocular photoelectric plethysmogram. The changes of dog's ocular and auricular blood flow by occlusion and releasing of vena cava superior*. Jpn. J. Ophthalmol. 15: 109, 1971", "*Senile Cataract: survey on cataract patients undergoing cataract surgery*". *Dev. Ophthalmol*. 17: 38, Karger Basel, 1989 and "*Survey of visually handicapped persons in Japan*. Arch. Publ. Health 51: 62, 1993". His professional activities have been extensive and positions he has held are Councillor of the JOS (1975-1997), President of the Japanese Society of Ophthalmic Surgeons (1990-), President of the Japanese Society of Ocular Allergy (1992-), of the Japanese Society of Community and Prevention Ophthalmology (1992-) and Councillor of many National Societies. He is also Executive Councillor of the Japan National Society for the Prevention of Blindness (1993-) and attends the World Assembly of the International Agency for Prevention of Blindness as Japan's representative. He is also a member of the French Ophthalmological Society (1967-) and Councillor of the International Society of Geographical and Epidemiology (1982-1998). He is an Honorary Member of the JOS. He has devoted himself to the International Exchange among Asian Countries, and he has served as the Secretary General for the Japan-Korea Joint Meeting (1982-), Japan-Philippines Joint Meeting (1981-), Japan-Thailand Joint Meeting (1953-) and the Japan-Taiwan Joint Meeting (1994-). Through these activities, he made many friends in South-East Asian Countries, and travelled to Laos, Cambodia, Viet Nam and Thailand to donate intraocular lenses to these countries. He also organized the WHO Intercountry workshop for the prevention of Blindness in 1983 and 1997, for the training of eye-care personnel in the Western Pacific Countries. In recognition of his meritorious service, he received the Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology in 1997 and the Distinguished Service Award from the International Agency for the Prevention of Blindness in 1999.(Japan National Society for the Prevention of Blindness, Trio-Tower North, 4F, 261 Yamabuki-cho, Sinjyuku-ku, Tokyo, 162-0801, Japan. phone: +81-3-5261-1444, fax: +81-3-5261-1321)(SM)

Kogure, Mitsuko (1933-) Japanese female Ophthalmologist, Professor Emeritus of Tokyo Women's Medical University. Wife of KOGURE Fumio. She graduated from Tokyo Women's Medical University in 1957, studied Ophthalmology in the Postgraduate School of Medicine of the University under Prof.→KATO Kinkichi and received her Doctor of Medical Sciences in 1962 (thesis: *Serological studies of experimental uveitis. No.1*. J. Jpn. Ophthalmol. Soc. 66: 207, 1962; *No.2*. ibid. 66: 215, 1962). She was promoted to Assistant Professor in 1974 and to Professor in 1986, and served as the Head of the Department of Ophthalmology from 1992 to retirement in 1998. During her tenure, she has held many key positions of the University and of professional Societies, and they are Board of Trustees of the University Alumni Association (1976-1995), Board of Trustees of the University (1997-1998), Japanese Association of Women Physicians (1985-1991), Vice-Director of the University Hospital (1997-1998), Councillor of the Japanese Ophthalmological Society (1993-1998), of the Japanese Society of Allergy (1972-1995), and Board of Trustees of the Japanese Association of Ocular Inflammation (1998-). Her research interest has been uveitis and she worked as a member of the Behcet's Disease Project of the Ministry of Health and Welfare (1972-1995). Her publications embrace "*Complements in Behcet's disease*. J. Jpn. Ophthalmol. Soc. 75:1260, 1971", "*Electron microscopic studies of the iris of patients with Behcet's disease"*. ibid. 78: 386, 1974 and "*T-lymphocyte subsets in the peripheral blood of Behcet's disease"*, Jpn. J. Clin. Ophthalmol. 39:,121, 1985.(SM)

Koide, Ryouhei (1946-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Show University. He graduated from Showa University in 1973 and studied at the Postgraduate School of the University at the Department of Pharmacology under Prof.→KAMIJO Kazuya. He completed the course in 1977 and received his Doctor of Medical Sciences (thesis: *Multiplicity and enzymatic properties of MAO in bovine brain, liver and human placenta*. Journal of the Showa Medical Association. 37: 545 1977). He then started Ophthalmology training at the University under Prof. FUKADO Yoshinao in 1978, and was promoted to Lecturer of Ophthalmology in 1980. He was further promoted to Assistant Professor in 1989 and the Professor as

above since 1992. His interested is in ocular traumatology, cataract, ocular surgery etc. and some examples of his many publications are "*Analysis of ocular motility disturbance in blowout fracture, using MRI motion pictures"*. Jpn. J. Clin. Ophthalmol. 46: 251, 1992" and "*Prognosis of orbital basis fracture, studies of 200 cases"*. Jpn. J. Clin. Ophthalmol. 49:1997. He serves as a Councillor to the Japanese Ophthalmological Society, Japanese Society of Cataract Research, Japanese Society of Traumatology and Japanese Society of Ocular Pharmacology. He is also a member of the Association for Research in Vision and Ophthalmology (ARVO).(Department of Ophthalmology, Showa University, 1-5-8, Hatanodai, Shinagawa-ku, Tokyo 142-8666, Japan. phone: +81-3-3784-8553, fax: +81-3-3784-5048, e-mail: koide@med.showa-u.ac.jp)(SM)

Koku Kojima

Kojima, Koku (1905-1981) Japanese Ophthalmologist, Professor Emeritus of Nagoya University. He graduated from Nagoya University in 1930, studied Ophthalmology under Prof. CH.→OGUCHI, and received his Doctor of Medical Science from Nagoya University in 1934. He was appointed Professor and Chairman of the Department of Ophthalmology of Nagoya University in 1950 and stayed in this position until his retirement in 1969. During his tenure he served as the Director of the University Hospital in 1965-68, as the President of the 71st Congress of the Japanese Ophthalmological Society in 1967. He carried out extensive studies of Diabetic Retinopathy and the results were summarized in his special lecture " Studies of Diabetic Retinopathy" at the 70th Congress of the Society in 1966. After his retirement from Nagoya University, he received the title Professor Emeritus of the University and was invited to be Professor of Ophthalmology of the Fujita Health University. In recognition of his distinguished services, the Government conferred on him the Second Order of the Sacred Treasures in 1976.(SM)

Koller, Carl (1857-1944) American ophthalmologist born in Bohemia. He studied medicine in Vienna where he presented his thesis in 1882. He then worked as an assistant in general medicine and also at the Laboratory of general and experimental Pathology of Prof. Salomon Stricker. In summer 1884, Sigmund Freud asked him to take part in the experiments of the effects of cocaine on the nervous system. Having experienced its effects on the nerve terminals, Koller prepared a cocaine solution and tested its effect on the eye of rabbits and dogs. He published the effects of cocaine solution as surface anaesthesia of the eye in 1884 (*Vorläufige Mittheilung über locale Anästhesirung am Auge.* Ber. Ophthalmol. Ges. Heidelberg 16: 60-63, 1884). Thus, Koller is the *pioneer* of Ophthalmic anesthesia, and opened a new era in Ophthalmic Surgery. Sigmund Freud recognized Koller's priority in his paper of 1885: Freud, Sigmund: *Beitrag zur Kenntnis der Cocawirkung.* Wiener Medizinsche Wochenschrift 35, 1885, 129-133 . Koller left Vienna in 1885, and studied Ophthalmology in Utrecht under Prof. Snellen for 2 years. He then moved to the United States and settled in New York. He wrote the story of the discovery of cocain in 1928: Koller, Karl: *Historische Notiz, über die ersten Anfänge der Lokalen Anaesthesie.* Wiener Medizinische Wochenschrift 78, 1928 , 601-602. (BJO 1944; 28: 316 & Robert→Heitz) SM

Jujiro Komoto

Komoto, Jujiro (1859-1938) The first Professor of Ophthalmology in Japan, and Professor Emeritus of Tokyo Imperial University. He graduated from Tokyo University in 1883, and studied Surgery under J.→SCRIBA. When Dr. K.→UME, the Head of the Eye Clinic died in 1885, the Government was urgently in need of an Ophthalmology Professor and requested Dr. Komoto to study Ophthalmology in Germany. He left Tokyo in 1886 and went to Freiburg (W.→Manz), Wuerzburg (C.→Hess), Berlin (C. →Schweigger. J.→Hirschberg), Vienna and also to London, and he came home in 1889. In June of that year he was appointed the Professor of Ophthalmology of the Imperial University (There was only one University in Japan). Soon after his appointment, the University established departments, and he was made the Chairman of the Department of Ophthalmology. The University acquired the authority of granting Doctor Degrees for those with outstanding scientific contributions and Prof. KOMOTO was the first to receive Doctor of Medical Sciences in 1891. Prof. KOMOTO taught Ophthalmology at the University for the University graduates, but he also established a One-Year Postgraduate Course and opened it to graduates of other medical schools. This postgraduate course lasted from 1888 to 1924, and more than several hundred Ophthalmologists studied here and dispersed throughout the country. Prof. KOMOTO also had his private Komoto Eye Hospital in Tokyo, and he

accepted many assistants at the Hospital. Consequently, ophthalmologists of early times in Japan studied almost without exception under Prof. Komoto and the number of his students exceeded 1,000. Therefore, Prof. KOMOTO is regarded as the father of Ophthalmology in Japan. In 1896, Drs. Y.→OHNISHI, G.→KAWAKAMI and T.→SUDA and 14 other Ophthalmologist conferred and came to a conclusion that the Ophthalmological Society similar to that of Heidelberg was needed for the development of this profession in Japan. They then persuaded Prof. Komoto to become the President of the new Society, thus, the First Congress of the Japanese Ophthalmological Society was held in February 1897, and the Society was created with 550 founding members . Prof. KOMOTO stayed as the President of the Society until 1925. He has many publications both in the Japanese and German Languages. KOMOTO *Textbook of Ophthalmology* was perhaps the first most comprehensive textbook and was read widely throughout the Country. Since trachoma was the disease with serious attention from an hygienic point of view, he organized a teaching course for the diagnosis and treatment of this disease. He taught not only in Tokyo, but traveled throughout the Country speaking about this blinding disease. Prof. KOMOTO was a good inventor and he developed in 1891 the *Komoto Ophthalmoscope* which was very convenient and was used until the 1960s, he also made instruments for scotometry, and many surgical instruments such as fixation forceps and the *Komoto speculum*. He was a great surgeon and was very good at teaching. In 1892, Prof. J. Hirschberg visited Japan and Prof. J. KOMOTO and Dr. T.→INOUYE were the gracious hosts; Prof. J. Hirschberg wrote his experience in his book " *Um die Erde*". In 1922, Prof. Ernst→Fuchs visited Japan and Prof. KOMOTO was the gracious host and Fuchs was impressed by the warm welcome at various cities in Japan. Toward the end of 1921, a letter came to Prof. KOMOTO from Prof. J. HIRSCHBERG, asking Komoto if he can purchase the voluminous Library that Hirschberg collected to write the *History of Ophthalmology*. Hirschberg was having a hard time after the World War I and wanted to sell his treasure to his good friend KOMOTO for 40,000 yen. Prof. KOMOTO decided to buy his Library and remitted money in 4 parts: unfortunately Hirschberg passed away when the last payment arrived. Therefore Prof. KOMOTO sent the money by telegram and completed the payment. Prof. S. KAGOSHIMA was in Europe and he met Prof. HIRSCHBERG and packed the voluminous Library and shipped it from Hamburg. The Great Earthquake that occurred in September 1923 destroying a large part of the city of Tokyo, but the arrival of Hirschberg Library was delayed and the Library survived the Great Earthquake. The Library was classified in order and a New Catalogue was completed in 1935. The Library is now named "KOMOTO LIBRARY" and is maintained by the Central Library of Tokyo University. (The detailed story of the transfer of this Hirschberg Library to Tokyo was described by KIRISAWA Naganori: "*The Komoto Library (formerly the Hirschberg Library),* Jpn. J. Ophthalmol. 21: 528, 1977". Prof. KOMOTO stayed as Professor of Tokyo University for 33 years, he retired in 1922 and was given the title Professor Emeritus of Tokyo University. He then served as the President of the Tokyo Ophthalmologists Association. In recognition of his great service, the Government conferred upon him the First Order of the Sacred Treasures.(SM)

Komoto, Michiji (1932-) Japanese Ophthalmologist, Professor Emeritus of Toho University. He graduated from Keio University in 1958, studied Ophthalmology at the University under Prof. UEMURA Misao and Prof. KUWAHARA Yasuharu. He submitted a thesis (*Studies of pentose oxidative phosphorylation in the cornea, No. 1*. J. Jpn. Ophthalmol. Soc. 69: 771, 1965; *No. 2*. ibid. 70: 124, 1966) to Keio University and received his Doctor of Medical Sciences in 1966. He served as the Professor and Chairman of the Department of Ophthalmology of Toho University from 1982 to retirement in 1997. He served as a Councillor to the Japanese Ophthalmological Society (JOS), Japanese Society for Cataract Research and as Secretary to the Japan Lens Research Association. He worked extensively on the lens, aqueous humor dynamics, biochemistry of the eye, and he delivered a special lecture "*Studies of aqueous humor dynamics*" at 59th Congress of the Toho Medical Association (1972) and "*Aging changes of the crystalline lens*" at the 8th Congress of Kanto Ophthalmological Society (1991). His publications include "*Studies of aqueous humor dynamics – effects of drugs*. Toho Journal of Medicine: 20: 13, 1973" and "*Cataract and acid-base equilibrium in the aqueous humor*. J. Jpn. Ophthalmol. Soc. 77: 165, 1973".(SM)

Kondo, Takehisa (1938-) Japanese Ophthalmologist, Head of the Department of Ophthalmology, Kobe Central City Hospital. He graduated from Tokyo Medical University in 1963, and studied Ophthalmology at Kyoto University under Prof. ASAYAMA Ryoji, and received his Doctor of Medicine in 1975 (thesis: *Morphological studies of regeneration of the corneal nerves*. J. Jpn. Ophthalmol. Soc. No. 1. 76: 1176, 1972; No.2. ibid. 77:66, 1973, No. 3. ibid. 77:428, 1973). He has been in the present position since 1975, and conjointly serves as a Visiting Clinical Professor to Kyoto University (1977-) and Kobe University (1998-). He works on glaucoma and aqueous humor circulation, and is a Councillor of the Japan Glaucoma Society and is the President of the 11th Congress of the Society. Some examples of his publications are "*Measurement method of the anterior chamber volume by image analysis*. Br. J. Ophthalmol.70: 668,1986", "*A method of measuring pupil-blocking force I the human eye*. v. Graefe's Arch. Clin. exp. Ophthalmol. 225: 361, 1987" and "*Ultrasound biomicroscopic findings in humans with shallow anterior chamber and increased intraocular pressure after the prone provocation test.* Am. J. Ophthalmol. 124: 632, 1997". (Department of Ophthalmology, Kobe City Central Hospital. Minato-shima Naka-machi 4-6, Chuo-ku, Kobe, 650-0046, Japan. phone: +81-7-8302-4321, e-mail: rf3t@asahi-net.or.jp)(SM)

Kondoh, Hisato (1949-) Japanese Molecular Biologist, Professor of Molecular and Developmental Biology, Director of the Institute for Molecular and Cellular Biology of Osaka University. He graduated from Kyoto University in 1971 with B.Sc. and studied in the Postgraduate School of Science of the University under Prof. OZEKI Haruo. He submitted the thesis (*Molecular genetics of flagellar morphogenesis in E. coli*) and received his Ph.D. in 1976. During 1976 and 1978, he conducted research as a Postdoctoral Fellow at University of Wisconsin-Madison (U.S.A.) under Prof.Julius ADLER (subject: *Genetic and biochemical mechanisms of bacterial chemotaxis*). He was then appointed the Assistant Professor to Prof. OKADADA Tokindo at Kyoto University and studied the mechanism of crystalline gene regulation. He served as the Professor of Molecular and Developmental Biology of Nagoya University (1988-1993). Since 1992 he has been the Professor of Osaka University and serves as the Director of the Institute as above since 1998. His research in the field of Vision Science was initiated by the investigation of the phenomenon of transdifferentiation of retinal tissue into Lens (*Transdifferentiation of putative neuronal cells of neural retina into lens: a demonstration by chick-quail chimeric cultures*. Roux's Arch. Dev. Bio. 192:256, 1983). Subsequently, he succeeded in the cloning of chicken delta crystalline gene with his colleagues. Utilizing the cloned crystalline gene, he started his major research on the mechanism of tissue-specific gene regulation (*Tissue specific expression of a cloned chick d-crystalline gene in mouse cells.* Nature 301:440, 1983). This is the *first* report published almost at the same time showing that cloned genes are regulated correctly with their own specificities in gene-transferred cells. Taking advantage of these experimental systems, he identified the enhancer located in the third intron which defines the lens-specificity of the delta-crystalline gene expression (*Lens-specific enhancer in the third intron regulates expression of the chicken d-crystalline gene*. Genes Dev. 1: 818, 1987). He further identified transcription factors responsible for differentiation of lens cells, i.e. a group of highly similar proteins, SOX1, SOX2 and SOX3. He confirmed that SOX2/3 expression is induced by contact of retina primordium to the ectoderm, and this expression of SOX2/3 then activates crystalline expression and lens differentiation (*Involvement of SOX 1, 2 and 3 in the early and subsequent molecular events of lens induction*. Development 125: 1521, 1998). On the basis of these discoveries, he is further promoting research projects to elucidate the molecular mechanism of lens-specific gene regulation and of lens cell differentiation (*Transcription factors for lens development assessed in vivo*. Curr. Opin. Genet. Dev. 9: 301, 1999) (Institute for Molecular and Cellular Biology, Osaka University, 1-3 Yamadaoka, Suita, Osaka 565-0871, Japan. phone: +81-6-6879-7963, fax: +81-6-6877-1738, e-mail: j61056@center.osaka-u.ac.jp)(SM)

Königshöfer, Oskar (1852-1911) German ophthalmologist, founder of the "Charlotten Heilanstalt für Augenkranke, " at Stuttgart, and for many years editor of *Die Ophthalmologische* Klinik. He was Director of the Charlotten Heilanstalt for twenty eight years, was for a long time Professor of Veterinary Ophthalmology at Stuttgart.American Encyclopedia of Ophthalmology, Vol.9, p. 6866. The Ophthalmoscope, 1911,p.466.

Königstein, Leopold (1850-1924) Austrian ophthalmologist. Königstein was born at Bzenec, Czechoslovakia. He received his M.D. in 1873 at the University of Vienna, where he studied under →Arlt, →Jaeger, →Stellwag, and →Brücke. Königstein was lecturer from 1881 to 1900 and became professor of ophthalmology in 1900. His writings deal with anatomical, physiological and clinical aspects of ophthalmology. Königstein was particularly interested in the physiology and pathology of the lens. He wrote: *Die Behandlung der häufigsten und wichtigsten Augenkrankheiten*. (4 small volumes) Wien 1889-1893.*Die Anomalien der der Refraktion und Accommodation* Wien 1883, 2nd.edition 1895 in Russian; *Praktische Anleitung zum Gebrauche des Augenspiegels* Wien 1889; Albert.Fischer.

Reisaku Kono

Kono, Reisaku (1915-1985) Japanese Virologist, Emeritus Member of the National Institute of Health Japan (N.I.H.Japan), Grandson of KONO Tasuku. He discovered the new Enterovirus Type 70 that causes Acute Hemorrhagic Conjunctivitis. He graduated from Tokyo University in 1940 and worked at the Institute of Infectious Diseases of Tokyo University until 1952. From July of that year to September 1953, he studied at the Johns Hopkins University, as a Fellow of Rockefeller Institute, and received the degree, Master of Public Health (M.P.H.). He was invited in 1958 to be the Professor of Kyoto University, Director of the Immunological Department of the Institute of Virus Research: during his tenure he served as the Director of the Institute (1961-1963). He left the University in 1963 to take the position of the Director, Central Virus Diagnostic Laboratories of the N.I.H. Japan and served until retirement in 1981. He served as the key person of many important projects or committees during his tenure. They were Short-term Consultant to the West Pacific Regional Office of WHO (1966), Short-term Consultant of the South-East Asia Regional Office of WHO (1974), Chairman of the SMON Research Committee of the Ministry of Health and Welfare, Member (1971-1976) and Chairman (1977-1981) of the Japan-US Cooperative Science Program Panel of Viral Diseases, Chairman of SMON Research Project of the Ministry of Health and Welfare (1972-1974), Chairman of Pathogen Division of the Project (1974-1979) and Consultant to the Project (1980-1985). He also served as the Chairman of the Conference on Clinical Potentials of Interferons in Viral Diseases and Malignant Tumors in 1980. Among many professional activities, he served as the President of the Japanese Society of Virology (1970), Executive Director of the Society (1971-1975), President of the Japanese Society of Clinical Virology (1963), Executive Director of the Society (1964-1982) and the Councillor of the Japanese Society of Infectious Diseases (1963-1984). He discovered new Enterovirus Type 70 as being the cause of Acute Hemorrhagic Conjunctivitis in 1972 (Pandemic of new type of conjunctivitis. Lancet 1: 1191, 1972, and The etiologic agent of pandemic acute haemorrhagic conjunctivitis. Bull. W.H.O.49: 341, 1973). He was a member of American Society of Microbiology (1978-1984). In recognition of his outstanding contributions, the Noguchi Hideyo Foundation granted him the 21st Noguchi Medical Award in 1977. After retirement from the National Institute, he served as the Professor at Saitama Medical College until his death.(SM)

Tasuku Kono

Kono, Tasuku (1855-1932) Japanese Ophthalmologist, a graduate of Tokyo University in 1881, studied Ophthalmology from I.→INOUYE, T. SUDA, J.→SCRIBA and K.UME, and he was appointed Assistant Professor of Tokyo University in 1883 and worked as Chairman of the Eye Clinic of Tokyo University until 1889. Thereafter he was made Chairman of the Eye Clinic of the Second Hospital of Tokyo University and was promoted to be Professor of Ophthalmology in 1902. He retired from the University in 1905 and practiced in Tokyo. He was elected to be the first President of Tokyo Ophthalmologist's Association in 1914. Kohno's *Textbook of Ophthalmology* was widely used in the early period of modern Ophthalmology in Japan.(SM)

Konyama, Kazuichi (1928-) Japanese Ophthalmologist, Member of the WHO Prevention of Blindness Programmes Advisory Group, and Expert Panel for the Control of Trachoma, Associate Professor of Ophthalmology of Juntendo University, Tokyo and Visiting Professor to the Department of Ophthalmology, Ramathibodi Hospital, Mahidol University, Bangkok. He graduated from the Faculty of Medicine and Siriraj Hospital of Mahidol University in 1955 with a MD degree, and studied Ophthalmology at Juntendo University under Prof. SATO Tsutomu and received his Doctor of Medical Sciences in 1960. He extended his study on Public Health at the School of Hygiene and Public Health

of Johns Hopkins University and received his Master Degree in 1982. He has a National License to practice Medicine both in Japan and Thailand. He has made a brilliant career in promotion of the Blindness Prevention Programmes of WHO and also on bilateral co-operative basis of Countries, and he has covered all Asian and the Western Pacific Countries in his activities in the area of blindness prevention and eye care system development. The works he has been engaged on are Colombo Plan Expert of JICA(Jpn. Government) to Buriram Province, Thailand (1966-1969), to Mahidol University (1969-1974), Advisor to the Ministry of Public Health of Thailand for the preparation of National programmes for the Prevention of Blindness and Control of Visual Impairment (PBCVI) (1978-1979), and continues to serve as a senior adviser on the Central Co-ordination Council to the national programmes. He also served as the short-term Consultant WHO/SEARO to assess for the first time the Indian National Plan of PBCVI (1978-1979) with similar missions to Bangladesh (1979), to Member States (WHO) of America, the Western Pacific and the Southeast Asia (1980-1981), Consultant to the National Rehabilitation Centre Japan (1979-1983), and served as a Staff Member of WHO Headquarters (1981-1988) in the Programmes for the Prevention of Blindness. In this period he promoted blindness prevention based on a Primary Health Care Strategy and Primary Eye Care approach. Assisted many Member States in the two Regions, launching national plans for the prevention of blindness and eye health promotion. Currently, besides his teaching duty at Juntendo and Mahidol University, he works as short-term Consultant and Advisor for the Governmental Programmes of the PBCVI in the WHO Regions of the Southeast Asia and the Western Pacific. He covers Thailand, China, Korea, Philippines, Malaysia, Viet Nam, Laos, Cambodia, the South Pacific Islands and Mongolia. He has organised many courses for Project Leaders of PBCVI in conjunction with WHO, the Japan National Society for the Prevention of Blindness and the Lions International Sight First project. In recognition of the outstanding success of his devoted service, he has received many Awards, e.g. Rear Admiral Medal from the Government of Thailand (1978), Ohyama Health Award (1978), Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology (1981), The Plate Award from the International Agency for Prevention of Blindness (1994), The Jewelled Badge from the Royal Society for the Welfare for Visually Handicapped, Thailand (1997), The Plate Award, Ministry of Health, Thailand(1997), The Red Star Badge of the Red Cross of Viet Nam (1997) and The International Prevention of Blindness Award from the American Academy of Ophthalmology (1997). (Department of Ophthalmology, Juntendo University, 3-1-3 Hongo, Bunkyo-ku, Tokyo 113-0033, phone:+81-3-5802-1092, fax: +81-3-3817-0260, e-mail: juntenop@iris.dti.ne.jp)(SM)

Koo, Bon Sool (1925-) Korean Ophthalmologist, Professor Emeritus of Choong Ang University, Seoul, and President of the Korea Foundation for Prevention of Blindness. He graduated from Seoul National University in 1948 and received Ophthalmology training at the University. He also worked at the Letterman Army General Hospital San Francisco, U.S.A. in 1956. He was appointed the Professor of Ophthalmology of the Catholic Medical College Seoul in 1967 and then from 1971 to 1990 as the Professor of Ophthalmology of Choong Ang University. He continued to serve as the Professor of Ophthalmology of Inha University Hospital and since 1992 he is the Director of Ophthalmology Department of Sung-Ae Hospital Seoul. His main interest has been in Eye Pathology and Public Health Ophthalmology. He organized many Seminars and Workshops in Korea since 1963 on the Eye Care of the Public, Eye Care for school children, for elderly and for low vision. He worked as WHO consultant for many years. He served as the President of the Korean Ophthalmological Society in 1972 and also of the First Korea-Japan Joint Meeting of Ophthalmology in 1982. Since 1997 he has served as the President of Korea Foundation for Prevention of Blindness. He is a recipient of many awards, e.g. National merit of Civic Service (1977) and Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology. He delivered an honored lecture, i.e. Holmes Lecture of the Academy in 1989. His many articles include " *Behcet's disease – Ocular pathology*. Survey Ophthalmol.12: 324, 1967" and "*Survey of causes of blindness in Korea*. J. Korea Ophthalmol. Soc. 14:86, 1973". (Department of Ophthalmology, Sung Ae Hospital, 451-5 Sinkil 1-Don, Yongdungpo-Ku, Seoul, Korea 150-051, Phone: 82-2-840-7251, Fax: 82-2-840-7252, e-mail: eyecare@thrunet.com)(SM)

Kopff, Albert (? - 1908) French ophthalmologist.He was formerly director of the eye clinic under →Xavier Galezowski and a foundation member of the Paris Ophthalmological Society. He was ophthalmologist at the St.Joseph hospital in Paris.

Kortum, Karl Georg Theodor (1765-1847) German ophthalmologist born in Dortmund, Westfalia, Germany. Kortum received his M.D. in 1785 at Göttingen with the thesis *Dissertationem inauguralem de apoplexia nervosapublice tuebitur auctor C.G.T.K* Goettingae 1785 , and served as district physician at Stolberg, near Aachen, for most of his life. He wrote a number of articles and books on general surgical and medical topics, and one on ophthalmology: *Medicinisch-chirurgisches Handbuch der Augenkrankheiten*.(2 vols.) Lemgo 1791-1793.*Abhandlung von den Scrofeln* (2 vols.) 1793. *Handbuch der praktischen Arztneiwissenschaft* Göttingen 1796; *De apoplexia Nervosa* in C.F. Ludwig *Scriptores Neurologici* , vol.4, 1791 and countless papers in *Hufeland´s Journal* between 1797and 1826. Albert.Hirsch.BMC. American Encyclopedia of Ophthalmology, Vol.9, p. 6867.

Kosaki, H. *see* **Kozaki Hiroshi**

Yosizo Koyanagi

Koyanagi, Yosizo (1880-1954) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Kyoto University in 1908, and studied Ophthalmology under Prof. I. →ASAYAMA. He studied in Europe during 1917-1918. On his homecoming he was appointed the first Professor of Ophthalmology and the Department Chairman of Tohoku University. He served in this position for 25 years and retired in 1942. His main interest was ocular pathology, and was named one of the Symposists at the 15th International Congress of Ophthalmology in Cairo 1940 and gave a lecture "*Studies of histopathology of retina in hypertension*". He served as the President of the 43rd Congress of the Japanese Ophthalmological Society in 1939 and delivered a special lecture "*The eye and hypertension*" at the 46th Congress in 1942. He reported a rare case of "*uveitis with whitening and loss of hairs*" in 1914 and he further compiled similar cases and published "*Dysakusis, Alopecia und Poliosis bei schwerer Uveitis nicht traumatischen Ursprungs*" in Klin, Mbl. Augenheilkd. 82. Since Alfred Vogt reported a similar case in 1906, that was included in 10 cases of Koyanagi, this disease has been called *Vogt-Koyanagi* disease. Today, this disease and Harada's disease are regarded as the same disease with the expression of inflammatory changes in the anterior segment of the eye in Vogt-Koyanagi's disease and in the posterior segment of the eye in Harada's disease. These diseases as a whole are now called "Vogt-Koyanagi-Harada Disease". In recognition of his outstanding contribution, the Government conferred on him the posthumous Decoration of the Second Order of the Sacred Treasures.(SM)

Koyle, Frank Harcourt (1865-1911) Canadian-American ophthalmologist. Born at Athens, Canada, he received his medical degree at Queen's University, Kingston, Ontario. For a time he engaged in general practice at Lowell, Mass., but after a considerable period of study of the eye, ear, nose and throat in the New York hospitals, he settled as ophthalmologist and oto-laryngologist at Brockville, Ont. In 1894, however, he moved to Hornell, N. Y. American Encyclopedia of Ophthalmology, Vol.9, p. 6867-6867

Hiroshi Kozaki

Kozaki (Kosaki) Hiroshi (1926-1994) Japanese Ophthalmologist, a graduate of Osaka University in 1951, studied Ophthalmology under Prof. Y.→UYAMA and was granted his Doctor of Medical Sciences by his thesis "*Metabolism of electrolytes in glaucoma patients*". He was promoted to be the Associate Professor of Ophthalmology in 1966, but soon he moved to the Head of the Eye Clinic of Osaka Kosei-Nenkin Hospital. Two years later he started to practice as the Director of the Kozaki Eye Hospital that his father (KOZAKI Seiichi: Professor of Ophthalmology at Osaka Medical College) founded. His academic activities involved Ophthalmic Microsurgery, Glaucoma research and Intraocular Lens Implantation. He was one of the founders of the Japanese Society of Ophthalmic Surgeons and the Japan Glaucoma Society. He delivered a special lecture "*Basic principles of surgery – as viewed from history of my surgery experience*" at the 13th Congress of the Society and he was awarded the Suda Award at the First Congress of the Japan Glaucoma Society with the award lecture" *Enchanted with the visual field of glaucoma*". He proposed the Kozaki Classification of Glaucoma visual field on the basis of his long experience with the Goldmann Perimeter, and Kozaki's Classification was used as the standard classification to describe the severity of glaucomatous visual field deterioration,

before the time when the computer assisted retinal sensitivity test became popular.(SM)

Kozaki, Masaru (1929-) Japanese Ophthalmologist, Director of the Kozaki Eye Clinic, Osaka. He was born as the 3rd generation in an Ophthalmology Family, younger brother of →KOZAKI Hiroshi . He graduated from Osaka Medical University in 1953, studied Ophthalmology at the University under Prof.→MAKIUCHI Shoichi and received his Doctor of Medical Sciences in 1959 (thesis: *A study of the influence of amino acids and their amines on the metabolism of the Retina*. J. Jpn. Ophthalmol. Soc. 62: 970, 1958). He served as the Lecturer of the University (1961-1964) and the Head of the Department of Ophthalmology of the Children's Medical Center of Osaka City (1965-1986): during his tenure he served as the Director of the Center (1981-1986). He is a leading expert in the field of pediatric Ophthalmology and Child Health. He is one of the Founders of the Japanese Society of Pediatric Ophthalmology (President 1980) and Japanese Society of Strabismus and Amblyopia (Board of Trustees, 1961-). He also founded the Society of Education of Visually Handicapped in 1962 and served as the Vice-President (1962-1986). He has served the Japanese Ophthalmological Society as a Councillor (1973-), as Board of Trustees to the Japanese Society of the Japan Contact Lens Society (1972-) and to the Japanese Society of Ophthalmological Optics (1980-). Some examples of his publications are "*Vision screening of the three-year old children"*. Jpn. J. Ophthalmol.17: 60-68, 1973 and "*School physical examination and mass ophthalmic screening"* Acta Pediatr. Jpn. 27: 385-391, 1985.He is an Honorary Member of these Professional Societies. In recognition of his meritorious service for child health and visually handicapped, he received the Osaka Mayor's Prize in 1968 (for screening of metabolic anomalies of sulfated amino-acids), the First Ohyama Prize (For education of visually handicapped) in 1980, the 7th Takeo Iwahashi Prize from the World Council for the Welfare of the Blind (WCWB) in 1980 and the Hakuho Prize from the Minister of Education in 1985. (Kozaki Eye Clinic. Acty Osaka, 17F, 3-1- Umeda, Kita-ku , Osaka 530-0001, Japan. phone: +81-6-6354-2174, fax: +81-6-6345-2168).(SM)

Kraemer, Adolf (1864-1911) Swiss oculist of Switzerland and California, author of a volume of the Graefe-Saemisch *Handbuch der ges.Augeinheilkunde* (2nd ed.) entitled "*Animal Parasites of the Eye*." Born at Giessen, Germany, he received the degree of Doctor of Philosophy at Basle, Switzerland, in 1892, his dissertation being "*Parasites of Fresh Water Fishes*." 'The degree of Doctor in Medicine he received at Zürich in 1894, on which occasion his dissertation was "*Spinal Meningitis*." For the next six months he studied gynecology with Pozzi of Paris. Soon, however, he turned to ophthalmology, which he found more to his liking. For a time he was assistant in ophthalmology at the University Clinic at Basle, and afterwards, for a somewhat longer period, at Zürich. Then he practised for a number of years at Heiden, a Swiss watering-place. While there, he contributed numerous ophthalmologic articles to various German, French and English journals. From Heiden he moved to San Diego, California, U. S. A., where he practised from 1902 until the end of his life. His chief recreation was botanizing. He collected a fine herbarium of Southern California, which he presented to the University of Basle. American Encyclopedia of Ophthalmology, Vol.9, p. 6868-6869.

Kranichfeld, Friedrich Wilhelm Georg (1789-1850) German physician, of slight ophthalmologic importance. Born at Hohenfeld, Thuringia, he began to practise in Vienna about 1816, and, from 1818 till 1821 was physician to the Austrian embassy at Constantinople. In 1822 he became extraordinary professor in Berlin, and four years later established an "Ophthalmo-Policlinical Private Institute" in the University building. In 1831 he became ophthalmic physician to the city poor. In 1834 he founded the "*Hygiocomium*", a private clinic. He was a very eccentric man, full of crotchets and whimsical ideas. He attempted for a time to establish a new sort of religion which he himself had thought out. In 1868 he resigned his professorship, disappeared and nothing further is known concerning his life. Aside from numerous writings of a general medical character, he wrote: 1.*Anthropologische Übersicht der gesamten Ophthalmiatrie nebst einer anthropoligischen Zusammenstellung der Augenkrankheiten* (1841). 2. *Conspectus Publicus Morborum Ophthalmicorum qui. . . Instituto Policlinico Ophthalm.-Privato suo...ab a. 1830 Usque ad a. 1842 Tractati et Sanati, etc.* (1842).American Encyclopedia of Ophthalmology, Vol.9, p. 6869-6870.Albert.Hirsch.BMC.

Krause Arlington C. (1896-1980) American ophthalmologist born in Chicago. He earned his B.A. at Lawrence College (1918), and his M.A. (1921) and Ph.D. (1923) in chemistry at the University of Wisconsin. In 1928, he received an M.D. from Yale University. Because of his doctorates in chemistry and medicine, he was able to contribute to our knowledge of the chemistry of various portions of ' the eye. He was an assistant instructor at the University of Wisconsin from 1919 until 1923. After moving to Yale University, he was an instructor and a research assistant in surgery front 1925 until 1928. He then became an instructor at Johns Hopkins University in ophthalmology from 1929 until 1935 . At the University of Chicago he began as an assistant professor in 1935 and became the Chairman of the Department of Ophthalmology before he left the university in 1956. He then went to the Veterans Administration Hospital in Memphis, Tennessee, as chief of the Department of Ophthalmology from 1956 until 1966. Krause wrote 95 articles, one monograph, and one book. His book, "*The Biochemistry of the Eye*," was published by the Johns Hopkins Press in 1934. By 1945 he had written more than 50 articles on the chemistry of the eye. He then became interested in congenital malformations and wrote extensively on retrolental fibroplasia. He was involved in extensive research to find its cause. In 1946, Krause wrote his classic paper on congenital encephalo-ophthalmic dysplasia. sometimes called "the Krause syndrome." AJO 1980,91:413-414.Arch Ophthalmol 1981,99:500

Krause, Karl Friedrich Theodor (1797-1868) German anatomist, internist, medical official and ophthalmologist *[Not to be confounded with his son, Wilhelm Krause, of Göttingen, who has also rendered lasting services to ophthalmology].whose name has been perpetuated in the acinous glands of the conjunctiva (discovered by him) and who also discovered the layer of ganglion cells of the retina, of the nerve cells of the *orbiculits cilinris,* and of the distinction between the supraorbital and frontal foramina on the *margo supra-orbitalis.* Born in Hanover, he studied at first in his town and was for a time a military surgeon. Released from active service, he entered Göttingen University, where he received the degree of M.D. in 1818. In 1820 he settled in Hanover as general practitioner. Here he soon became Professor of Anatomy and, in 1852, Director of the Upper Medical College. He was a remarkably able lecturer and writer. Krause's chief ophthalmologic writing is " *Einige Bemerkungen über die Gestalt und die Dimensionen des Menschlichen Auges*" (*Meckel's Archiv,* 1832; *Poggendorf's Annalen der Physik,* Vol. XXXVI, XXXIX, 1833, 1836).American Encyclopedia of Ophthalmology, Vol.9, p. 6870

Krause, Wilhelm (1833-1910) German anatomist. Krause was born in Hannover, Germany. He received his M.D. at Göttingen in 1854. Later, in 1860 he became there professor of anatomy. He directed from 1892 the laboratory at the Berlin Anatomical Institute. Krause published extensively in the fields of general anatomy, neuroanatomy, and anatomy of the eye. About the eye, he wrote: *Die Brechungsindices der durchsichtigen Medien des menschlichen Auges* Hannover 1855; *Die Membrana Fenestrata der Retina* Leipzig 1868. Albert.Hirsch.

Kries, Johannes Adolf von (1853-1928) German physiologist, born near Grudziadz, Poland. Kries received his M.D. in 1876 at Leipzig University after having visited the universities of Halle and Zurich. After several years of study under Hermann v.→Helmholtz and Carl Ludwig, he became professor of physiology at Freiburg in 1880. Kries wrote: *Die Gesichts-empfindungen und ihre Analyse*. Leipzig 1882. *Studien zur Pulslehre* Freiburg 1892; *Über die materiellen Grundlagen der Bewußtseinerscheinungen* Tübingen 1901.Albert.Fischer.

Krill, Alex Eugene (1928-1972) American ophthalmologist, director of clinical research at the University of Chicago Pritzker School of Medicine, killed in the crash of a jet plane as it approached Midway Airport in Chicago, December 8, 1972. He was returning to Chicago after lecturing at the National Eye Institute, Bethesda, on the natural history of fundus flavimaculatus. He was born in Cleveland, Ohio, and attended the public schools there. He graduated in 1950 from Western Reserve University with a Bachelor of Science degree with a major in mathematics. He was a member of Phi Beta Kappa. He graduated in 1954 from Ohio State Medical School where he was a member of the honorary fraternity, Alpha Omega Alpha. He interned at Philadelphia General Hospital, and wrote the music for the annual house staff show. He served in the United States Navy as a

Krill´s famous book, of which, due to his premature death, only volume 1 was published.

physician on a troop transport from 1956 to 1958. He retired as a Lieutenant Commander from the U.S. Navy Reserve in 1963. Krill was a resident in ophthalmology at the Illinois Eye and Ear Infirmary in 1959-61. Following this, he was a special trainee of the United States Public Health Service, and divided his time between the University of Illinois and the University of Michigan. His interests were significantly influenced bv Professors William F. Hughes and Peter C.→Kronfeld at the University of Illinois. Professors Harold F. Falls and Matthew Alpern at the University of Michigan kindled his interest in genetic diseases of the eye and their evaluation by means of electrophysiologic quantification of retina function. He joined the faculty at the University Chicago as assistant professor and director of clinical research in 1961, Here, he established a retinal function testing laboratory, and emphasized the significance of the retinal pigment epithelium in a variety of fundus anomalies. His interest in ophthalmoscopy was heightened by his association with Professor Bertha A.→Klien (University Chicago) and they collaborated in the description of the histologic and histochemical characteristics of fundus flavimaculatus in 1965. Though Dr. Klien had been professor emeritus since 1963, she attended the monday afternoon retinal session, in which Dr.Krill reviewed the patients seen the previous week, their retinal function studies and outlined the management. In addition to seeing much hereditary diseases of the retina and choroid, Dr. Krill managed a large clinical practice. He began the use of the laser in photocoagulation in 1962, but returned to the xenon photocoagulation until 1970. He followed many patients with presumed histoplasmosis and early recognized new blood vessels extending from the choriocapillaris through the retinal pigment epithelium. He observed regression of new blood vessels in diabetic retinopathy after photocoagulation. Krill received the Academy´s Honor Medal in 1968. He received the Section of Ophthalmology of the American Medical Associatlon certificate of merit for the most meritorious paper presented before the Section in 1970 for the description of treatment of macular edema in branch vein occlusion by means of photocoagulation. He was a member of the American Medical Association, the Illinois Medical Society, and the Chicago Medical Society. He was a fellow of the American College of Surgeons, and a member of the American Ophthalmological Society. The first volume of *Hereditary Diseases of the Choroid and Retina* appeared in the fall of 1972 . Three volumes were projected, the second volume nearly complete at the time of his death. AJO 1973,75:530-532

Kronfeld Peter C. (1899-1980) American ophthalmologist, professor emeritus of ophthalmology at the University of Illinois Medical School. Born , in Vienna, Austria. His education was interrupted by compulsory service in the Austrian army, but in 1923 he obtained an M.D. degree from the University of Vienna. Although his initial choice for specialization was physiology, he was convinced by Professor Mueller to enter ophthalmology. He completed his residency and then joined the staff of the first eye clinic at the University of Vienna. During the great invasion of Austria by American ophthalmologists in search of postgraduate education, Kronfeld was able to communicate in excellent English. His scientific acumen and ability prompted E.V.L.Brown in 1928 to offer him a full-time position at the University of Chicago where he stayed until 1933. Invited to become chairman of the Department of ophthalmology at the Peking Union Medical College in 1933, Kronfeld was able to resume his interests in the biochemistry of the aspirated aqueous. When the Japanese invaded China the Kronfelds returned to Chicago at the invitation of Harry Gradle, where Dr. Kronfeld became the Director of Education at the Ilinois Eye and Ear Infirmary. In 1959, Kronfeld became chairman of the Department of ophthalmology at the University of Illinois Medical School. Kronfeld wrote over 130 scientific papers, principally dealing with glaucoma, seven chapters and books. Among his books we find: *The Glaucomas*, 1944; *Introduction to Ophthalmology*, Springfield 1938; *Compensated Glaucoma-Symposium*, St.Louis 1941,1944 and *The Human Eye in Anatomical Transparencies*, 1943. Innumerable medals and honors attest to his success. AJO 1980,90:268-70. Arch Ophthalmol 1980,98:924. JPW

Krönlein, Rudolph Ulrich (1847-1910). Swiss general surgeon, inventor of osteo-plastic resection of the orbit. Born in Canton Schaffhausen, Feb. 19, 1847, he studied at Zürich, Bonn, and Berlin, returning at length to receive the degree of M. D. at Zürich. In 1878-79 he filled the chair of surgery at Giessen, from 1879 till 1881 the extraordinary chair at Berlin, and in 1881 returned to Zürich to accept the full professorship in that institution, as well as the directorship of the Surgical Hospital. Both these positions he resigned in 1910, shortly before his death, which also occurred in that year.American Encyclopedia of Ophthalmology, Vol.9, p. 6871

Krukenberg, Peter (1788-1865) German physician, of a slight ophthalmologic importance because of his graduation dissertation. entitled "*De Cancro Bulbi Oculi Humani*." Born at Königslutter he received the medical degree in 1808 at Göttingen, practised and taught at Halle, and died of cancer of the palate. American Encyclopedia of Ophthalmology, Vol.9, p. 6879-6880.

Krükow,A. (1849-1908) Russian ophthalmologist. K.was Professor for Ophthalmology at the Moscou University. He was vice-president of the Ophthalmological Society and since 1904 editor of Westnik *Ophthalmologii* which was at that time the only Russian ophthalmological journal.The Ophthalmoscope,1908,p.1024.

Krutkul, Rampoei (*1935) Thai Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Udornthani Hospital, Thailand. He graduated from the University of Medical Sciences, Bangkok, in 1960 and received his M.D. degree. He received his Certificate in Ophthalmology from Mahidol University in 1970 and Diploma of the Thai Board of Ophthalmology in 1980, and he further received a Certificate of Public Health Ophthalmology from Juntendo University, Japan, in 1981. He also received intensive training in public health Ophthalmology at Camp Rachandra Pradsad Eye Center and Sittapur Eye Hospital, India. He serves as the Deputy Medical Director of Udornthani Hospital, Secretary and Committee of the 4th Region of the Thai Red Cross Eye Bank. He has been very active in Prevention of Blindness activities: he organized the Udornthani Lions Club and Thai Lions Club Cataract project in 4 successive years in 1992-1995, he served as Coordinator in the Cataract Survey Project of the Princess Mother Foundation in 5 successive years in 1989-1993, he initiated mobile eye clinics to rural area in 1988-1994. Due to his meritorious service, he received Royal Medal from the Princess Mother Foundation (1988), First Class Royal Decoration from the King of Thailand (1995) and Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology (1977). (Department of Ophthalmology, Udornthani Hospital,Udornthani, Thailand 41000, phone: 662-42-347-728, 662-42-347-729) (SM)

Krwawicz, Tadeusz (1910-1988) Polish ophthalmologist born in Lwow, Poland. He entered the medical faculty at the University of Lwow, graduating in 1938. He became assistant at the eye department of the University Hospital and remained there during the second world war. During the occupation by Russia he served in the Polish Army as ophthalmic specialist in Lublin. After demobilization he became consultant ophthalmologist in the University Hospital and was promoted associate professor in 1951 and ordinary professor in 1957. He introduced the cryoextraction of cataract in 1959 and other cryo surgical techniques. He published more than 150 papers and became a member of the Polish Academy of Science in 1966. He was recipient of many awards and honours from all over the world and was the first president of the Cryo-ophthalmological Society. In 1975 the Medical Academy in Lublin and in 1976 the Semmelweis University in Budapest awarded him honorary doctorates in medicine. He was a Founder Member of the *Academia Ophthalmologica Internationalis*.BJO 1988, 478-479. (SM)

Krzowitz Wenceslaus Trnka de *see* **TRNKA DE KRZOWITZ, Wenceslaus**.

Kubota, Nobue (1936-) Japanese female Ophthalmologist, Professor of Ophthalmology of Teikyo University. She graduated from the Faculty of Medicine of Toho University in 1961, studied Ophthalmology at Tokyo University under Prof. HAGIWARA Hogara and received his Doctor of Medical Sciences in 1969 (thesis: *Studies of alternating hyperphoria. No. 1.* J. Jpn. Ophthalmol. Soc. 72: 59; *No.2* ibid. 72: 65; *No.3* ibid. 72: 145; *No.4.* ibid. 72: 279; *No. 5*, ibid. 72; 368, *No.6*, ibid. 72: 523; *No.7* ibid. 72: 647, 1968). She has been in the present position as above since 1983. She has held the following professional positions: Councillor of the Japanese Ophthalmological Society (1985-),

Auditor of the Society (1999-), Vice-President of the Japanese Association of Strabismus and Amblyopia (1998-) and Vice-President of the Japanese Association of Pediatric Ophthalmology (1989-), and she is a member of the International Society of Strabismology. She has worked worked as an Executive Board Member of the Japanese Review of Clinical Ophthalmology since 1982. Her research interest has been strabismus, amblyopia, extraocular muscle and ophthalmic plastic surgery, and many of her publications include the following: "*Treatment of dissociated vertical deviation (DVD) with conventional superior rectus recession: Results of 150 operations in 110 cases*". Binocular Vision Quarterly 4: 165. 1989 and "*Superior oblique palsy: Results of surgery in 43 cases*". Binocular Vision Quarterly 6: 143, 1991. (Department of Ophthalmology, Teikyo University, 2-11-1 Kaga Itabashi-ku, Tokyo, 173-0003, Japan. phone: +81-3-3964-1211, fax: +81-3-3963-0303)(SM)

Küchler, Heinrich (1811-1873) German ophthalmologist, the inventor of test-types. Born at Darmstadt, Germany, he studied at Giessen and Paris, and in 1835 founded an eye infirmary in his native city. In 1836 his rapidly increasing practice was completely broken up by an imprisonment of several years duration, most unjustly inflicted upon him because of his participation in certain agitations made by the student-body of the University. For the greater portion of about three years he lay in a foul, damp cell, in consequence of which exposure he suffered throughout the remainder of his life from the tortures of severe sciatica. On his release in 1839, he re-opened his Ophthalmic lnstitute, and began to rebuild his practice. In 1844 he founded "Das Mathilde Landkrankenhaus." In 1862 he became Medical Councillor, and a few years afterward Privy Upper Medical Councillor. He had an enormous practice which he well deserved, being a man of excellent judgment and a skilful operator. According to Hirschberg, he left a collection of 30,000 case histories from his private practice. We have already stated that Küchler was the inventor of test-types. The question of priority in this matter, which has been extensively investigated by Hirschberg, may be stated very briefly as follows:, Alfred Smee, of London, had nothing at all to. do with the invention in question, though by both Snellen and Landolt he is stated to have invented, or at least to have proposed, the use of rows of letters for testing purposes in 1854. Küchler, however, in 1843, described the letters which he had invented and actually employed them in his practice. Küchler's cards, it must be remembered, however, were employed only for the testing of near vision. The first to publish a complete collection of test-types was Ed.v.→Jaeger, of Vienna, in 1854. The first to state upon the card, next to each row of letters, the distance at which that row could be discerned by the normal eye, was Stellwag von →Carion, of Vienna, in 1855. Snellen, of Utrecht, finally, put the cap upon the sheaf, by the invention of letters which, from above downward and also from side to side were composed of five (in the same line equally) large blocks, or square units, each block, at the normal distance which was expressly stated for the line, subtending an angle of exactly one minute. Küchler's ophthalmologic writings are as follows: 1.*Schriftnummerprobe für Gesichtsleidende*. (Darmstadt, 1843.) 2. *Die Horngeschwülste des Augapfels*. 3. *Eine Neue Operative Heilmethode der sämtlichen Wahren Hornhautstaphylome*, etc. (Braunschweig, 1853.) 4. *Kurze Zergliederung der Schrift des Dr. G. Simon*, etc. (Darmstadt, 1858.) 5. *Die Querextraction des Grauen Staares der Erwachsenen*. (1868.) American Encyclopedia of Ophthalmology, Vol.9, p. 6880-6881

Kuhn, Hedwig Stieglitz (1895-1973) American woman ophthalmologist, born in Chicago, who graduated from Rush Medical School in 1919, and specialized with her husband, Hugh, in industrial ophthalmology. Kuhn was one of the pioneers and early advocates of more effective industrial safety programs. She led a drive to form the Hammond Safety Council and wrote a monthly newsletter concerning public and recreational safety and worked to combat accidents involving automobiles, airplanes, and boats. In 1957, she was named to President Eisenhower's Traffic Safety Commission and served on a presidential subcommittee concerned with employing the physically handicapped. In 1970, Dr. Kuhn received the highest award of the National Safety Council, the Distinguished Service to Safety Award. Kuhn was a Diplomate of the American Board of Ophthalmology, a Fellow of the American and International Colleges of Surgeons, a member of the National Society for the Prevention of Blindness, the American Medical Association, and various state and local medical societies. She wrote: *Industrial Ophthalmology*, 1944, second edition 1950. AJO 1973,76:1024-1025.JPW

Kühne, Wilhelm (Willy) (1837-1900) German physiologist, born in Hamburg. Kühne received his M.D. in 1862 following study in Göttingen, Jena, Berlin, Paris, Vienna under famous personalities such as R. Wagner, Claude Bernard, Virchow, Ludwig, Henle. He received his Dr.phil in 1856 and 1862 his medical degree (Dr.med.) He became professor of physiology at the Universities of Amsterdam from 1868 to 1871 and of Heidelberg from 1871 to 1899. Kühne was director of the Physiological Institute of Heidelberg. He made important investigations about visual purple. It was a paper about physiology of vision, published by Franz C. Boll (1849-1879) in the Mber.k.preuss.Akad.Wiss.Berlin that iniated Kühne´s interest in visual purple. It started with Kühne´s lecture, in January 1877, to the *Naturhistorish-Medicinischen Vereins zu Heidelberg* : *Zur Photochemie der Netzhaut* followed by a series of publications with his assistant August Ewald (1849-1924) about visual purple, all published in the *Untersuchungen des physiologischen Instituts der Universität Heidelberg*, Vol.1, 1877: I.*Untersuchungen über den Sehpurpur* (Ewald/Kühne), II. *Enstehung der Retinafarbe* (Ewald/Kühne), III.*Veränderungen des Sehpurpurs und der Retina im Leben* (Ewald/Kühne), IV. *Zur Chemie des Sehpurpurs*. The same year (1877) Kühne published about the same subject under his name alone:*Über der Sehpurpur*. Heidelberg 1877, *Das sehen ohne Sehpupur*, *Über die Darstellung von Optogrammen im Froschauge* and with another visiting assistant (W.C.Ayres from New Orleans): *Über Lichtbeständige Farben der Netzhaut* in : *Untersuchungen des Physiologischen Instituts der Universität Heidelberg*, 1877,Vol.1, issue 4. JPW. Albert. Hirsch

Ueber die Darstellung von Optogrammen im Froschauge.

Hermann Kuhnt

Naoki Kumagai

Kuhnt, Hermann (1850-1925) German ophthalmologist, born in Senftenberg (Lausitz), Germany. Kuhnt received his medical training in Bonn, Berlin and Würzburg. He served first as prosector under Merckel in Rostock and later as Becker's assistant in Heidelberg. 1880 he went as professor to Jena, then to Königsberg in 1892 before becoming professor of ophthalmology at the Bonn University as from 1907. Kuhnt specialized in the treatment of inflammations of the frontal sinus as well as in ophthalmic surgery. He authored: *Zur Kenntnis der Sehnerven und der Netzhaut* Berlin 1879. *Beiträge zur operativen Augenheilkunde* Jena 1883. *Neue Therapie bei gewissen hornhautgeschwüren Wiesbaden* 1884 *Ueber die Therapie der Conjunctivitis granulosa* Jena 1897. *Über die Verwertbarkeit der Bindehaut in der praktischen und operativen Augenheilkunde* Wiesbaden 1898.

Kumagai, Naoki (1885-1973) Japanese Ophthalmologist, Professor Emeritus of Niigata University. He graduated from Tokyo University in 1910, studied Ophthalmology under Prof. J.→KOMOTO. He went to Germany in 1914, but due to the outbreak of the World War II, he returned home and was invited to be Professor of Ophthalmology of Aichi Medical School (now Nagoya University). In 1917, he received his Doctor of Medical Sciences from Tokyo University and the same year he served as the President of the 21st Congress of the Japanese Ophthalmological Society. He was then invited in 1922 to be Professor and Chairman of the Department of Ophthalmology of Niigata University. He served again as the President of the 28th Congress of the Japanese Ophthalmological Society. He retired from the position in 1945 and was entitled Professor Emeritus of the University. His main interest in research was glaucoma and his work was summarized in his special lecture " *Diagnosis and treatment of glaucoma*" delivered at the 42nd Congress

of the Japanese Ophthalmological Society in 1938. In recognition of his distinguished service, the Government conferred upon him the Second Order of the Sacred Treasures in 1936. (SM)

Noboru Kunitomo

Kunitomo, Noboru (1907-1990) Japanese Ophthalmologist, Professor Emeritus of Nihon University. He was a graduate of Tokyo University in 1931, and he studied Ophthalmology under Prof. S.→ISHIHARA, and received his Doctor of Medical Sciences in 1947. In 1938, he was made the Assistant Professor of Taihoku Imperial University (now National Taiwan University), and returned home after the War. He was appointed the Professor and Chairman of the Department of Ophthalmology of Nihon University in 1946 and he stayed in this position until retirement in 1973. He served as the Director of the University Hospital in 1953-1954 and also as the President of the 68th Congress of the Japanese Ophthalmological Society in 1964. His main interest was the external eye diseases and anatomy and pathology of the anterior segment of the eye, and his works were summarized in his special lecture "*Microcirculation of the human conjuntiva*" delivered at the 76th Congress of the Japanese Ophthalmological Society in 1973. This work was published in the English Language with the same title from Igaku Shoin, Tokyo in 1974. He was also a founder of a Journal " *GANKA: Ophthalmology* " and served as the editor from 1959 until his retirement in 1973: the Journal conveyed the most up-to-date clinical knowledge to Ophthalmologists throughout the Country. (SM)

Kunt, August Adolph Eduard (1839-1894) German scientist born in Schwerin in Mecklenburg; studied at Leipzig and Berlin (1867) ; was professor of physics at Berlin University, and there followed von →Helmholtz. He made many experiments in magneto-optics, as well as original researches on light and on the velocity of sound in different gases. He died at Israeldorf, near Lübeck. American Encyclopedia of Ophthalmology, Vol.9, p. 6883-6884.

Yoshi Kurachi

Kurachi, Yoshi (1905-1982) Japanese Ophthalmologist, Professor Emeritus of Kanazawa University. He graduated from Kanazawa University, studied Ophthalmology under Prof. Minoru→NAKAJIMA, and received his Doctor of Medical Sciences from the University in 1938. He was appointed Professor and Chairman of the Department of Ophthalmology of the University in 1942 to succeed Prof. Nakajima. He stayed in this position for 29 years and retired in 1971, whereupon he was given the Professor Emeritus of the University. During his tenure, he served as the Director of the University Hospital, Dean of the Faculty of Medicine and many other important administrative positions. His research interest was the metabolism of the eye, with particular attention to the retinal metabolism, and these works were summarized in his special lecture "*Metabolism of the eye with particular attention to the retina*" at the 67th Congress of the Japanese Ophthalmological Society in 1963. In recognition of his distinguished service, the Government conferred on him the Second Order of the Sacred Treasures in 1975. (SM)

Junzo Kurosawa

Kurimoto, Shinji (1929-) Japanese Ophthalmologist, Former Professor of Ophthalmology of Yamaguchi University and of the University of Occupational and Environmental Health. He graduated from Yamaguchi University in 1955, studied Ophthalmology at Tottori University under Prof.→KANDORI Fumio and received his Doctor of Medical Sciences in 1960 (thesis: *Studies upon the experimental cataracts, Part 1;*"*Myleran cataracts and its toxicity to the endocrine glands and internal organs*" Yonago Acta Medica 3:174-180, 1959) He studied on histochemistry of the retina under Prof.Frank W.→Newell at the University of Chicago (1961-1966). He served as the Professor and Chairman of the Department of Ophthalmology, University of Occupational and Environmental Health (1978-1987) and then of Yamaguchi University (1987-1993). He served to the Japanese Ophthalmological Society as a Councillor. Some examples of his publications are "*Glyocogen syntehesis by the rat retina"*. (ed.) Graymore C.: *Biochemistry of the Retina*: p. 31-35, Academic Press. London, 1965 and "*Eye strain in VDT (Visual Display Terminal) work*". (ed). Noro, K.: *Occupational Health and Safety in Automation and Robotics*. p. 110-136, Taylor & Francis, London, 1987.(SM)

Kurosawa, Junzo (1894-1966) Japanese Ophthalmologist, a graduate of Tokyo University in 1921, studied Ophthalmology under Prof. S.→ISHIHARA and received Doctor of Medical Sciences in 1927. He was appointed the first Professor of Ophthalmology at Nippon Medical College in 1926. In 1929, he left the College to practice at Ogawa Eye

Hospital, the hospital his father-in-law Kenzaburo→OGAWA founded. Dr. Kurosawa founded the Japan Ophthalmologists Association after the World War II and served as the President during 1928-1953. He served as the President of the Japan Medical Association in 1954-1955. He also served as the President of the Association for the Prevention of Trachoma Inc.(now Japan Society for the Prevention of Blindness). The Government, in recognition of his distinguished service, conferred on him the posthumous decoration of the Second Order of the Sacred Treasures.(SM)

Kurozumi, Itaru (1934-) Japanese Ophthalmologist, President of the Association for Ophthalmic Cooperation to the Asia Inc. (AOCA). He graduated from Tokushima University in 1960, studied Ophthalmology at Kobe University under Prof.→IMACHI Jo and received his Doctor of Medical Sciences in 1967 (thesis: *On the spontaneous discharges of the extraocular muscles*. J. Jpn. Ophthalmol. Soc. 71: 919, 1967). He served as the Head of the Eye Clinic of Ashiya Municipal Hospital from 1975 to 1996. His early publications are on extraocular muscles: "*On the spontaneous discharges of cat's extraocular muscles"*. Jpn. J. Ophthalmol. 11: 179, 1967 and "*Electromyograms in the early stage of complete paralysis of human extraocular muscles with special reference to the fibrillation potential and spontaneous discharge"*. Ophthalmologica. 159:233, 1969. While serving at the Ashiya Municipal Hospital, he joined the foundation of the AOCA and he contributed to the education of Nepalese Ophthalmologists, Eye care specialists and technicians and also he conducted and guided many Eye Camp activities in rural villages of Nepal. He also donated Ophthalmic Instruments and guided the management of Eye Hospitals in Nepal. For his contributions, the Asian Committee of WCWB (World Council for the Welfare of the Blind) granted him the Takeo Iwahashi Prize in 1984 and the Asia-Pacific Academy of Ophthalmology granted him the Jose Rizal Award in 1996: His Majesty the King of Nepal conferred on him the Gorkha Daksina Bahu, Nepalese National Decoration, in 1996. He has many publicatons on Nepal: "*Ophthalmic cooperation to Nepal: its results and reconsideration*. Jpn. J. Clin. Ophthalmol. 53: 521, 1999", "*Nepal: the land of gods*. Kobe News Paper Publ. Center, 1983" and "*Reports from Nepal, photographic illustrations*. Kobe New Paper Publ. Center 1985". (AOCA: 12-23-101, Futami-cho, Nishinomiya, 663-8111 Japan. phone: +81-7-9867-3821, fax: +81-7-9867-3823)(SM)

Kurtzwig, David George (1764-1834) Russian physician and medical official, of a slight ophthalmologic importance because of his graduation dissertation, "*Diss. de Morbis Palpebrarum*." Born at Riga, Russia, he received his medical degree in 1788 at Jena, settled in Riga, became Medical Inspector for the Government of Livland. American Encyclopedia of Ophthalmology, Vol.9, p.6884.

Kurz, Jaromír (1895-1965) Czech ophthalmologist. Kurz was professor of ophthalmology of the University of Prague, and recipient of the Purkinje Medal.Brit.J.Ophthal.1966,50:110.

Kussmaul, Adolf (1822-1902) German physician, who introduced the stomach pump for the treatment of diseases of the stomach, and who, as ophthalmologist, was the first to show that the retina of man and other mammals is, in the fresh condition, absolutely transparent. Born at Graben, near Carlsruhe, he studied at Heidelberg from 1840 till 1845, but, as it seems, did not receive his medical degree there. While yet a student, however, he published an original composition. entitled "*Die Farben-Erscheinungen im Grunde des Menschlichen Auges*" (Heidelberg, 1845), a work which, in spite of the immaturity of its author, was crowned by the Heidelberg faculty, and, even at the present day, evokes the admiration of so critical an authority as Hirschberg. From 1850 till 1853 Kussmaul practised as general physician in Kandern, then proceeded to Würzburg for graduate instruction, and there, in 1854, received his medical degree-whether ad *eundenb* is not positively known. The following year he qualified as privatdocent in Heidelberg, and in 1857 was made extraordinary professor in the same institution. In 1859 he removed to Erlangen in order to accept the full professorship of internal medicine in the Erlangen University. In 1863 he held the corresponding chair in Freiburg i. Br., and in 1876 that at Strassburg. He spent his last years in Heidelberg, writing a famous medical autobiography: *Jugenderinnerungen eines alten Artzes* (1899). American Encyclopedia of Ophthalmology, Vol.9, p. 6884-6885.

Toichiro Kuwabara

Kuwabara, Toichiro (1920-1991) American ophthalmologist of Japanese birth. His many contributions included studies on lipid keratopathy, diabetic retinopathy, photic damage to the retina, diabetic cataracts, genetic diseases of the eye, and a host of other ocular abnormalties. No less important was the major role he played in introducing electron microscopy and novel histochemical techniques to eye research. In the laboratory he set uncompromisingly high standards for himself and for his staff. Kuwabara was born in 1920 on the island of Shikoku, Japan, the eldest son of a prominent medical family. He received his medical school training at Kyushu University, where he graduated in 1944 and later obtained a Ph.D. degree (Metastatic Mechanism of Lung Cancer) , in preparation for a planned career in general pathology. In 1952, Kuwabara was recruited for a trial year in the Howe Laboratory of Ophthalmic Research at Harvard Medical School and the Massachusetts Eye and Ear Infirmary. He arrived in this country with little more than a satchel, a broad smile, and meager familiarity with the English language. Nevertheless, he soon became a productive member in the small family of clinical and basic scientists dedicated to eye research. Together they explored fat metabolism in the cornea where his talent for tissue processing and his uncompromising perfectionism proved him indispensable. Unfortunately, the McCarran Act required his return to Japan and a wait of several long months before he could return as a permanent resident. He did eventually return, this time with his wife and two little girls, and immediately reactivated his studies on aberrant lipogenesis. This project opened up an entirely new field not only in eye research but in atheromatosis and fatty degeneration elsewhere in the body. Then one of those serendipitous observations caused a redirection of research. A piece of retina was incidentally tryphinized along with the corneal preparation. When this retina was subsequently stained by the periodic acid Schiff, it revealed for the first time the cellular topography of retinal capillaries. Important in itself as an anatomic discovery, this finding came to have crucial significance in elucidating the pathogenesis of diabetic retinopathy; the mural cells (pericytes) of the retinal capillaries are the target cells in diabetes. The Kuwabara trypsin digestion technique became the universal procedure for studying retinal blood vessels. The foregoing lipid and retinal studies were major directions of Kuwabara's research in the Howe Laboratory but were only part of his extensive and innovative contributions, all of which established his authority in understanding the normal and pathologic eye. For all these accomplishments, he was honored with the Hektoen Silver Medal of the American Medical Association (1960), the New England Ophthalmic Society Award (1962), the Friedenwald Award (1968), the Research to Prevent Blindness Trustees' Award (1970), the Alcon Research Institution Award (1982), the Senior Investigator Award of Research to Prevent Blindness (1991), and the honor of being a much sought-after collaborator in ophthalmic research and, often, research outside of ophthalmology. Promotions at the Harvard Medical School followed in due course to the title of professor of pathology in the Department of ophthalmology (1971). In 1972, with administrative changes in the Howe Laboratory pending, Dr. Kuwabara and a group of several senior investigators left Boston to join the new National Eye Institute. For the next 17 years, Dr. Kuwabara was chief of the Laboratory of Ophthalmic Pathology at the National Eye Institute. The opportunity for collaborative research in the Institute is evident in Kuwabara's continuing publications for these years. The total number of papers authored or coauthored by Dr. Kuwabara is more than 200, covering a wide range of subjects. He accepted in 1989 the challenge to set up an ophthalmic pathology laboratory at the University of Indiana. AJO 1991, 112:107-108

Yushihiro Kuwabara

Kuwabara, Yushichiro (1865-1924) Japanese Ophthalmologist. He graduated from Niigata Medical School and passed the National Examination for Medical Practice in 1885. He studied Ophthalmology at the Postgraduate course of Tokyo University under Prof. J.→KOMOTO. He went to Germany in 1902, and in 3 years he studied in Wuerzburg (Prof. C.→Hess), in Erlangen (Prof.J.N.→Oeller) and in Munich (Prof.O. →Eversbusch), and received Doktor Medicine (Thesis: *Experimentelle und klinische Beitraege ueber die Einwirkung von Anilinfarben auf das Auge*, Arch Augenheilkd,49:157,1903). After his homecoming he practiced in Nagaoka, Niigata Prefecture and founded a Journal "*Ganka Rinsho Iho*: Japanese Review of Clinical Ophthalmology" in 1905 and he worked as the Chief Editor for 20 years. This is the 95 year-old leading Journal of Ophthalmology in Japan. He also published a 5-volume book "*Nihon Ganka no Shyoumei*: Kritik der modernen Ophthalmologie in Japan" which covered all the ophthalmological articles ever

published in many journals in Japan, and lists several thousand articles. The Chief Editor of the Japanese Review of Clinical Ophthalmology was transferred to Tomohisa TSUTUMI, Bujyu SHIKANO, Shinichi→SHIKANO, Tadashi KATO, Hirobumi MOMOSE and then to Toshio →MARUO. (SM)

Yasuharu Kuwahara

Kuwahara, Yasuharu (1908-1985) Japanese Ophthalmologist, Professor Emeritus of Keio University. He graduated from Keio University in 1932, studied Ophthalmology under Prof. S.→SUGANUMA and received his Doctor of Medical Sciences from the University in 1937. He was appointed the Professor of Ophthalmology of Tokyo Medical College in 1956. He was then invited to be Professor and Chairman of the Department of Ophthalmology of Keio University in 1962 and served in this position until retirement in 1973. His research interest was in the cornea, keratoplasty and cataract. He played the key role in enactment of the law "*Keratoplasty Act*" in 1958 and founded the Japan Eye Bank Association Inc. in 1965 and served as the President for 11 years. He was one of the symposists on keratoplasty at the 16th Congress of the Japanese Clinical Ophthalmology in 1962 (Lecture: *Heterograft in keratoplasty*), and also at the 69th Congress of the Japanese Ophthalmological Society in 1965 (Lecture: *Studies of long-term preservation of cornea for keratoplasty*). In the latter study, he developed K medium to preserve cornea for transplantation. His interest in cataract led him to develop his original ultrasound instrument to emulsify cataracts and gave a special lecture "*Phacoemulsification in cataract with nucleus*" at the 74th Congress of the Japanese Ophthalmological Society in 1970 (*Method cataract aspiration*, Igakushoin Tokyo 1970). He wrote:*Aspiration Method of a Hard Cataract: Ultrasonic vibration*, Tokyo 1972. He served as the President of the Japanese Ophthalmological Society and Japanese Society of transplantation. (SM)

Kuwajima, Jisaburo (1913-) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Tohoku University in 1940, studied under Prof. HAYASHI Yuzo and received his Doctor of Medical Sciences in 1943 (thesis: *Experimentelle Studien ueber die allgemeine Blutdrucksteigerung bei Kaninchen mit besonderer Beruecksichtigung des Augenfundus*. Tohoku J. exp. Med. 46: 170, 1943). He served as the Professor of Ophthalmology of Tohoku University from 1968 until retirement in 1977. He carried out extensive studies of optic neuritis and pointed out the presence of multiple sclerosis in 1952 that had been thought to be very rare in Japan. He compiled many cases and confirmed the diagnosis of this disease and gave a lecture as a symposist at the 61st Congress of the Japanese Ophthalmological Society in 1957 (J. Jpn. Ophthalmol. Soc. 61: 2051, 1957). He recently published a Medical Essay "*True record of multiple sclerosis in Japan*, Nihon-Iji-Shinpo, Tokyo, 1985). He is an Honorary Member of the Japanese Ophthalmological Society, one of the founders of the Neuro-ophthalmology Japan and its Honorary Member. He received the Award from the latter Society in 1997.(SM)

Kwon, Jung-Yoon (1943-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Kyungpook National University, Taegu. He graduated from Kyungpook National University School of Medicine, with an M.D. degree, in 1970. Subsequently, he studied Ophthalmology in the Graduate School of the University and completed the course with a Ph.D. Degree in 1980 (thesis: *Fluorescein fundus angiographic findings in Korean diabetics*. Kyungpook Univ. Med. J. 20: 444, 1979). He further extended his experience as a visiting physician at Osaka Children's Hospital in 1981 and at the Wilmer Ophthalmological Institute in 1985-1986. He was appointed the Professor of Ophthalmology of Kyungpook University in 1989 and has served as the Chairman of the Department as above since 1996. He has served as the Chairman of the Korean Pediatric Ophthalmology and Strabismus Society (1997-1998), the Chairman of the Korean Board of Ophthalmology of the Korean Ophthalmological Society (KOS) (1997-1998) and is on the Editorial Board of the Journal of the KOS since 1996. He has many publications in the field of electrophysiology of vision and pediatric Ophthalmology, e.g. "*Photic electroretinogram in adult diabetics*. J. Kr. Ophthalmol. Soc. 40: 121, 1999", "*Clinical studies of accommodative esotropia*. J. Kr. Ophthalmol. Soc. 38, 1997" and "*Positional changes of reattachment site after superior rectus recession in rabbit*. *Advances in Strabismology*. (ed.) Lennerstran, G., p.385, Aeolus Press. 1998". He has written two books on Ophthalmology in the Korean Language. (Department of Ophthalmology, Kyungpook National University, Hospital, 50, 2-Ga, Samduck-Dong, Taegu, Korea 700-712; Phone : +82-53-420-5812 ; Fax. No. : 82-53-426-6552; e-mail: jykwon@kyungpook.ac.kr)(SM)

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