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Charles Abadie

Abadie, Charles (1842-1932) French ophthalmologist, professor of ophthalmology in Paris. Graduating in Medicine in 1868 he served as interne in Paris; and then studied ophthalmology in Vienna and Berlin, serving as assistant in the Clinic of A. von Graefe. Returning to Paris he became the Chief of Clinic for de Wecker; later he opened his own clinic, which grew and was subsequently located on Boulevard St. Germain. He retired from active practice about 1912, but continued to attend medical societies, visited his old clinic and wrote medical articles until 1927. For more than fifty years he was an important figure among the ophthalmologists of France. In 1876 he published his two volume treatise on diseases of the eye: *Traité des maladies des yeux.*, 2 vols., Paris 1876-1877 and in 1881: *Leçons de clinique ophthalmologique recueillies par le Dr. Parenteau.* Paris 1881. Although not given to devising operations or instruments, he was known as a very skilful operator. He contributed to the great many short, clinical papers, especially devoted to ocular therapeutics. Early he became interested in glaucoma. Abadie kept his preference for iridectomy, in all acute and inflammatory cases; and chronic glaucoma, chose miotics for principal treatment, and sympathectomy, or trephining, if operation finally necessary. He emphasized importance of the sympathetic nervous system in glaucoma and in some other ocular conditions; and recommended paracarotid sympathectomy for optic atrophy. While in de Wecker's Clinic he urged the use of jequirity for trachoma. He always showed an active interest eye conditions attending diseases of central nervous system. He was Vice-president of the Section on Ophthalmology in the International Medical Congress held at Washington, D.C., 1887; and read a paper on *Certain derangements of ocular motility and their treatment*". He also opened the discussion of a paper by Henry Power on *"Microbes in eye diseases"*. As lecturer and speaker in medical societies he was always heard with attention and interest.(by Edward →Jackson).AJO 1932,16:264. Annales d'Oculistique 1932, 159:689-695. *Jubilé du Docteur Charles Abadie* (50 years ophthalmologist) by Lapersonne. JPW

Abbe, Ernst Karl (1840-1905) German Professor for Physics, one of the founders of the Carl Zeiss Foundation. Ernst Karl Abbe was born in Eisenach, Germany. He received a scholarship and graduated from Göttingen University in 1861. He joined the University of Jena in 1863 where he became professor of physics and mathematics in 1870. He was named director of astronomical and meteorological observatories in 1878. In the meantime, 1866, he had joined the Carl Zeiss workshop as Research Director and, with him, began to produce a scientific under-pinning for optical products, producing in 1872 new types of optical glass. (In 1892 there were already 76 sorts of glass!) Together, Zeiss and Abbe produced a compound microscope of unparalleled quality. This instrument was the "father" all modern compound microscopes in use today. Abbe left, in 1889, all his personal fortune to the Zeiss Company to create the still existing Zeiss Foundation. (Schmitz *Handbuch zur Geschichte der Optik*, Suppl.2, *Das Mikroskop*, Vol.2a:147-163, Wayenborgh 1989). JPW

Abbot, Frank Wayland (1841-1901) American oto- and ophthalmologist born in Burma. He was educated at Falley Seminary, Fulton, N.Y., at the University of Rochester, N.Y., and at the medical department of the University of Buffalo, receiving his M.D. in 1866, and devoting himself entirely to ophthalmology and otology. Abbot wrote numerous articles in various journals and translated Helmholtz's *"Recent progress in Theory of Vision"* and was one of the founders of the Charity Eye an Ear Hospital. American Encyclopedia of Ophthalmology, Vol.1,p.20-21.

Abdel-Latif, Ata. A. (1933-) American biochemist of Palestinian origin, working on the eye, Regents' Professor at the Department of Biochemistry and molecular Biology, Medical College of Georgia. He was born in Beitunya, Ramallah Palestine and studied at De Paul University Chicago with B.S. and M.S. degree (Chemistry) granted in 1955 and 1958 respectively. He then received Ph.D. degree in 1963 from Mt Sinai Medical Research Foundation and Illinois Institute of Technology. He has been in the present position as above since 1987, after having served as Associate Professor at the Department of Cell and molecular Biology, Medical College of Georgia (1967-1974) as the Professor (1974-1987). He served as a Visiting Professor to the Department of Biochemistry, University of Nottingham, School of Medicine, Nottingham, England (1975-1976). He trained many postgraduate students and postdoctoral fellows. His editorial assignments include *Neurochemistry International* (1989-1992), *Membrane Biochemistry* (1987-1994) and

Executive Editor of *Experimental Eye Research* since 1992. His research interest embraces neurotransmitters, cell signaling, phosphoinositides, phosphoproteins, phospholipases and protein kinases, second messengers, arachidonic acid release and metabolism, iris-ciliary body, smooth muscle and nervous tissues. He has published more than 140 original papers in these fields and some examples are " *Endothelin-1 stimulates the release of arachidonic acid and prostaglandins in cultured human ciliary muscle cells: activation of phospholipase A2*. Exp. Eye Res. 65: 73, 1997", " *Calcitonin gene-related peptide relaxes rabbit iris dilator muscle via cyclic AMP-dependent mechanisms: cross-talk between the sensory and sympathetic nervous systems*. Curr. Eye Res. 17: 197, 1998" , " *Activation of particulate guanylyl cyclase by endothelins in cultured SV-40 transformed cat iris sphincter smooth muscle cells*. Life Sci. 64: 161, 1998" and " *Aqueous humor, iris-ciliary body and trabecular meshwork*. *Ocular Biochemistry*, pp. 52-93, ed. Harding J. J., Chapman and Hall, Publ. London, 1997". He is a recipient of the Nih Merit Award (1989) and Alcon Research Institutes Award (1990) and many other honor awards for the excellence of his research. He is an elected member of many professional societies, e.g. American Society of Biochemistry and Molecular Biology, International Society for Eye Research, Association for Research in Vision and Ophthalmology and many others. (Department of Biochemistry and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100, U. S. A.. phone: +1-706-721-3364; fax: +1-706-721-6608; e-mail: LABDEL@mail.mcg.edu)

Abe, Haruki (1947-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Niigata University. He graduated from the University in 1971 and studied Ophthalmology under Prof.→MIKUNI Masakichi and Prof.→IWATA Kazuo; he received his Doctor of Medical Sciences in 1979 (thesis: *Studies on binocular Interaction by checkerboard pattern VECP*. J. Jpn. Ophthalmol. Soc. 83: 1575, 1979). He is in the present position as above since 1993. His research interest is in glaucoma and his publications include " *Contrast sensitivity and pattern visual evoked potential in patients with glaucoma*. Doc. Ophthalmol.65: 65, 1987" and " *Multifocal electroretinogram and visual field defects in patients with glaucoma*. Glaucoma Update (ed. G.K.Krieglstein): 103, Springer Verlag, Heidelberg, 1999. He is an active member of the Glaucoma Society of the International Congress of Ophthalmology, Association for Research of Vision and Ophthalmology, American Academy of Ophthalmology, International Society for Clinical Electrophysiology of Vision and International Perimetric Society. He is also a council member of Japanese Societies in his field.(Department of Ophthalmology, Niigata University, School of Medicine, 1-757 Asahimachi, Niigata, 951-8122, Japan; phone: 81-25-223-6161, fax: 81-25-224-2813, e-mail: abechan@med.niigata-u.ac.jp) (SM)

Abenguefit (end 10th century) Spanish-Arabian physician, born of a distinguished Arabian family which settled in Spain, at Toledo. He was noted in politics as well in medicine, and became Vizier to the Prince of Toledo and physician to the chief hospital in that city. Abenguefit also wrote, among others, a book on ophthalmology: " *Book of the Exact Consideration of the Diseases of the Sense of Sight*" which had a certain influence in Spain for many centuries. American Encyclopedia of Ophthalmology, Vol.1,p.23.

Abney, William (Sir William) de Wiveleslie (1844-1920) British scientist. He entered the Royal Navy at the age of 17, retiring in 1881 with the rank of Captain. He was elected a Fellow of the Royal Society in 1876, and was awarded the Rumford Medal in 1882 for his researches on radiation. He was a pioneer in the chemistry of photography, and wrote the first practical treatise on the manufacture of sensitive emulsions. In 1882 he delivered the Cantor Lectures of the Royal Society of Arts, choosing as his subject, " *Recent Advances in Photography*." He was also a pioneer in the three-colour process. In addition to being President of the Royal Photographic Society, he also served as President of the Royal Astronomical and the Physical Societies. Sir William Abney was appointed Assistant Director for Science in the Science and Art Department of South Kensington.in 1884, Director in 1893, and Assistant Secretary in 1899. In 1900 he was appointed Assistant Secretary to the Board of Education, and in 1903, scientific adviser to the Board. He was made C.B. in 1888, and K.C.B. in 1909. Sir William Abney's work on Colour Vision is his chief claim to recognition by ophthalmologists. In 1892 he gave a lecture at the Royal Society of Arts on " *Colour Blindness*." In 1894 he delivered the Tyndall Lectures-at the

Royal Institution on "Colour Vision.": *Colour vision: being the Tyndall Lectures delivered in 1894 at The Royal Institute*. London 1895. His original papers in the Transactions and Proceedings of the Royal Society are known to ophthalmologists. They are accessible in a volume entitled "*Researches in Colour Vision and the Trichromatic Theory*" published in 1913. Sir William Abney carried on the tradition of Thomas Young, Clerk Maxwell, and Hermann von Helmholtz; and added greatly to our knowledge of colour vision by research inspired by the three components theory. Like his predecessors in this field he viewed the subject from the point of view of the pure physicist, and the mathematical trend of his papers, combined, it must be admitted, with an unfortunate obscurity of style, failed to gain for his work the recognition by physiologists and ophthalmologists which it deserved. He acted as Secretary of the Royal Society Committee on Colour Vision, appointed in 1890, and was the principal special examiner in Colour Vision for the Mercantile Marine Department of the Board of Trade from 1893 to the time of his death. BJO 1921,5:47-48

Abraham, James (1917-1993) Malaysian Ophthalmologist. He graduated from King Edward VII College of Medicine in Singapore in 1946, carried out postgraduate studies in London and received Diploma of Ophthalmology. He returned to Malaya in 1957, in the year of the Country's Independence. He served as Ophthalmologist in Alor Setar and Ipoh, and then as Senior Consultant Ophthalmologist in the General Hospital, Kuala Lumpur. He played important roles as a Founder Committee Member, in the Foundation of the Ophthalmological Society of the Malaysian Medical Association in 1964, and served twice as the Chairman from 1965 to 1968, and from 1969 to 1970. During his Chairmanship, the membership of the Society greatly increased, and the activities intensified. He retired from the Government Service in 1971. (SM)

Abu Bakr Muhammad ibn Zakariya al-Razi *see* **Ar-Razi**.

Abu Bekr Mohammed ibn Badjeh *see* **Avempace**

Abu Gafar b. Harun at-Targali (12th century) A Spanish-Arabian oculist, who practised at Seville in the 12th century. He left no writings. American Encyclopedia of Ophthalmology, Vol.1,p.43.

Abu Ruh. Bin Mansur bin Abi Abdallah bin Mansur alyamani (11th century) Persian born at Gurgan on the Oxus and educated both in Persian and Arabic . His work "*The Light of the Eyes*" constituted the standard ophthalmic textbook in Persia for centuries. American Encyclopedia of Ophthalmology, Vol.1,p.45.

Abu Zakariya Juhanna b. Masawaih (777-857) Arabian "ophthalmographer", chiefly known because of the numerous references made to him in the "*Continens*" of →Rhazes and also because of his two books: "*Knowledge of the Examination of Oculists*" and "*Alteration of the Eye*". American Encyclopedia of Ophthalmology, Vol.1,p.46.

Abubertus *see* **Ar-Razi** (Rhazes).

Abubeter *see* **Ar-Razi** (Rhazes).

Abul Qasim Ammar b. Ali-Al Mausili *see* **Ammar**

Abul Barakat al-Katai. Body physician to Saladdin, who died in Cairo 598. He was a distinguished operator on the eye, but wrote nothing concerning that organ. American Encyclopedia of Ophthalmology, Vol.1, p.43.

Abul Farag b. at-Tajjib (11th century) A Nestorian priest and philosopher of the 11th century, known to have composed a book "*On the diseases of the eye*". American Encyclopedia of Ophthalmology, Vol.1,p.43.

Abul Haggag Jusuf. An oculist of the Arabian period in Cairo. He was known to have taught the father of Usaibia. American Encyclopedia of Ophthalmology, Vol.1, p.43.

Abul Kasim ben Abbas al-Zarawi (? – 1013) This author, the greatest of Arabic writers on surgery was in fact a Spaniard. He died at an extremely old age in Cordoba, Spain. His famous *surgery* formed only a part of his great work on medicine "*al Tasrif*" ["*The Explanation*"]. Based chiefly on the teachings of the Greeks, especially Paulus of Aegina, it exhibits nevertheless, considerable evidence of a rich personal experience. American Encyclopedia of Ophthalmology, Vol.1,p.43-44.

Abul Mutarrif Abd ar-Rahman b.Muhammed b.Abd alKarim b.Jahja Ibn-Wafid al-Lahmi *see* : **Abenguefit**.

Abul Quasim Hibat-Allah b.Fadl (1086-1162) A physician and poet of Bagdad who is said to have made a specialty in curing diseases of the eye. American Encyclopedia of Ophthalmology, Vol.1,p.44.

Abulcasis *see* **Abul Kasim ben Abbas al-Zarawi**.

Abul-Quasim *see* **Abul Kasim ben Abbas al-Zarawi**.

Adachi-Usami, Emiko (1937-) Japanese Ophthalmologist, Professor and Chairwoman of the Department of Ophthalmology of Chiba University. She graduated from Chiba University in 1962 and studied Ophthalmology under Prof. →SUZUKI Yoshitami and received her Doctor of Medical Sciences in 1968 (thesis: *Studies on ERG of the retinal artery and vein occlusion especially on their prognostic value*. Acta Soc Ophthalmol Jap.71: 39-45,1967). She studied in 1966-1967 at University of Rotterdam with Prof. Harold E→Henkes, in 1971-1973 at Max-Planck Institute with Prof. Eberhard Dodt, in 1980-1981 at Zurich University with Prof. Dietrich Lehmann. She is in the present position as above since 1984. Her research interest has been clinical electrophysiology in Ophthalmology and her many publications in this field embrace "Apparent accommodation in pseudophakic eyes as measured with visually evoked potentials. Invest. Ophthalmol. Vis.Sci. 33:442, 1992" and "Distribution of pattern-evoked potentials in the facial area. Am. J. Ophthalmol. 96: 734, 1983". In recognition of her outstanding contributions to the Japanese-German cultural exchange, the Government of Germany (President Minister Richard von Weizaecker) granted her the Philipp Franz von Siebold Prize in 1988. She serves on the *International Society for Electrophysiology of Vision* as the Secretary General for Asia and Australia (1982-1989), as a Vice-President (1990-1998) and the Treasurer since 1998. In recognition of her scientific achievements, the Japan Medical Society conferred on her the Honor Award 2000, and she delivered the Award lecture "Optic neuritis- from diagnosis to optic nerve transplantation". (Department of Ophthalmology, Chiba University School of Medicine, 1-8-1 Inohana, Chuo-ku, Chiba, 260-0856, Japan. phone:81-43-222-7171, fax: 81-43-227-1810, 81-43-224-4162, e-mail: adachi@ophthalm.m.chiba-u.ac.jp)(SM)

Adams, Edward C. (1858-1910) American ophthalmologist. Adams received his M.D. at Northwestern Medical College, St.Joseph, Mo., in 1886 and settled in St.Joseph as ophthalmologist and otologist. American Encyclopedia of Ophthalmology, Vol.1,p.92.

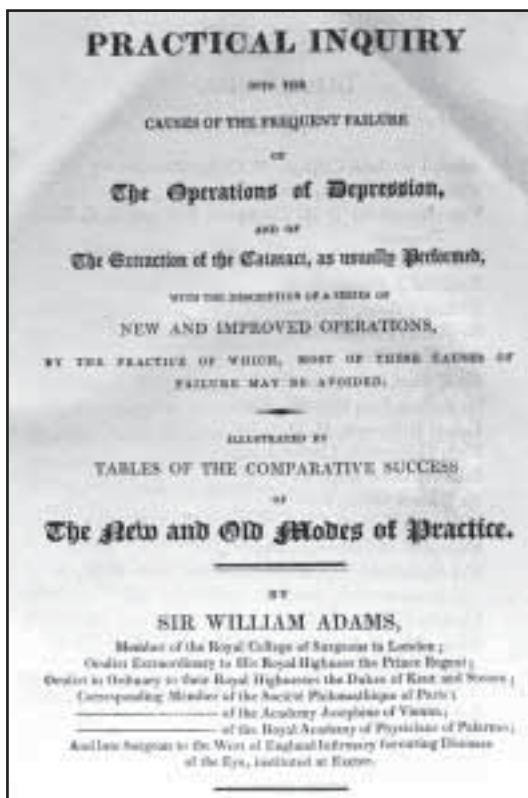
Adams, George A. (1750-1795) Famous London optician who devoted all his energy to optics and mechanics and acquired a world-wide reputation as a maker of spectacle and microscope lenses. He succeeded his father as mathematical-instrument maker to the court and wrote: "*Essays on the microscope*" London 1787 and "*Essay of Vision, Explaining the Fabric of the Eye and the Nature of Vision*", London 1789, German translation by Kries 1794, 2nd ed.1800. American Encyclopedia of Ophthalmology, Vol.1,p.92.

Adams, George, "the Elder" (1720-1773) famous British instrument maker to George III, father of George A.→Adams. He was the author of "*Micrographia illustrata, or the microscope explained*" London 1745. His treatise, that went through several editions, describes the uses and capabilities of the microscope, including the universal single and double microscopes which he invented.

Adams, Matthew A. (1836-1913) British ophthalmologist, surgeon to the Kent County Ophthalmic Hospital at Maidstone. He was the inventor of an instrument called "*Horamagraph*" used for investigating the field of vision. The Ophthalmoscope, 1913, p.382.

Adams, Philip Edward Homer (1879-1948) British ophthalmologist from Oxford. After leaving Lancing in the late 'nineties of the 19th century, he came up to Exeter College, Oxford, and during his period there as an undergraduate spent much time working at the Oxford Eye Hospital as a clinical assistant to his uncle, Robert Doyne, and for some part of this time filled the post of unqualified house surgeon there. After taking his degree and first M.B., he went to the London Hospital for clinical experience. While at London he

qualified M.B.,Oxon, and in 1904 took the F.R.C.S., (Eng.). He then returned to Oxford and started ophthalmic practice in partnership with Robert Doyne, and was appointed Assistant Surgeon to the Oxford Eye Hospital. The period 1900/1910 was a very active one in Oxford Ophthalmology. A Readership in Ophthalmology had recently been established with Doyne as the first Reader. The Diploma in Ophthalmology was inaugurated and the beginnings of the Oxford Ophthalmological Congress were in the making. Into all these activities Adams entered to the full, and it can be said that the subsequent success of the Congress was largely due to his efforts, inspired by the genius and drive of Doyne and backed by the business and literary ability of Sydney Stephenson. In 1912 on the retirement of Doyne, Adams was made Reader in Ophthalmology to the University and Senior Surgeon to the Hospital. From then on for thirty years he was the lynch pin of Oxford Ophthalmology. He was responsible as Deputy Master for a large part of the arrangements for each annual Congress at the Oxford end; as Reader he was responsible for the course of study needed by Statute for candidates for the Diploma of Ophthalmology, and he was at the same time, as Senior Surgeon to the Hospital, involved in day to day affairs relative to its efficiency. He also had a large private practice. He went through the post of Master of the Oxford Ophthalmological Congress 1925/1927 and delivered, 1931, the Doyne Memorial Lecture. In 1944/1945 he was President of the Ophthalmic Section of the Royal Society of Medicine. Adams wrote: *Pathology of the Eye*, Oxford 1912. BJO 1948,32:254. The Lancet 1948,1:349 and 1948,2:320. JPW



Sir William Adams

Adams, William (Sir William) (1783-1827) British ophthalmologist who was trained in ophthalmology by John Cunningham →Saunders at the London Infirmary for Curing Diseases of the Eye and Ear. He earned a knighthood in 1814 for his (controversial) claims to cure the Egyptian ophthalmia, which was then prevalent among British troops. He became surgeon and oculist extraordinary to the Prince Regent and Dukes of Kent and Sussex. Two years before his death, he changed his name to Rawson, which was his wife's maiden name. Adams wrote "*Practical observations on ectropium or eversion of the eyelids, with the description of a new operation for the cure of that disease*" London 1812; "*A letter to the Right Honourable and Honourable Directors of Greenwich Hospital, containing an exposure of the measures ... by the Medical Officers of the London Eye Infirmary, for the purpose of retarding the adoption, and execution of plans for the extermination of the Egyptian ophthalmia*" London 1817; "*A practical inquiry into the causes of the frequent failure of the operations of depression, and of the extraction of the cataract*" London 1817; "*A reply by Sir William Adams to a recent publication against him*" London 1818; "*Report of the Committee of the London Infirmary for Curing Diseases of the Eye, occasioned by the false and calumnious statements contained in a letter addressed by Sir William Adams*" London 1818; "*A treatise on artificial pupil*" London 1819. Albert, Am Encyclopedia 1,p.92 (with wrong life dates).

Adelmann, George F.B. (1811-1888) Russian ophthalmologist of German origins born in Fulda (Germany). Adelmann studied in Marburg and Würzburg and was for a certain time engaged in a general practice in Fulda. In 1837 he returned to Marburg, in order to become assistant in the

surgical clinic of Ullman. In 1841 he was called to the combined chairs of Surgery and Ophthalmology in the University of Dorpat, and in this double capacity officiated for thirty years till 1871. He wrote prolifically and in four language: Latin, German, Italian and Russian. His best known writings in ophthalmology are: "*Über endemische Augenkrankheiten der Esten in Livland und verwandter Stämme im Russischen Reiche*" and "*Beiträge zur medizinischen und chirurgischen Heilkunde* „ (2 vols.) Erlangen 1845 American Encyclopedia of Ophthalmology, Vol.1,p.97.Albert

Adelmann, Heinrich A. (1807-1884) German ophthalmologist. Adelmann received his medical degree in 1830 at Würzburg, and, in 1837 , was appointed docent (lecturer), and in 1840 extraordinary professor at the same institution. He taught theoretic ophthalmology and gave ophthalmic operation courses using phantoms and the cadavers. He invented in 1852, a suction instrument for hypopion. He also was an excellent artist and furnished the

illustrations for Textor's "*Elementary Principles for the Teaching of Surgical Operations*" 1834-36. American Encyclopedia of Ophthalmology, Vol.1,p.97.

Adhikari, Basu Prasad (1951-) Nepalese Ophthalmologist, Medical Director of MWRECC, Fateh Bal Eye Hospital Nepalgunj. He graduated from R. G. Kar Medical College of Calcutta with MBBS in 1976 and extended his studies at Bristol University in UK and received his M.Sc. in 1990. He worked at various hospitals as a medical officer before 1990, e.g. R.G. Kar Medical College Hospital, Khandbari Hospital, Koshi Zone, Nepal, Kailali Hospital Seti Zone Nepal, Paro Hospital Bhutan, and as a SHO and Ophthalmic Surgeon at Nepal Eye Hospital Kathmandu, Royal United Hospital, Bath UK, The General Hospital Eye Department, Burton-on-Trent, U.K. He has performed more than 10 thousands cataract operations and conducted more than 24 eye camps. He also worked as a consultant ophthalmologist in Shigatse, Tibet, and trained ophthalmologists, ophthalmic assistants and medical students. Since 2000 he is also working as a professor of ophthalmology for undergraduates at Lord Buddha Medical College at Kohalpur, Nepalgunj. He is in the Medical Director position since 1994. (MWRECC, Fateh Bal Eye Hospital, P.O. Box 32, Fultekra, Nepalgunj, Nepal. Phone: +977-81-20598; e-mail: baral@fbeh.wlink.com.np) (SM)

Adler, Hans (?-?) Austrian ophthalmologist who wrote „*Die während und nach der Variola auftretenden Augenkrankheiten*“ Wien 1874 and „*Zweiter Bericht über die Behandlung der Augenkranken*“ Wien 1875.



Sir William Adams

Adler, Francis Heed (1895-1987) American ophthalmologist who was born in Philadelphia, the son of a physician. He graduated from the University of Pennsylvania with a Bachelor of Arts in 1916, received a Master of Science in physiology in 1918, and an M.D. in 1919. As a medical student, Adler worked in the Department of Physiology and studied at Woods Hole, Massachusetts. After internship at the hospital of the University of Pennsylvania he became an instructor in physiology at the University. In the same year he became associated with George de→Schweinitz in the Department of Ophthalmology. In 1927, he became assistant surgeon at Wills Eye Hospital in Benjamin F.→Baer's clinic. In 1933 he became attending surgeon. Adler continued in both the Department of Physiology and the Department of Ophthalmology until 1937 when he became the William F. Norris and George E. de Schweinitz professor and chairman of the Department of Ophthalmology. Adler was then named a consulting surgeon at Wills Eye Hospital. In 1933 Adler published "*Clinical Physiology of the Eye*," the first textbook in English dealing with the topic. In 1950 he expanded the textbook to "*Physiology of the Eye: Clinical Applications*," Which went through four editions. The textbook has been continued as "*Adler's Physiology of the Eye*" and is now in its ninth edition. After the death of Sanford→Gifford, Adler took over his "*Textbook of Ophthalmology*" in 1941 and completely revised it. It has been translated into Polish, Spanish, and Chinese. Subsequent editions were written by his longtime associate and successor as chairman of the Department of Ophthalmology, Harold G.→Scheie, assisted by Daniel M.→Albert. Adler was named an associate editor of the *Archives of Ophthalmology* in 1929 and succeeded Arnold Knapp as editor in 1950.

He enlarged the editorial board of the *Archives*, established strict statistical standards, and developed an authoritative review of the literature on a different topic each month. He served as editor until 1960 when the American Medical Association adopted the ten-year maximum service regulation. At that time he became a consulting editor of the *American journal of Ophthalmology*, a position he held until 1965. He became emeritus professor of ophthalmology in 1960, at which time his former residents commissioned Franklin Watkins to paint his portrait. It now hangs at the University of Pennsylvania. Harold Scheie organized a special issue of the Journal of Ophthalmology (AJO 1960,50:1025) to mark this transition and William O. →La Motte, Jr., published a tribute. In 1975 the editorial board of the American Journal of ophthalmology and members of the American Board of Ophthalmology paid tribute (AJO 1975,79:1) to

Adler's contribution to the vitality and integrity of American ophthalmology. In 1978 the Francis Heed Adler lectureship was established at the University of Pennsylvania. He served as a member of the American Board of Ophthalmology for thirty years, as a director from 1950 to 1957, as chairman in 1955, and as a consultant from 1957 to 1967. He became executive director of the Board in 1967 and served until 1980. He was active in refining the multiple choice question method of the American Board of Ophthalmology and in streamlining many of its examination procedures. Adler was chairman of the Section on Ophthalmology of the American Medical Association in 1953 and received its Prize Medal in ophthalmology in 1959. He was first vice president of the American Academy of Ophthalmology and Otolaryngology in 1954 and served as president in 1969. He received the Howe Medal of the American Ophthalmological Society in 1951 and was president in 1962. The Association for Research in Ophthalmology awarded him its highest honor, the Proctor Medal, in 1967. He received the Lucien Howe Medal of the University of Buffalo in 1961. He gave the first Gifford Lecture in 1945, the Edward Jackson Lecture in 1947, the Bedell Lecture in 1950, and the de→Schweinitz Lecture in 1954. After retirement from the University of Pennsylvania, Dr. Adler continued a consulting Practice in Philadelphia until well into his 80th year. His major clinical interest was various aspects of ocular motility. Adler's writings and lectures influenced several generations of ophthalmologists. He brought a scientific and editorial rigor to the Archives of Ophthalmology that was copied by many medical periodicals. He brought to the American Board of Ophthalmology an equanimity and scholarship reflected in a series of innovative examination techniques, candidate (and examiner) appraisal, and interaction with other boards. AJO 1987,104:448-449

Aegina, Paul of ophthalmologist of the Greek middle ages. The dates of his birth and death are not precisely known, but he undoubtedly flourished in the first half of the seventh century. Baas sets the limits of his life as 625-690 A. D., on the other hand, as pointed out by Handerson, "if the date assigned [by Baas] for the birth of Paul is correct, he could have been but sixteen years old when Alexandria was captured an age when his medical education at least could have been scarcely begun." We know but little of his life. He, however, was educated in Alexandria, and practised in that city with very great success. He was also a famous writer, but of all his works, and they must have been numerous, the only one preserved until our day is the great compendium of medicine in seven books, called "*Hypomnema*." This book became at once a high authority, and so remained not merely throughout the Byzantine middle ages, but also through the whole of the saracenic period. Even at the present day it possesses a remarkable interest, for the sponge-like Paulus, having, as it seems, the freest access to that great repository of ancient learning the Alexandrian library, and at a time just prior to its destruction by the Arabs absorbed the medical and surgical learning of the age and gave it forth again to later generations in the form of his all-embracing work "*Hypomnema*" truly a monument both to his own industry and to the medical and surgical attainments of the Greco-Roman world. The parts of the great treatise that deal with ophthalmology are: Book 1, Section 31, "*On Dimness of Sight*"; Book III, Section 22, "*On Diseases of the Eye*"; Book VI (Surgical), Section 2 "*On Burning of the Head for Ophthalmia*," and Sections 4 to 22 inclusive, which treat of nearly all the other surgery of the eye as this was known and practised in the seventh century A.-D. American Encyclopedia of Ophthalmology 12,p.9371;

Aetius of Amida (502-575) A most exhaustive ophthalmologic compiler born in Amida (now Diarbekir). Aetius was educated at the University of Alexandria and very soon settled in Byzantium, where he seems to have passed the remainder of his days. He was a devout Christian, became Lord High Chamberlain to the Great Justinian and also body-physician to the same potentate. His famous "*Sixteen Books on Medicine*" was a kind of Encyclopedia of the healing art as known and practiced in his day. . The chapters on ophthalmology are the subject of a monograph by Julius Hirschberg "*Die Augenheilkunde des Aetius aus Amida*" (English translation by Richey L. Waugh, Wayenborgh 2000). Other editions are: "*Libri sexdecim nunc primum latinate donati, in quibus cuncta quae ad artem curandi pertinent sunt congesta ... in tres divisum est tomos*" Venice 1534 (first complete Latin edition of Aetius' encyclopedic compilations of doctrines and practices of the healing arts known in his day in which the seventh book, "*De oculorum morbis*," contains

an extensive account of diseases of the eye; "*Contractae ex verteribus medicinae tetra-biblos*" Basle 1542; "*Contractae ex verteribus medicinae sermones XVI*" (2 vols.) Venice 1543-1544. American Encyclopedia of Ophthalmology, Vol.1, p.110-111. Albert

Agarwal, Lalit Prakash (1922-) Indian Ophthalmologist, Head of Dr. Rajendra Prasad Center for Ophthalmic Sciences (AIIMS), New Delhi. He graduated from Lucknow Medical College in 1946, studied Ophthalmology further in London (DOMS, London, 1947), in Oxford (DO, 1947) and in Lucknow (M.S. in Ophthalmology, 1949). He then served as the Lecturer in S. N. Medical College, Agra (Uttar Pradesh) in 1950 - 1957, and then as the Head of the Department of Ophthalmology at Ganesh Shankar Vidyarthi Memorial Medical College in Kanpur during 1957 - 1959. He was appointed in 1959 the Professor of Ophthalmology of the AIIMS and served until 1984. During his tenure, he also served as the Dean of the AIIMS (1977-1979) and the Director (1979-1984). He worked as the Chief Organizer of Dr. Rajendra Prasad Center for Ophthalmic Sciences of the AIIMS in 1966 - 1984. He worked as the Head of the AIIMS till 1984. His professional activities has been extensive and positions he has held are President of the All India Ophthalmological Society (AIOS) (1977-1978), Founder President of the Federation of Ophthalmic Research and Education Centers-India (1985), Honorary Member of the Association of Eye Research Workers, London (1965), Fellow Institute of Barraquer Spain (1960), Executive Committee and Vice President of the Afro-Asian Foundation of Ophthalmology (1959-1979), Life Member of the Academia Ophthalmologica Internationalis (1977) and Member of the International Council of Ophthalmology (1978-1986). He has served as the Ophthalmic Surgeon to the President of India (1964) and Honorary Ophthalmic Advisor to the Government of India, Ministry of Health and Family Welfare (1971-1979). He has been the Editor of many Scientific Journals, e.g. *Ophthalmologica* (Switzerland) and *Vision, an International Journal of Ophthalmology and the Prevention of Blindness*. He has served as the Technical Advisor to a large number of Ophthalmic Hospitals and Institutes throughout India and aboard. His scientific activities covered a wide area and he published more than 450 scientific papers in National and International Journals. He wrote more than 22 books and some examples are (from Publishers, Sankalp, Darya Ganj, Delhi), "*General and Ocular Anatomy*", "*Physiology, Pharmacology and Microbiology*", "*Community Ophthalmology and Entrepreneurship*", "*Chatterjee's Hand Book of Ophthalmology*", "*Agarwal's Eye Diseases-2nd Edition*" and "*Principles of Optics and Refraction - 5th Edition*". In recognition of his meritorious service, he has been granted many National and International Awards.(SM)

Agnew, Cornelius Rea (1830-1888) American surgeon born in New York City. When fifteen years of age, Agnew entered Columbia College, an institution which, in later years, was to owe much to his labors and, at the age of nineteen, received therefrom the degree of bachelor of arts. In the same year he began to study medicine, after the fashion of the time with a preceptor, Dr. J. Kearney Rogers, who for many years was surgeon to the *New York Hospital* and to the *New York Eye Infirmary*, as well as Professor of Anatomy at the *College of Physicians and Surgeons*. In the last named institution Agnew attended the regular course, and, in 1852, received his professional degree. Serving for a year, or more as house surgeon in the *New York Hospital*, he proceeded, in 1854, to what were then the western wilds, south of Lake Superior. There for about a year he practised in a village which is now Houghton, Michigan. Receiving without solicitation the appointment of surgeon to the Eye and Ear Infirmary of New York City, he returned to his native town early in 1855. Soon, however, he sailed for Europe to prepare himself still further for the arduous duties of his new position. This he did solely on his own initiative, and because of the deep conscientiousness for which he was ever noted. He did not, however, while abroad, confine his attention exclusively to the study of ophthalmology and otology. In Dublin, for example, though he studied under William (afterwards Sir William) Wilde, deviser of "Wilde's Incision" for mastoid abscess, he became, at the same time, a resident pupil of the lying-in asylum in London, a little later, although he studied under William →Bowman and George →Critchett, he devoted much attention to general medicine and general surgery. Finally, in Paris, where his masters in ophthalmology were no less personages than →Sichel and →Desmarres, he found time to attend the clinics of Velpeau and Ricord. Returning to New York late in 1855, he entered on a career as general

practitioner, and soon was appointed surgeon general of the state. Three years later, he was appointed medical director of the New York Volunteer Hospital. In 1856 he married Mary Nash, daughter of Lora Nash, a New York merchant. In his later years Agnew devoted himself exclusively to diseases of the eye and ear. Dr. Agnew was a man of strongly marked and wholly natural executive ability. Hence it was that, first and foremost, he was a founder of institutions. He was one of four to start the *Union League Club* of New York City. He assisted, in 1864, in organizing the *School of Mines* of Columbia. In 1866, at the request of the entire faculty, he established an ophthalmic clinic in the *College of Physicians and Surgeons of New York*. Two years later he brought into existence the *Brooklyn Eye and Ear Hospital*, and, the following year, the *Manhattan Eye and Ear Hospital of New York*. He was also one of the founders of the *New York Ophthalmological Society*. In 1869 he was elected to the clinical professorship of diseases of the eye and ear in the *College of Physicians and Surgeons*-a position which he held till his death. Agnew's contributions to ophthalmic literature and his inventions are numerous and valuable. He devised, for example, an excellent operation for divergent strabismus, which he described in detail in the *Transactions of the American Ophthalmological Society*, 1886, p. 31, under the title, "*A Method of Operating for Divergent Squint*." His "*operation for thickened capsule*" is also an important procedure, often described today (1913) by European ophthalmologists even in their smaller manuals. American Encyclopedia of Ophthalmology, Vol.1,p.190-193

Agnew, D. Hayes (1818-1892) American surgeon and excellent ophthalmologist born in Nobleville (now Christiana) PA , . Agnew studied medicine with his father, a physician of considerable importance locally, entered in 1836 the Medical Department of the University of Pennsylvania, and in 1838 received his degree from that institution. In 1844 he entered commercial life, in which he was a dismal failure, and, in 1847, returned to the practice of medicine. Unrivalled as an operator, he was also an impressive teacher and a clear and forceful writer. "Brilliant" is hardly the word for any of the accomplishments of Dr. Agnew. Though all he did was interesting and though he possessed an extremely attractive personality, yet the salient characteristic of his performances in every division of his work was thoroughness, solidity. His *magnum opus* was "*The Principles and Practice of Surgery*" in three volumes-which appeared from 1878 to 1883. Concerning this work Agnew's greatest (but sincere and outspokenly generous) rival, Samuel D. Gross, remarked to its author, "You have produced a great and noble work, one creditable alike to yourself, your profession, and your country." Ophthalmology received in this masterpiece of Agnew's, a clear and comprehensive treatment, one that attracted the favorable attention of all the ophthalmologists of the day. In addition to this memorable service in his chosen field, Agnew was undoubtedly one of the past masters of operative oculists. Few have ever performed an operation on an eye with better judgment, greater gentleness, or more extreme precision. He was one of the surgeons to the Wills Eye Hospital from 1866 to 1868. In the operating room Dr. Agnew wore, as a rule, a very old linen duster, buttoned close up in front, and, as a matter of course, very clean, but, even in front, very patchy, and ragged and disreputable looking behind. Former students of the great surgeon inform me that their memory of the man is inseparable from his "operating duster". Agnew came before the country prominently as one of the physicians in the case of President Garfield. American Encyclopedia of Ophthalmology, Vol.1,p.193-194; Albert

Aguilon, Francois d' (1566-7(?) -1617) French scientist and rector of a Jesuit college in Antwerp (Belgium). Assigned to organize the teaching of exact sciences for all of Belgium, he developed the project into a master treatise on optics. Aguilon invented the horopter and described its importance in explaining binocular vision. He wrote: *Opticorum libri sex, philosophis juxta ac mathematicis utiles*. Antwerpen 1613. The beautiful illustrations were drawn by Peter Paul Rubens. Albert

Agulto, Manuel B. (1947-) Filipino Ophthalmologist, Executive Director of the eye Referral Center and Vice chairman of the Glaucoma Research Foundation, Inc., Manila. He graduated from the University of the Philippines (UP), College of Medicine in 1973 with an M.D. degree. After completing ophthalmology residency at the UP-Philippines General Hospital, he studied in Boston, enrolled in postgraduate ophthalmology at Harvard Medical School (1979), trained as Glaucoma and Anterior Segment Disease Fellow at New England Glaucoma Research Foundation (1982-1983) and also at the

Institute of Clinical Ophthalmology, Kiryu, Japan (1987). He serves as University Researcher at the UP Institute of Ophthalmology, Vice-Chairman and clinical Associate Professor at the Department of Ophthalmology, UP-PGH Medical Center and also as the Chairman of the Eye Department of J.B. Lingad Memorial General Hospital (Central Luzon Regional Hospital). He works as President of the *Philippine Glaucoma Society* and also as member of the Editorial Board of the *Philippine Journal of Ophthalmology* and *Asian Journal of Ophthalmology*. He is a member of many national and international ophthalmological societies, and has received the Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology, Merit Award of the Philippine Board of Ophthalmology and many other honors. He was past president of the UP Medical Alumni society (1998).(SM)

Ahmad, Mohammed Mukhtar (1937-) Pakistani Ophthalmologist, Director, Institute of Eye Diseases, Karachi. Received his primary & secondary education in Faisalabad, MBBS from Nishtar Medical College, Multan (1963), DO (England) in 1970, FRCS in 1972, FRC.Ophth (London) 1989. His career positions are Resident House Officer / Senior House Officer, England, Wales, Ireland (1964 to 1968), Registrar, Inverness Scotland 1968 to 1970, Registrar, Glasgow, Ophthalmic Institute(1970 to 1972), Senior Registrar Tennent's Institute of Ophthalmology, Glasgow University, Scotland (1972 to 1974), Locum Consultant, Ophthalmic Surgeon in Scotland (1974), In-charge Adamji Foundation Retina Clinic Karachi (1974 to 1976), private practice, Vitreo-Retina and General Ophthalmology, Karachi (1976 to 1980), invited as in-charge Ophthalmic Department Liaquat National Hospital, for establishment of department of Ophthalmology (1980 - 1990), Director, Institute of Eye Diseases, Karachi (1987) to date, President Ophthalmological Society of Pakistan , Karachi branch (1997 -98) , Chairman Ethical Committee Ophthalmological Society of Pakistan since 1996, member Medical Group for National Health Problems; advising the President of Pakistan (1995), member Board of Trustees, LRBT. Pakistan. The Trust has nine free eye hospitals in Pakistan including two state-of-the-art base hospitals in Karachi and Lahore, member Board of Directors. Metropolitan Rotary Club, Karachi (1996-97), honorary appointment by the College of Physicians & Surgeons of Pakistan as examiner for the fellowship (FCPS) and MCPS, several times, assessor for FCPS Dissertations, member Ophthalmological Society of United Kingdom, life member Ophthalmological Society of Pakistan , founder & life member of Pakistan Academy of Ophthalmology, member Pakistan Society of Neurologists, life member Society of Physicians of Pakistan, life member Society of Surgeons of Pakistan, life member Ida Rue Society for the Welfare of the Blind, Chairman Research Committee of Glaucoma Interest Group, Ophthalmological Society of Pakistan, Founder Vitreo- Retinal association, Ophthalmological Society of Pakistan "Fellow American Academy of Ophthalmology, Fellow Royal College of Ophthalmologists UK. His academic & research assignments are, attended 9 international conferences and presented 6 papers in such conferences, attended almost all national conferences, under the auspices of Ophthalmological Society of Pakistan and presented 37 papers in such conferences. His editorial assignments are Member Editorial Board of the *Journal of Ophthalmological Society of Pakistan*, founder member and executive managing Editor of the *Journal of the Pakistan Academy of Ophthalmology* JP AO, Specialist: *Journal of Medical Sciences*, *British Medical Journal*, Pakistan edition, Author of "*Code of Ethics for Ophthalmological Society of Pakistan*". He is a recipient of many awards e.g. FRCOphth, Gold Medal from Ophthalmological Society of Ceylon. On invitation to deliver state-of-the art lecture on Silicone Oil in complicated retinal detachment. August, 1989 Colombo Conference, Paul Haris Medal twice for outstanding service to humanity, Pride of Performance Gold Medal of the President of Pakistan 1996, Norval Christy Gold Medal of Ophthalmological Society of Pakistan 1997, Wania Memorial Lecture Gold Medal at Ophthalmological Society of Pakistan Conference 28th August 1999. He is involved in social work e.g. has participated in eye Camps in Sindh & Punjab, Involved in social welfare work through rotary International. His hobbies are Sport, Interest in Urdu Literature, Poetry in Particular, and Study in Divine Religions, Active member of Rotary International. (Address: Institute of Eye Diseases, 241/3/A, Block-2, Shahrah-e-Quaideen, P.E.C.H.S., Karachi, Pakistan. Phone: +92-4556460, +92-445561-62) (SM)



Goro Akagi

Akagi, Goro (1909-1999) Japanese Ophthalmologist, Professor Emeritus of Okayama University. He graduated from Okayama University in 1935, studied Ophthalmology under Prof. HATA Bunpei and received the degree Doctor of Medical Sciences in 1938. He was appointed the first Professor of Ophthalmology of Hiroshima University in 1948 and was promoted to the Professor and Chairman of the Department of Ophthalmology of Okayama University in 1951. He worked in this position until retirement in 1969: during his tenure he served as the President of Okayama University in 1964-1968. He served as the President of Kawasaki Medical School in 1970-1974. He gave special lectures "*Autoregulation of the intraocular pressure*" at the 60th Congress and "*Man and the Science*" at the 76th Congress of the Japanese Ophthalmological Society: the Society granted him the Society's Award for his outstanding contributions. He is the author of "*Refraction of the Eye*", *Handbook of Ophthalmology of the Japanese Ophthalmological Society*, Vol. 8, 1955, and many other ophthalmologic books. He is an Emeritus Member of the Society. In recognition of his distinguished service, the Government conferred on him the Second Order of the Sacred Treasures in 1980.(SM)

Akagi, Yoshio (1946-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Fukui Medical University. He is a graduate of Kyoto Prefectural Medical University in the year 1972 and studied Ophthalmology at the University under Prof. →TANI Michiyuki. He received his degree Doctor of Medical Sciences from the University in 1979 (thesis: *Localization of the motor neurons innervating the extraocular muscles in the oculomotor nuclei of cat and rabbit using horseradish peroxidase*. J. Comp. Neurol. 181: 745, 1978). He is in the present position as above since 1993. He serves as a Councillor to the Japanese Ophthalmological Society (JOS), Japanese Society for Cataract Research (JSCR), Japanese Society of Ophthalmic Diabetology and Japanese Society for Ocular Pharmacology. He worked extensively on basic aspects of cataract and diabetes, and published 189 original papers, and some examples are "*Aldose reductase localization in retinal mural cells*. Invest. Ophthalmol. Vis. Sci. 24: 1516, 1983" and "*Localization of aldose reductase in the human eye*. Diabetes, 33: 562, 1984". For the excellence of his research, he received the National Eye Institute Scientific Director's Award (1984) and Award of the JSCR (1989). He is a member of the Association for Research in Vision and Ophthalmology (ARVO). (Department of Ophthalmology, Fukui Medical University, 23 Shimoaizuki Matuoka, Fukui 910-1193, Japan. phone: +81-7-7661-8400, fax: +81-7-7661-8131, e-mail: akagiy@fmsrsa.fukui-med.ac.jp)(SM)

Akiya, Shinobu (1932-) Japanese Ophthalmologist, former Professor of Ophthalmology, University of Occupational and Environmental Health, Kitakyushu. He was born as the 8th generation in an Ophthalmology family, and graduated from Keio University in 1958, studied Ophthalmology at the University under Prof. →UEMURA Misao: he received the degree Doctor of Medical Sciences in 1963 (thesis: *Electron microscopic studies of the retina*. J. Jpn. Ophthalmol. Soc. 65: 1793, 1961; *ibid.* 66: 304, 1962; *ibid.* 66: 1177, 1962; *ibid.* 68: 28, 1964). He was promoted to Lecturer of the University in 1966 and spent one year (1968-1969) as a Research Fellow at the Cornea Service and Research Laboratory of New York Hospital. He was made the Assistant Professor at Keio University in 1974 and then was invited to be the Professor and Chairman of the Department of Ophthalmology, University of Occupational and Environmental Health in 1988 and served until retirement in 1998. Currently, he is serving as Clinical Professor to Keio University in part time. He has served the Japanese Ophthalmological Society as a Councillor since 1987. His many publications embrace "*Granular dystrophy of the cornea*. Arch. Ophthalmol. 84: 179, 1970", "*Morphological study on glycosaminoglycans in the developing human vitreous*. Ophthalmic Res. 16: 145, 1984" and "*Electron microscopic study of the developing human vitreous collagen fibrils*. Ophthalmic Res. 18: 199, 1986".(SM)

Alabaster, Edward Beric (1893-1971) British ophthalmologist. He joined the staff of the Birmingham Children's Hospital in 1922 as consultant ophthalmologist, succeeding Martin Young, and he served the hospital until 1946. He qualified in 1916 and at once volunteered and joined the R.A.M.C., attaining the rank of captain and seeing service in Serbia and Salonika in the first world war. On his return he decided to specialize in ophthalmology and took the Diploma at Oxford in 1921. He was appointed surgeon to the Birmingham Eye Hospital in 1922. As consultant to the Children's Hospital he became

intensely interested in the treatment of squint and initiated the *first* hospital orthoptic department in Britain. Under his guidance and with Miss D. Jones as head teacher, the orthoptic training school earned a nation-wide reputation. He also devised his own original squint operation using a gold bar splint. He became an authority on this subject, which he took for the Mary Louisa Prentice Montgomery Lecture which he was invited to give in Dublin in 1937. He was also a founder member of the British Orthoptic Board and served for many years on its examining panel. He excelled as a surgeon and was the first in Birmingham to adopt the intracapsular method of cataract removal: his work was a revelation of delicacy and precision, and he was ever enthusiastic in the pursuit of new ideas and surgical techniques. He was elected F.R.C.S.Eng. in 1948. He was a prominent member of the Midland Ophthalmological Society, of which he was President from 1939 to 1943, and a regular attendee at the Oxford Ophthalmological Congress. Although ill-health forced him to relinquish his appointment at the Children's Hospital in 1946, he continued his service at the Eye Hospital until 1958, having served there for 36 years. Even after retirement he continued in consultation and in industrial clinics. BJO 1971,55:720

Al-Akfani, Sams ad-din Muh. B. Ibrahim b. Said as-Singari al-Misri b. (? – 1348) Egypto-Arabian ophthalmologist. He wrote "The Discovery of Filth in Eye-Diseases" which is partly scientific and partly superstitious in character. That book seems to have made but little impression either in the Eastern, or Western ophthalmologic world. American Encyclopedia of Ophthalmology, Vol. 1, p.202-203.

Albert, Daniel M. (1936-) American Ophthalmologist, F.A. Davis Professor and Chair, and Lorenz E. Zimmerman Professor, Department of Ophthalmology and Visual Sciences, University of Wisconsin - Madison. Albert graduated from University of Pennsylvania School of Medicine with his M.D. degree granted in 1962, his M.A. received (Honorary) from Harvard Medical School (1976) and his MS in Health Administration from the University of Wisconsin - Madison (1997). He completed his Residency in Ophthalmology at the University of Pennsylvania Hospital (USPHS) (1963-1966), and further worked as a Clinical Associate in Ophthalmology, Surgeon USPHS and as a Research Fellow at the National Institute of Neurological Disease and Blindness, National Institute of Health (1966-1968), and as NIH Special Fellow in Ophthalmic Pathology, Armed Forces Institute of Pathology (1968-1969). He has served in the following academic positions, i.e. Instructor in Ophthalmology and Lecturer, Graduate Division of Medicine, University of Pennsylvania (1969-1968), Associate in Ophthalmology and Lecturer, Graduate Division of Medicine, University of Pennsylvania (1968-1969), Assistant Professor of Ophthalmology (1969-1970), Associate Professor of Ophthalmology (1970-1975), Professor of Ophthalmology, (1975-1976) of Yale University School of Medicine; Professor of Ophthalmology, Harvard Medical School (1976-1992), David G. Cogan Professor of Ophthalmology, Harvard Medical School (1983-1992) ; Frederick Allison Davis Professor of Ophthalmology and Chairman, University of Wisconsin, Madison Affiliation with Department of the History of Medicine as Professor (1992-). He is in the present position as above since 1992. His major interest in Ophthalmology is ocular and adnexal tumors: natural history, treatment, morphology, ultrastructure, and etiology and he published more than 500 original articles in reviewed professional journals, many books and monographs, and also contributed chapters to more than 84 books. Some examples of books are: 1. Albert DM, Scheie HG: *A History of Ophthalmology at the University of Pennsylvania*. Springfield, IL, CC Thomas, 1965; 2. Scheie HG, Albert DM: *Adler's Textbook of Ophthalmology*, 8th Edition; Philadelphia, WB Saunders, 1969; 3. Albert DM: *Jaeger's Atlas of Diseases of the Ocular Fundus*. Philadelphia, WB Saunders, 1972; 4. Hedges TR Jr, Frayer WB, Albert DM: Harold G. Scheie: *A Biographical Sketch and Selected Papers*. Philadelphia, WB Saunders, 1974; 5. Curth H, Curth HO, Urbach FF, Albert DM: Korting's *The Skin and Eye*. Philadelphia, WB Saunders, 1976; 6. Scheie HG, Albert DM: *Textbook of Ophthalmology*, 9th Edition. Philadelphia, WB Saunders, 1976; 7. Albert DM, Puliafito CA: *Foundations of Ophthalmic Pathology*. New York, Appleton-Century-Crofts, 1978; 8. Albert DM, Weichselbaum RR (Eds): *Ocular Tumors. International Ophthalmology Clinics*, Volume 20, Number 2. Boston, Little, Brown, 1980; 9. Albert DM (Ed): *Ophthalmology Alert*. Boston, Warren Gorham and Lamont, 1982; 10. Ni C, Albert DM (Eds): *Tumors of the*

Eyelid and Orbit: A Chinese-American Collaborative Study. *International Ophthalmology Clinics* Volume 22, Number 1. Boston, Little, Brown, 1982; 11. Albert DM, Ni C (Eds): *Ocular Tumors and Ocular Pathology*: A Chinese-American Collaborative Study. *International Ophthalmology Clinics*, Volume 22, Number 3. Boston, Little, Brown, 1982; 12. Albert DM, Jakobiec FA (Eds): *Principles and Practice of Ophthalmology: Basic Science*. Philadelphia, WB Saunders, 1993; 13. Albert DM, Jakobiec FA (eds): *Principles and Practice of Ophthalmology: Clinical Practice* (5 vol.). Philadelphia, WB Saunders, 1993; 14. Albert DM, Henkind P: *Men of Vision*. Philadelphia, WB Saunders, 1995; 15. Albert DM (Ed): John Jeffries *Lectures on the Diseases of the Eye*, Oostende, Wayenborgh 1998; 16. Albert DM, Norton EWD, Hurtes R: *Source Book of Ophthalmology*. Boston, Blackwell Science, 1995; 17. Albert DM, Jakobiec FA: *Atlas of Clinical Ophthalmology*. Philadelphia, WB Saunders, 1996; 18. Albert DM, Edwards DD: *The History of Ophthalmology*. Cambridge, MA, Blackwell Science, 1996; 19. Albert DM: *Ophthalmic Surgery: Principles and Techniques*. Blackwell Science, 1998; 20. Albert DM: *The Best of Archives of Ophthalmology*. American Medical Association, 2000. To be published during 2001: Albert, DM (editor): *Managing Medicine: A guide for the Physician* (Blackwell) and Albert, DM: A Chronology of Ophthalmology (Pergamon). Based on his expertise, he has been invited to many Universities in the U.S and other Countries as well, and some samples are: Faculty of Lancaster Course in Ophthalmology (1972-1991), Associate Examiner, American Board of Ophthalmology (1974-), Lecturer in Dermatology, Yale University School of Medicine(1976-1985) Consultant in Ophthalmic Pathology, Brigham and Women's Hospital, Boston, Massachusetts(1976-1992), Consultant, National Institute for Occupational Safety and Health: Field Study of Ocular Neoplasms in Chemical Workers, Belle, West Virginia (1978, 1979), Visiting Professor, University of London and Visiting Scientist, Institute of Ophthalmology, London, England (1985), International Consultant, Israeli Center for Intraocular Tumors, Jerusalem, Israel (1989-), and visiting professor to University of Newcastle-on-Tyne(1974), Shanghai First Medical College (1980), University of Glasgow (1992), Universite Louis Pasteur (1992), Peking Union Medical College (1980), Xian Medical School (1980), University of Nagasaki (1996), King Khaled Eye Specialist Hospital and also to many U.S. Universities. He also has many editorial assignment and some examples are *Investigative Ophthalmology and Visual Science* (1974-1977), Ophthalmic Toxicology Section, *Journal of Environmental Pathology, Toxicology and Oncology* (1979-), *Survey of Ophthalmology* (1979-1994), Book Review Editor, *Archives of Ophthalmology* (1985-1994), Associate Editor, *Progress in Veterinary and Comparative Ophthalmology* (1991-1994), Associate Editor, *History of Ophthalmology* (Documenta Ophthalmologica (1991-), Editor, *History of Ophthalmology* (Documenta Ophthalmologica) (1994-) and Editor-in-Chief, *Archives of Ophthalmology* (1994-). He serves as an Officer for many professional societies that include American College of Physician Executives (1995-), American Ophthalmological Society Council Member (1998-), Verhoeff Society (1974-), Academia Internationalis Ophthalmologica (1982-1991), American Association of Ophthalmic Pathologists (1977-) and Ophthalmological Society of the United Kingdom (1985-). He is a recipient of many honor awards, and they are 1. William and Mary Greve Scholarship, Research to Prevent Blindness, Inc. (1978); 2. Friedenwald Award, Association for Research in Vision and Ophthalmology (1982) ; 3. Alcon Research Institute Award (1984); 4. Von Sallmann Prize, International Congress on Eye Research (1988); 5. Humboldt Research Award, Alexander von Humboldt Foundation (1989); 6. Mackenzie Lecturer, University of Glasgow (1992); 7. Doctor Honoris Causa, Université Louis Pasteur, Strasbourg, France (1992); 8. Zimmerman Medal, American Association of Ophthalmic Pathologists and the American Academy of Ophthalmology 1993); 9. American Academy of Ophthalmology, Edward Jackson Memorial Lecturer (1996); 10. Lighthouse Pisart Vision Award (1997); 11. King Khaled Memorial Lecturer, Riyadh, Saudi Arabia (1998); 12. W. Morton Grant Lecturer, New England Eye Center, Boston (1998); 13. George and Jean Tyner Lecturer, Texas Tech University(1998); 14. Arthur J. Bedell Lecturer, Wills Eye Hospital(1999); 15. Harold Gifford Lecturer, University of Nebraska (1999); 16. Scarborough Lecturer, Emory University School of Medicine, Atlanta (1999) (F.A. Davis Professor and Chair, and Lorenz E. Zimmerman Professor, Department of Ophthalmology and Visual Sciences, University of Wisconsin, F4/336 Clinical Science Center, 600 Highland Avenue Madison, WI 53792-3220; Phone: 1-608-263-9797; Fax: 1-608- 263-1466 ; e-mail: albert@eyesee.ophth.wisc.edu) (SM)

Alberti, Salomon (1540-1600) German anatomist, discoverer of the lachrymal sac and inventor of the Latin name for it. American Encyclopedia of Ophthalmology, Vol.1,p.204.

Albini, Giuseppe (1825-1911) Italian physician, born in Milan, who studied physiology in Pavia under Panizza and in Vienna under Ernst Brücke (1850). From 1860 he was professor of physiology and lecturer on ophthalmology at the University of Naples; he wrote numerous works on the physiology and pathology of the visual system.(Albert 7)

Albinus, Bernhard (1653-1721) This illustrious surgeon and body-physician to the first King of Prussia, as well as father of the still more famous Bernhard Siegfried →Albinus, was born at Dessau, Germany in 1653. He was, for a time, professor at Frankfurt a.d.Oder, and, for 19 years at Leyden. He is remembered by ophthalmologists for a cataract needle, proposed, though not invented, by him. It was a highly elaborate affair, the operative extremity of which, though a needle, when introduced into the eye, became, on the pressure of an outside spring, a delicate pair of forceps. The instrument, seems never to have been actually employed by Albinus himself. American Encyclopedia of Ophthalmology, Vol.1,p.206.

Albinus, Bernhard Siegfried. (1697-1770) Son of Bernhard →Albinus. At the age of 5 he accompanied his father to Leyden, and, when only 24, succeeded him as professor of anatomy and surgery in the University at Leyden. He was a very patient investigator, teacher and operator. Albinus was a well known student and teacher of anatomy; in fact he has been called "The Reformer" of that subject. He is chiefly remembered by ophthalmologists because he was the *first* to furnish an illustration of congenital coloboma of the iris. American Encyclopedia of Ophthalmology, Vol.1,p.206.

Albrecht, Johann Friedrich Ernst (1752-1814) German theater director, later a physician who wrote a great number of popular medical essays (partly anonymous) among which "*Der Augenarzt oder sichere hülfe für kranke Augen*" of which a second edition was published in Hamburg 1816.

Alessi, R. C. Salvatore, professor of ophthalmology at Naples in the 19th century. He wrote: "*Memoriali di ottalmologia ovvero pensieri ed osservazioni su svariati punti della scienza degli occhi.*" Napoli 1843 and "*Della elmintiasi nelle sue relazioni colla oculistica ... con una lettera sulla compressione del tumore lagrimale.*" Roma 1850.

Alexander de Spina (? – 1313) The *re-discoverer* of spectacles, a monk who dwelt in the Dominican cloister of St. Catherine at Pisa for many years. The following passages from the *Chronicle of the Cloister* show that he was not (as has sometimes been supposed) the first, but only the second, discoverer of "eyeglasses": "Brother Alexander de Spina, a good and modest person, understood how to make whatever he saw, or any restorative that he happened to hear about. Eyeglasses, which were first made by somebody who, however, would communicate nothing about them, he prepared by himself, and then communicated to others concerning them with a willing and joyful heart." Alexander, though not a physician, was, plainly enough, qualified by nature to be a good and true one. The second passage runs: "Brother Alexander de Spina, of Pisa, could make with his hands whatever he would, and was wont to communicate his arts to others out of good-heartedness. As, at that time, somebody had first invented "peepers," (as the people called "eyeglasses"), by means of a certain beautiful, new and useful discovery, and no one would communicate the art of their preparation, then did this good man and artist, after he had seen, at once and without any teacher, proceed to learn it and he thenceforth taught it also to others, whoever wished to know. " For the sake of completeness, it ought to be added that the name of the "first" inventor of "eyeglasses" is to this day unknown. It should also be expressly stated that the view so commonly held, to the effect that spectacles were known to the ancients, is wholly erroneous. The commonly cited passage from Suetonius relating to Nero and his emerald has, in fact, nothing at all to do with spectacles; for Nero's emerald was a concave mirror, not lens of any sort. Equally fallacious are the conclusions which attribute the invention of spectacles to the Chinese. American Encyclopedia of Ophthalmology, Vol.1,p.219-220.

Alexander of Tralles (A. D. 525-605) A most distinguished physician of the Greek Middle Ages was born at Tralles, in Lydia. His father, Stephen, and one of his brothers, Dioscurus, were famous physicians. Other notable brothers were: Metrodorus, the

grammarians; Olympius, the jurist; and Anthemius, one of the architects of St. Sophia. Alexander studied medicine at first with his father, then with the father of the Indian traveller, Cosmas, and afterwards with many another well known instructor. For the purpose of rendering more complete his medical education, he travelled in Cyrene, Spain, Gaul, Italy and Greece. Then he settled in Rome where he lived until his death. Some years before his death, however, he became unable to practice, and, from that time forth, devoted himself exclusively to the composition of his immortal *Twelve Books on Medicine*. In this work, which, for the most part, must be conceded to be only a compilation, the author affords, none the less, evidence of great powers of observation and original reflection. Over and over again, Alexander warns his contemporaries against the blind acceptance of authority and admonition greatly, needed in that day, and one which its giver took thoroughly to heart himself. He was an excellent diagnostician, and gave much time to inspection, palpation, percussion, etc. He would seem to have made a number of dissections—a remarkable fact for the time. He mentions rhubarb, and is said to be the first in history to have done so. (The “rhubarb” mentioned by Dioscorides-A. D. 40-90 was only the garden variety, or pie-plant.) Great as was the Trallean Alexander in general medicine, he was of less importance to ophthalmology. The ophthalmic portion of his

Twelve Books is, in fact, little more than a collection of prescriptions, with which the compiler would seem to have had but little experience. American Encyclopedia of Ophthalmology, Vol.1,p.220-221

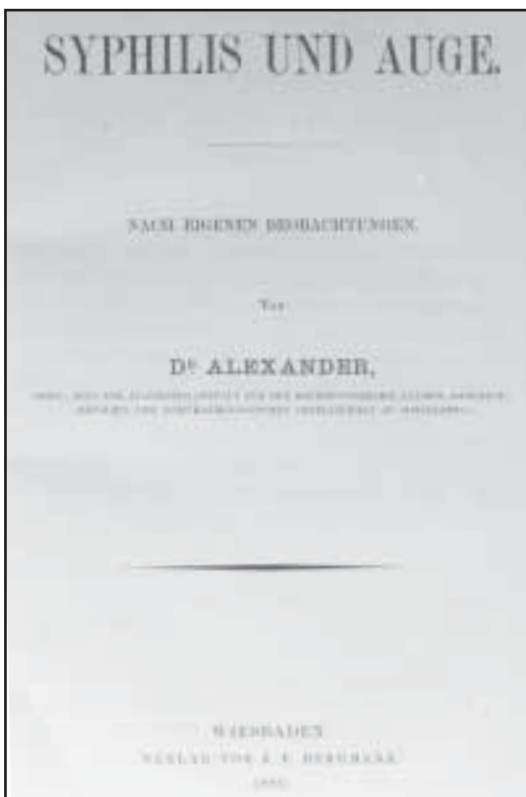
Alexander, Benedictus. An excellent plastic surgeon, ophthalmic and general, who flourished in the latter half of the 15th century (→ Benedetti). American Encyclopedia of Ophthalmology, Vol. 1,p.219.

Alexander, Louis (?-?) German ophthalmologist. He wrote two books about diseases of the eyes in relation to syphilis: „*Neue Erfahrungen über luetische Augenerkrankungen.*” Wiesbaden 1895 and *Syphilis und Auge* (2 vols.) Wiesbaden 1888-1889. Albert

Algarotti, Conte Francesco (1712-1764) Italian philosopher and critic of Venice. He was a friend of Frederick the Great and Voltaire. He wrote: *Il Newtonianismo per le dame, ovvero dialoghi sopra la luce e i colori.* Napoli 1737. This first successful and influential popularization of Newtonian optics is presented in the form of six dialogues. (Followed 1738 by Voltaire’s *Elemens de la Philosophie de Neuton*)

Alhazen (Ibn al-Haitham) (965-1039) The full form is, ABu ALI MUHAMMAD b. AL-HASAN IBN A HAITAM AL-BAsti. He is not to be confused either with the physician, Abd ar-Rahman b. Ishaq b. al-Haitam, who came later, or with another Alhazen—he who, in the 10th century, translated, Ptolemy’s *Almagest*. This personage was not a doctor, but a mathematician, whose great importance to ophthalmology arises from his services in the field of physiologic optics. He was born in Bassora (Basra on Persian gulf) and died in Cairo. The Fatimid Khalif of Egypt, Al-Hakim, who had heard of his genius and great learning, summoned Alhazen to Egypt to see if he could regulate the flow of the

Nile river. Although this scheme failed, he lived in Egypt the rest of his life under the patronage of Al-Hakim (on one occasion feigning madness to get his patron off his back). He wrote: 1) *The Book of Optics (Kitab al Manazir or De aspectibus)* 2) *On the Paraboloidal Burning Mirror (De speculis comburentibus)* 3) *On the Spherical Burning Mirror* 4) *On the Burning Sphere* 5) *On Light* 6) *On the Rainbow and Halo* 7) *On the Nature of Shadows* 8) *On the Form of the Eclipse* (concerning radiation through apertures) 9) *On the Light of the Moon* 10) *On the Light of the Stars* and many other books that have been lost but are known by their titles to have been concerned with Medicine and Ophthalmology. It was Alhazen who convinced the world that rays did not emanate from the eye to contribute to the process of vision. Ptolemy, some years before had recognized that light can be bent when it passes through glass but no rules of refraction had been formulated. Alhazen, seeing that light did indeed influence the eye, producing light adaptation and afterimages, argued that it was the incoming rays that somehow reproduced within the eye the form of distant objects. See also: *Peri optices id*



Alexander's book



Alhazen's famous book.

est de natura, ratione, et projectione radiorum visus luminum colorum atque formarum Nuremberg 1535; *Opticae thesaurus* Basileae 1572. American Encyclopedia of Ophthalmology, vol.1,p. 222-223.Thompson. Albert

Ali Abbas (? – 994) His full name is ALI IBN AL-ABBAS AI-MAJUS i. e., the magician, or fire-worshipper; he was also called HALY ABBAS. Distinguished Persian physician of the Arabic period. He was body-physician to the Emir, Adhad ed-Dauda. His chief work is *al-Maliki, Liber Regis*, or *The Kingly Book*, so called because of its dedication to the above-mentioned Emir. This work is divided into two -a theoretical and a practical division, each of ten books. He declares his intention, in the composition of the work, to have produced something which should constitute a kind of golden mean between the extremely prolix and ill-digested *Continens* of →Rhazes, on the one hand, and the over-condensed and much too highly systematized "*Liber ad Mansorem*" of the same distinguished writer, on the other. The result is decidedly satisfactory, for all historians of ophthalmology agree that *The Kingly Book* is a model of completeness combined with conciseness. In *The Kingly Book* diseases of the eye are first presented, in the 13th chapter of the 10th book of the 1st part. The subjects are all discussed, as one might readily suppose, in exact anatomical order: Diseases of the Conjunctiva; Diseases of the Cornea; Diseases of the Ciliary Region; Diseases which arise between the Pupil and the Lens [in this department, following the fashion of the time, he included cataract] ; Diseases of the Lids; Diseases of the *Corner of the Eye* ; Diseases of the Optic Nerve; Diseases of the Other Nerves and of the *Muscles which Move the Eye and the Lid* ; In the second (the practical) division, he speaks for the most part of the cataract operation, as it was practised in his day. American Encyclopedia of Ophthalmology, vol.1, p.223.

Ali ben Isa (c.940-1010)[or, ALI IBN ISA, AL-KAHHAL] He was also called Jesu HALY. This famous writer, the most important of the Arabian ophthalmologists, flourished in Bagdad in the first half of the eleventh century. His Memorandum *Book for Eye-Doctors*, was the earliest specialist work on ophthalmology which has been preserved in its entirety. It stood, furthermore, as the standard text-book on its subject not only in Islam but also, throughout Christendom for several centuries. We may add that even today, it is in use among the Arabs. Soon after its first appearance it was translated into Latin and Hebrew. The only complete translation, however, into a modern European tongue is that of →Hirschberg and Lippert : *Ali ben Isa, Erinnerungsbuch für Augenärzte, aus arabischen Handschriften übersetzt und erläutert.* Leipzig, 1904. The work is divided into three books, the subjects of which are as follows: (I) *The Anatomy and Physiology of the Eye*, (II) *The Diseases of the Eye which are Recognizable by the Senses*, (III) *The Diseases of the Eye which are not Recognizable by the Senses*. American Encyclopedia of Ophthalmology, vol.1,p.224-239.Albert

Ali, Syed Imtiaz (1951-) Pakistani Ophthalmologist, Professor of Ophthalmology, Rawalpindi Medical College. Obtained MBBS in 1975, DO (Dublin) 1982, FRCS (Glasgow) 1985, FRC Ophth (Eng) 1989. His career positions are House Officer, Mayo Hospital, Lahore, Pakistan-1975 to 1976, Registrar Holy Family Hospital, Rawalpindi-1977 to 1979, Medical Officer, Holy Family Hospital-1979, Senior House Officer, Pinderfields General Hospital Wakefield 1979 to 1980 (UK), Senior House Officer, Ophthalmology, Kent County Ophthalmic and Aural Hospital, Maidstone (Kent) 17th Nov. 1980 to 5th May 1982 (UK), Senior House Officer, Ophthalmology, Royal Halifax Infirmary , 6th May 1982 to 17th Nov. 1982 (UK) , Registrar in Ophthalmology, Royal Halifax Infirmary, 18th Nov. 1982 to 24th Nov. 1984 (UK) , Registrar in Ophthalmology, Salisbury General Infirmary, 1-1-85 to 2-2-85; 9-4-85 to 19-4-85; 1-7-85 to 25-7-85 (UK), Registrar in Ophthalmology, Victoria Eye Hospital Herefordshire, 22-4-85 to 6-5-85; 5-8-85 to 21-8-85 (UK), Associate Eye Specialist, Southend Hospital , West Cliff on Sea, 2nd Sept. 1985 to 25th Nov. 1985(UK) ,Registrar in Ophthalmology Pinderfields Hospital Wakefield, 11th Dec. 1985 to 14th Sep. 1986 (UK). His current appointments is Professor, Ophthalmology, Rawalpindi Medical College and visiting eye surgeon Rawalpindi General

Hospital, from 15th July to date. He has served as Associate Professor, Ophthalmology, Rawalpindi Medical College and visiting Eye Surgeon Rawalpindi General Hospital since 3rd Nov. 1994 to 14th July, Assistant Professor, Ophthalmology, Rawalpindi Medical College and visiting eye surgeon Rawalpindi General Hospital 30th Aug. 1986 to 2nd Nov. 1994. His editorial assignments are member editorial board "*Asian Journal of Ophthalmology*", Published 8 articles in national and international journals. His academic & research assignments are attending 5 workshops at the College of Physicians and Surgeons Pakistan, attending 4 abroad and 8 local meetings and presenting 4 papers in such meetings. (Address: House # F-882/11, "Satellite Town, Deputy Feroze Lane, Behind Holy Family Hospital, Rawalpindi Pakistan post code 46300. Phone: +92-413464, Fax: +92-413991) (SM)



Chowdhury Shaheed Alim

Alim, Chowdhury Shaheed (1930–1971) Bangladesh Ophthalmologist. Alim was born in the village Khairpur of district Mymensingh. He was matriculated in the year 1945 from Kishorganj High School and passed I.S.C Examination from Islamia College. He entered the Dhaka Medical College in the same year and started active part in all the progressive student movements of the country during those days. In 1948 he was one of the main organizers of Bengali Language Movement and was taken into custody by the then Pakistan Government. At that time he was the Vice-President of the Dhaka Medical College Students Union. Dr. Alim Chowdhury became a Medical graduate and went to UK for higher studies in the year 1958. During this period he was the Joint Secretary of the then East Pakistan Medical Association and also the Editor of its Journal. He also edited two other literary papers namely "*Jatrik*" and "*Khap Chhara*". In London he was one of the convenors and editors of London based Bangla Academy. He obtained his Diploma in Ophthalmology from London and worked at St. James Hospital and the Royal Eye and Ear Hospital of London. In 1963 Dr. Alim Chowdhury came back home and joined the Eye Department of Kumudini Hospital at Mirzapur as Chief Ophthalmic Surgeon. Subsequently he worked as Associate Professor of Ophthalmology in the Institute of Postgraduate Medicine and Research (PG Hospital), Dhaka Medical College and Sir Salimullah Medical College. He was also the Secretary General of the East Pakistan Ophthalmological Society. Dr. Chowdhury was associated with various social and voluntary organizations doing selfless social works for the poor and the needy. During the liberation war in the year 1971 he helped the freedom fighters by way of money, medicines and other helps taking serious risk of life. On 15th December, 1971, this noble doctor, a great human being was kidnapped and brutally murdered by the "Al-Badars" the fanatic collaborators of the then Pakistan Army. Shaheed Alim Chowdhury left behind his wife and two lovely daughters Neepa and Shampa to mourn his death. Shaheed Dr. Alim Chowdhury is immortal and always with the people of Bangladesh. The Ophthalmological Society of Bangladesh created the Alim Memorial Gold Medal and Lectureship for the memory of this National Hero. (By M. A. Matin)

Alió, Jorge L. (1953-) Spanish ophthalmologist. Alió received his Medical Doctor degree from the Complutense University (Madrid) and Graduated with honor "*Cum Laude*". He received a PhD. degree at the same University and received Awards from the Spanish Ophthalmological Society and from the Royal Academy of Medicine for his Doctorate Thesis. His residency in Ophthalmology was achieved at the MIR national program in the Service of Ophthalmology of the Conception Clinic (*Jiménez Díaz Foundation*), Madrid. He is a Research Fellow of the Ministry of Education and Science. His academic career was initiated as an assistant professor of Ophthalmology, Autonomy University in Madrid and followed by the same position at the University of Salamanca. He became Full Professor of Ophthalmology at the University in Alicante in 1982, and Professor and Chairman of Ophthalmology of the University in Alicante in 1986, Director of the Division of Ophthalmology of this University in 1987 and then Director of the Department of Surgery of the University of Alicante from 1989 to 1993. Alió is the Founder and Director of the Center to Prevent Blindness of Alicante (O.N.C.E./University of Alicante Foundation)(1987) and of the Laboratory of Ocular Inflammation (1990), Founder and Medical Director of the Institute of Ophthalmology in Alicante (1987), and Fundacion Jorge Alio (1996). His research career has been devoted to the study of *Ocular Neovascularization, Ocular Inflammation, Surgery of Cataract and Refractive Surgery*. He has directed 41 PhD. projects to date, all of them qualified as "*Cum Laude*". Two of

them have received the *National Chibret Doctorate Award* and four the *Extraordinary Award* of the University of Alicante. He is author of 548 communications and presentations to ophthalmic meetings, 310 original articles published in scientific journals, 35 books and 24 book chapters. Chairman of the International Ocular Inflammation Society (1992-1998) and then General Secretary of the same Society (1998). He has a regular membership of 25 scientific societies and participates, in some of them as part of its organisational structure. He has received 27 Awards for his clinical and experimental research activity, 5 of them are international. Aliós is Elected Member of the Board of the European Society of Cataract and Refractive Surgery (1999). He has been appointed as Professor of Clinical Ophthalmology (Full Professor) at Louisiana State University, Medical School in January 2000. Address: Instituto Oftalmológico de Alicante, Avda. de Denia, 111, E-03015 Alicante, Spain Tel. : +34 96 515.00.25 Fax: +34 96-515.15.01 e-mail: jlalio@oftalio.com

Alison, William Pulteney (1790-1859) Scottish ophthalmologist of Edinburgh. He received his M.D. at the University of Edinburgh (1811), and in 1822 was there appointed professor of physiology. The idea of a life force, distinct from the physical forces of what he called "dead matter," was one he attempted to apply to physiological studies. He is the author of "*On single and correct vision, by means of double and inverted images on the retinae*" Edinburgh 1836. Albert

Allbutt, Thomas (Sir Thomas) Clifford (1836-1925) English physician and medical historian who was born in Dewsbury, Yorkshire and who received an M.A. at Cambridge University in 1860. He studied medicine at St. George's Hospital, London (receiving his M.B., in 1861). He practiced and lectured in Leeds until 1889; from 1892 he was professor of medicine at Cambridge. Allbutt helped introduce the use of the ophthalmoscope into general medical practice. He wrote: "*On the use of the ophthalmoscope in diseases of the nervous system and of the kidneys.*" London and New York: 1871. Although not an ophthalmologist, Allbutt belongs in IBBO because of his interest in medical ophthalmology – particularly in the contribution of the ophthalmoscope to internal medicine, as expressed in his 1871 book - a contribution that was strongly underlined by Eduard Jaeger in 1876. (see "*Life of Sir Clifford Allbutt*" by Humphry D. Rolleston. London, Macmillan, 1929, and a fairly long biographical sketch by Keynes, M. & Butterfield, J. in the *Journal of Medical Biography*, 1993; 1: 67-75) Thompson. Albert

Allen, Grant (1848-1899) British philosopher educated at Birmingham and in Oxford, who became professor of mental and moral philosophy in Jamaica. He returned to England in 1876 and adopted literature as his profession. He wrote 1877 "*Physiological Aesthetics*" and 1879 "*The Colour-Sense; Its Origin and Development*" which had a German translation in 1880. Albert

Allen, Henry Freeman (1916-1993) American ophthalmologist. He represented the sixth generation of Warren family doctors, who were responsible in part for the founding of the Harvard Medical School and the Massachusetts General Hospital; the author Harriet Beecher Stowe was also Dr. Allen's great-grandmother. He graduated magna cum laude from Harvard College and received his M.D. degree from the Harvard Medical School in 1943. He spent all of his professional life in Boston, where he trained at the Massachusetts General Hospital and the Massachusetts Eye and Ear Infirmary, and became one of the pre-eminent leaders in ophthalmic microbiology during his academic career. In 1968 he became the Henry Willard Williams Professor of Ophthalmology at Harvard Medical School, chief of Ophthalmology at the Infirmary, and chairman of the Department of Ophthalmology at the Harvard Medical School. For ten years (1966-1976) he guided the *Archives of Ophthalmology* as editor-in-chief, and for 25 years he was the director of the Lancaster Course in Ophthalmology held annually at Colby College, Waterville, Maine. He was a member of the American Ophthalmological Society, chairman of the American Medical Association Section of Ophthalmology, and president of the American Association of Ophthalmology. He received the Lucien Howe Medal of the Section of Ophthalmology of the American Medical Association. For his philanthropic medical work among the Indians of South Dakota, he was adopted by the Ogalalla Sioux Tribal Council in 1965 and given the name of Eagle Eye. AJO 1994,118:133-134.

Allen, Timothy Field (1837-1902) American physician, born in Westminster, Vermont. He received his M.D. at the University of the City of New York (now N.Y.U.) in 1861. He became the first professor of materia medica and therapeutics at New York Homeopathic Medical College and was Dean there from 1882 to 1893, as well as being a surgeon at New York Ophthalmic Hospital. He co-authored with George S.→Norton "*Ophthalmic therapeutics.*" New York and Philadelphia 1876. Albert

Alm, Albert (1941-) Swedish ophthalmologist. He qualified in medicine at Uppsala University in 1969. He studied for his thesis with Anders Bill at the Department of Pharmacology in Uppsala and was awarded the Doctorate of Science in 1972 (thesis: *Blood flow and oxygen extraction in the cat uvea at normal and high intraocular pressures.* Acta Physiol Scand 1970. 80:19-28; *The oxygen supply to the retina, I. Effects of changes in intraocular and arterial blood pressures, and in arterial pO₂ and pCO₂ on the oxygen tension in the vitreous body of the cat.* Acta Physiol Scand 1972. 84:261-274.; *The oxygen supply to the retina, II. Effects of high intraocular pressure and of increased arterial carbon dioxide tension on uveal and retinal blood flow in cats. A study with radioactively labelled microspheres including flow determinations in brain and some other tissues.* Acta Physiol Scand 1972. 84:306-319.; *Effects of norepinephrine, angiotensin, dihydroergotamine, papaverine, isoproterenol, histamine, nicotinic acid and xanthinol nicotinate on retinal oxygen tension in cats.* Acta Ophthalmol 1972. 50:707-719). He started clinical training in Ophthalmology in Uppsala in 1973 and he became Professor and Chairman of the Department of Uppsala. His research has been focused on the physiology and pharmacology of ocular blood flow, on transport through the blood-retinal barrier, and on the pharmacology of aqueous humor dynamics. Much of his clinical research has been directed towards an evaluation of prostaglandin analogues for treatment of glaucoma. He has published more than 100 original articles and contributed chapters to 6 books. For the excellence of his works, he received the Alcon Research Institute's Award in 1994. Some of his recent publications are "*Ocular circulation.* in (ed.) Hart Jr. WM. Adler's *Physiology of the eye, Clinical Application.* 1992", "*Latanoprost and physostigmine have mostly additive ocular hypotensive effects in human eyes.* Arch Ophthalmol. 1997;115:857-861" and "*Retinal mean transit time determined with an Impulse-Response analysis from video fluorescein angiograms.* Acta Ophthalmol. 1997; 75:532-536". He is on the editorial board of *Acta Ophthalmologica*, (1984 -), *Journal of Glaucoma* (1995-), *Investigative Ophthalmology & Visual Science* (1995-), *Experimental Eye Research* (1995-), *British Journal of Ophthalmology* (1998-) and *European Journal of Ophthalmology* (1998-). He served as the Vice-Chairman to the Swedish Ophthalmological Society (1990-1992) and is a member of many International Societies. He has been elected Vice President (Europe) for the International Society for Eye Research for the period January 1, 2000 to December 31, 2003. Due to his expertise, he has been an invited speaker in many International Meetings. (Department of Ophthalmology, University of Uppsala, Uppsala, Sweden, phone: +46-18-66 51 36 fax: +46-18-50-48 57, e-mail: albert.alm@nc.uas.lul.se) (SM)

Al-Muwaffiq b. Saau al-Israili A Jewish physician, principal physician to Saladdin, concerning whom Usaibia relates that he was "renowned for the sureness of his art and his superior knowledge in medical science, including ophthalmology and surgery. American Encyclopedia of Ophthalmology, vol.1,p.248.

Alpern, Mathew (1921-1996) American scientist, a Member of the National Academy of Sciences, and a leading vision scientist for almost 50 years. Alpern started his academic career at Pacific University, Forest Grove, Ore, in 1951 after earning a degree in optometry from Northern Illinois University in DeKalb; a degree in engineering from the University of Florida in Gainesville; and a PhD in physiologic optics from Ohio State University in Columbus. In 1955, he came to the University of Michigan, Ann Arbor, where he was professor of physiologic optics in the Departments of Ophthalmology and Physiology and professor of psychology, taking emeritus status in 1991. He was active in his laboratory until his final days. Alpern is best known for key studies on rod and cone photopigments and mechanism of normal and anomalous color vision. He also published key works in visual psychophysiology related to eye movements, pupillary light reactivity, astigmatism, and many other areas. He received the Friedenwald Award of the Association for Research in Vision and Ophthalmology in 1974, the Tillyer Medal of the Optical

Society of America in 1984, the Prentice Medal of the American Academy of Optometry in 1988, and an honorary doctorate from the State University of New York in New York City. He was elected to the National Academy of Sciences in 1991. *Arch Ophthalmol* 1996,114:1161

Alphonse de Grand Boulogne (?- ?) French ophthalmologist who wrote « *Mémoire sur deux instruments nouveaux destinés à l'extraction et à l'abaissement de la cataracte.* » Marseille 1843, in which he describes the modifications and applications of the keratome and the couching needle for extraction and depression of cataracts. Albert

Alpini, Prosper (1553-1617) Italian physician who received his M.D. at the University of Padua in 1578. As physician to Giorgio Emo, Venetian consul to Cairo, he spent three years in Egypt. He became later professor of botany at Padua, and wrote a history of Egyptian medicine and therapeutics and other uses of plants he had studied in Egypt: "*De Medicina Aegyptiorum*" Venetiis 1591. He is also the author of "*De medicina methodica libri tredecim*" and of "*De Praesagienda Vita et Morte Aegrotantium*" Venetiis 1601. Albert

Alpinus *see* **Alpini**

Al-Qaisi, Qadi Fath ad-din Abul Abbas Ahmad b. al-qadi Gamal ad-din kbu Amr Utman. One of the latest and most famous of Egypto-Arabian ophthalmologists. His single best known work, entitled "*Concerning the Result of Reflection about the Treatment of Ocular Diseases*," still extant, is simple, clear, and practical, but not to be compared for thoroughness with the works of such earlier Arabian writers as **Ammar** and **Ali ben Isa**. *American Encyclopedia of Ophthalmology*, vol.1,p.275.

Al-Qasim b. Halifa. The father of the much more famous Arabian Ophthalmologist, →Usaibia, he was himself well known as an oculist in Damascus about the year 1200. *American Encyclopedia of Ophthalmology*, vol.1,p.275.

Alquié, Alexis Jacques (1812-1864) French surgeon born at Perpignan, France. He received his medical degree, despite ill health and many other hardships, at the University of Montpellier in 1838 and, in 1851, was appointed to the Chair of clinical surgery in the same institution. The most important of his writings is the *Traité de Chirurgie Conservatrice et Moyens de réstreindre l'Utilité des Opérations*, which appeared at Montpellier in 1850, and in which, as a representative of the French conservative school, he strongly opposed the extirpation of the lachrymal gland for the relief of otherwise incurable epiphora and the section of ocular muscles in myopia. *American Encyclopedia of Ophthalmology*, vol.1,p.275-276.

Alston, John A Scot, treasurer of the Glasgow Blind Asylum who, about 1834, invented a form of raised Roman type for use by the blind. *American Encyclopedia of Ophthalmology*, vol.1,p.276.

Alt, Gustav Adolf Friedrich Wilhelm (1851-1920) American ophthalmologist, a copious contributor to the literature of ophthalmology, and founder in 1883 of the first ophthalmologic journal published west of New York City. Alt, was born at Mannheim, grand duchy of Baden, Germany. He commenced the study of medicine in 1869, but, his father dying in 1870 and with the Franco-Prussian war breaking out, he enlisted in the 2d regiment of Baden grenadiers. After participating in eleven battles, he returned to the study of medicine at Heidelberg in 1871. In 1872 he migrated to Strassbourg University, but in the following year, returned to Heidelberg, where he received his medical degree with honors, in March, 1875. Having completed his term of military service in the medical department of the 47th infantry, he moved, in September, 1875 to America. For almost two years he was first assistant to Dr. Herman→Knapp, in the New York Ophthalmic and Aural Institute. A part of this time he lectured on the normal and pathologic histology of the human eye. In 1879 he removed to Toronto, Ont., where upon examination, he became a member of the College of Physicians and Surgeons of Ontario. He was also appointed lecturer on ophthalmology and otology in the Trinity Medical College. In 1879 he moved to St. Louis, Mo. He was author, in St. Louis, of several volumes on the eye, and also of valued articles on ophthalmology which number into the hundreds. In 1883 he founded a journal, and, until its merger in 1918 with the *American*

Journal of Ophthalmology continued to edit that journal. He was also, until his death, a member of the Editorial Staff of this journal. He was a member of the St. Louis Medical Society, the Missouri Medical Association, and the American Ophthalmological and American Otological Societies. He was one of the founders of the American Academy of Ophthalmology and Otolaryngology. Shortly after moving to St. Louis he was made Professor of Ophthalmology in the Beaumont Hospital Medical College, and later (1901-03) held the same post in the St. Louis University Medical School, and the Marion Sims Beaumont School of Medicine. About 1911 he left the last-named school for the Washington University Medical School, which made him Professor Emeritus in 1917. Alt wrote: "*Compendium der Normalen und Pathologischen Histologie des Auges*" Wiesbaden: J.F. Bergmann, 1880. American edition in New York also in 1880: "*Lectures on the human eye in its normal and pathological conditions.*" ; "*A treatise on ophthalmology for the general practitioner.*" Chicago 1884. AJO,3:778-779; Albert

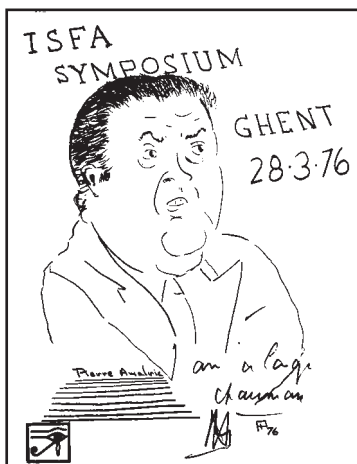
Althof, Herman (1835-1877) German-American ophthalmologist, born in Horn, Germany. He went to America three times. His first visit took place in 1847, when, with his father, he visited his brother, a resident of New York City. Returning to Germany, Althof first completed his academic education, after which he began his medical studies, at Würzburg. Continuing these, at Zurich, Vienna, and Prague he received his medical degree at Berlin in 1857. In the Prussian capital young Althof, attracted the favorable attention of Alfred →Graefe, who offered him a position as one of his assistants. Refusing this position, however, Althof proceeded to Paris, where he studied ophthalmology exclusively and was a favorite of →Desmarres. In 1858 he went again to America, practicing as an ophthalmologist in New York City. At the end of two years, he returned to Europe, staying for a time with Heinrich Müller, in Würzburg, and, later, with Graefe again, in Berlin. Returning, once more, in 1861, to New York, he became connected with the German Dispensary, the German Hospital, and the New York Eye and Ear Infirmary. He was one of the founders of the New York Ophthalmological Society and of the American Ophthalmological Society, and once the president of the former association. His writings, some in English, some in German are few but important. Among the latter were a number "*Klinische Notizen*" (*Graefe's Archiv*, Bd. viii, Abthl. 1.). Among former were "*Canthoplasty: a Clinical Study*" (*Trans. of the Am. Soc.*, vol. II, part 2.). American Encyclopedia of Ophthalmology, vol.1,p.278.

Alvarado, Emilio (1853-1916) Spanish ophthalmologist born at Burgos. He pursued his studies at Valladolid where his father was in practice. He enlisted in the French army in 1870 and was taken prisoner at the battle of Orleans. After completing his medical studies he started practice at Burgos, but at his father's death moved to Valladolid. He spent some time in Paris in 1880 with Louis →de Wecker and Xavier →Galezowski and from there made his name famous by his many contributions to ophthalmological journals. Alvarado was particularly interested in combating ophthalmia neonatorum. The Ophthalmoscope, 1916,p.629.

Alvaro, Moacyr Eyck Marquis da Silva da Cunha e Fernandes (1899-1959) Brazilian ophthalmologist, born in Santos, the seaport of Sao Paulo, Brazil. His father was a prominent ophthalmologist and encouraged his son in his future career. After completing his medical course at the University of Rio de Janeiro in 1922, Alvaro began his specialty training at the University of Vienna and completed it with work as an assistant in the Polyclinic of Berlin. On returning to Brazil in 1926, Alvaro established a successful practice in Sao Paulo. About this time, societies of ophthalmology were organized in Sao Paulo and Rio de Janeiro. He became an enthusiastic member and was able to organize the first Brazilian Congress of Ophthalmology in Sao Paulo in 1935. The meeting was so successful that the congresses became biennial affairs and were attended by many foreign as well as Brazilian ophthalmologists. Following a successful campaign against ophthalmia neonatorum in the immediate area, Alvaro was able to interest the medical profession of Brazil in a definite program for the prevention of blindness. This activity led him to establish the first glaucoma clinic in South America. He also developed an orthoptic center in Sao Paulo. In 1937, Alvaro, with a group of associates, established the Ophthalmological Studies Center in connection with the Paulista School of Medicine, where he was professor of ophthalmology. The classes were limited to 80 postgraduate students annually and became extremely popular in South America. While attending the

International Congress of Ophthalmology in Cairo, Alvaro with the late Harry→Gradle of Chicago and Conrad→Berens of New York, developed the original plans for the organization of the Pan-American Association of Ophthalmology. During the meeting of the American Academy of Ophthalmology and Otolaryngology in Cleveland, Ohio, in 1940, the first meeting was held and Alvaro was elected secretary for South America. He was given the task of developing the society in the southern countries, which he accomplished with great efficiency. About this time, Alvaro made a survey of eye injuries in Brazilian industry and became so interested in efficiency in management that he joined and later became president of I.D.O.R.T., the business efficiency organization of Brazil. Alvaro suffered a severe cerebral hemorrhage in Europe in the spring of 1955. His right side was affected and as soon as he was able he came to New York for rehabilitation treatment. He returned to his home in the fall and resumed his activities with his usual vigor and interest. At this time, Dr. Alvaro was president of the Pan-American Association of Ophthalmology and vitally concerned with the 5th congress, which was held in Santiago, Chile, in 1956, and was most successful. He was rewarded for his efforts by his election to executive director at that meeting. Following the Chilean congress, Alvaro arranged many successful lecture tours in South American countries for prominent ophthalmologists of the United States and Europe. As executive director, Alvaro stimulated more than 100 South American ophthalmologists and their families to attend the successful Vth interim congress held in New York in 1957. He was the moving spirit behind the II cruise congress in the Caribbean area in 1958. Alvaro had the distinction of representing the Pan-American Association of Ophthalmology on the International Council while he was president and later represented South America. In this position, he supported ophthalmology of the Western Hemisphere and the United States with greatest zeal. Just before his last illness, Alvaro had completed a strenuous tour of South America in behalf of the coming VIth Congress of the Pan-American Association of Ophthalmology to be held in Caracas, Venezuela, early in 1960. Alvaro was a member of the National Academy of Medicine of Brazil, the College of Surgeons of Brazil, the American College of Surgeons, the American Academy of Ophthalmology and Otolaryngology, and the American Ophthalmological Society. He was a diplomat of the American Board of Ophthalmology and a consultant to the New York Eye and Ear Infirmary. AJO 1959,48:687-688

Amalric, Léon-Victor (?- ?) French ophthalmologist who wrote «*Blessures de l'appareil cristallinien*» Paris 1866. Albert



Pierre Amalric by Paul Henkind

Amalric, Pierre (1923-1999) French ophthalmologist, born in Velour sur Agouti, a small village in the south of France, situated 70 km from Toulouse. His father, Edmond, practiced general medicine, and his mother was the daughter of a well-to-do farmer in Gaillac, France. During his adolescence, Amalric showed no interest in medicine as a career, much to the disappointment of his father. Rather, he was interested in pursuing the humanities, arts, and history. During the German occupation of France in 1940, he worked in his father's clinic. He entered medical school in Toulouse in 1940 and received the *diplome en medicine*. He also joined a liberal arts college to obtain a degree in history. He soon entered a network of resistance to the German occupation under the direction of one of his professors. From 1944 through 1945, he was assigned to various military units and hospitals. For a short time, he practiced general medicine. He soon came under the influence of Professor Calmettes, an ophthalmologist who became his role model and changed the direction of his career to ophthalmology. He presented his thesis under Calmettes in 1949. It was titled *Manifestations Oculaires de la Maladie de Besnier-Boeck-Schaumann* (Albi 1949). He was encouraged to open a clinic in Albi, which was really the beginning of his ophthalmologic career. Amalric made many trips throughout Europe visiting leading ophthalmologists, many of whom became lasting friends. Photography was one of his main interests, which served him well in furthering his medical career. His interest in rare books, history, and the humanities continued. He was much interested in fluorescein angiography. In 1969, Amalric invited a group of internationally known ophthalmologists interested in fluorescein angiography to meet in Albi. The conference was a tremendous success both scientifically and socially and led to the formation of the *Fluorescein Angiography Society*, which subsequently met in Japan, Germany, and Italy. Amalric published articles on ophthalmology, history, art, and humanities, numbering 670,

including major articles and lectures, mainly in French. His main medical contributions were on choroidal circulation, the treatment of diabetic retinopathy, and a description of the *Triangle Syndrome*, which bears his name. The subject of his papers varied from the investigation of the mysterious disappearance of the ships of the explorer Laperouse, who was born in Albi, to the various eye problems of the French Revolutionary period. He was proud of his French heritage and wrote a book on the history of French ophthalmology (to be published by Wayenborgh). He also wrote, with J.Mur and G.Santucci *Oeil et Lumière* (Special Issue, Bulletin des Sociétés d'Ophthalmologie de France, November 1990). He received many awards related to his efforts to preserve French culture. The distinguished national awards included Officier de la Legion d'Honneur, Chevalier de l'Ordre National du Mérite, Croix de Guerre, Combattant Volontaire de la Résistance, and Officier des Palmes Académiques. He was highly honored to be elected to the French Academy of Medicine. He also received 6 distinguished international awards and was especially proud of the honorary membership and Wacker Prize from the Club Jules Gonin. In addition, he was an honored guest of the American Academy of Ophthalmology. Arch Ophthal 118, 448, 2000. JPW

Amemiya, Tsugio (1937-) Japanese Ophthalmologist, Professor and Chairman of Department of Ophthalmology, Nagasaki University. He graduated from Kyoto University in 1963 studied Ophthalmology in the Graduate School of Medicine of the Kyoto University under Prof.→Asayama Ryoji and received his Doctor of Medical Sciences in 1968 (thesis: *Dynamic aspects of vitamin A excess and deficiency in the retina. Cytochemical and electron microscopic examination of the retina of rats with hypervitaminosis A.* J. Jpn. Ophthalmol. Soc. 71: 2236, 1967; *Cytochemical and electron microscopic examination of the retina of rats with hypovitaminosis A.*, J. Jpn. Ophthalmol. Soc. 72: 1074, 1968). He studied with Dr. Daniel M.→Albert at the Department of Ophthalmology and Visual Science, Yale University from 1970 to 1972 (*Ocular defects in newborn rats treated with 5-iododeoxyuridine (IUDR).* Proc. Soc. Exp. Biol. Med. 142: 1272, 1973). He is in the present position since 1987. He worked on ocular pathology using electron microscopy and has many publications, that include "Frequent coexistence of ocular malformations etc" Invest. Ophthalmol. Vis. Sci. 37: 1967, 1996" and "Ultrastructure of retina of manganese deficient rats. Invest. Ophthalmol. Vis. Sci. 37: 1967, 1996". He is a Councillor of the Japanese Ophthalmological Society, The Japan Society of Histochemistry and Cytochemistry, the Japanese Society of Electron Microscopy, and Japan Society for Biomedical Research for Trace Elements. He is the Director of the Clinical Electron Microscopy Society of Japan. He is on the Editorial Board of Acta Histochemica et Cytochemica and Journal of Clinical Oncology. He delivered the Award Lecture to the 103rd Congress of the Japanese Ophthalmological Society in 1999 (*The eye and nutrition*, J. Jpn. Ophthalmol. Soc. Vol. 103, No. 12, 1999). (Department of Ophthalmology, Nagasaki University, 1-7-1 Sakamoto, Nagasaki 852-8501, phone: +81-95-849-7344 fax:+81-95-849-7347 , e-mail: tamemiya@net.nagasaki-u.ac.jp)(SM)

Ammar. Full name: Abul Qasim Ammar b. Ali-Al Mausili was one of the most distinguished, and by far the most original, of the Arabian oculists. Ammar was born at Mosul, in Mesopotamia, in the latter half of the 10th century. He made a number of pilgrimages, both for the purpose of study and for that of practising ophthalmology, dwelt for a time in Irak, and finally settled for the practise of his profession in Egypt. In this land it was, during the reign of the Sultan Hakim (996-1020 A. D.) that Ammar composed his highly original book, and, possibly, invented his suction method for the extraction of cataract. At all events, the suction method is undoubtedly Ammar's and his great treatise, entitled "*Book of the Selection of Eye-Diseases.*" is the most important work on ophthalmology now extant from the Middle Ages, with the single exception of the "*Memorandum Book for Oculists*" of Ammar's great contemporary, Ali ben Isa. American Encyclopedia of Ophthalmology 1,p.316-318

Ammon, Friederich August von (1799-1861) German ophthalmologist-son of the famous theologian, Professor Christopher Friederich von Ammon, was born in Göttingen. In 1813 he accompanied his father to Dresden, and from 1814-18 he attended the Schulpforte, leaving this institution to begin the study of medicine at Leipzig. Later, he continued his professional studies at Göttingen, where he was intimately associated with Blumenbach,

Langenbeck, →Himly, and other celebrated instructors. When he had studied at Leipzig for only a year and a half, he received the prize of the George-Augustus University for his work on the "*Semiology of Sleeping and Waking*". In 1821, he graduated, presenting as his Dissertation "*The History of Ophthalmo-Paracentesis.*" After a brief sojourn in Paris and another in Southern Germany, von Ammon settled (1822) in Dresden, where he devoted especial attention to surgery and ophthalmology. In 1824 he was appointed physician to the Dresden Institute for the Education of Blind Children-a position in which he displayed extraordinary ability. In 1828 he was made Professor of General Pathology, Materia Medica, and Clinical Medicine and Surgery in the Medico-Chirurgical Academy at Dresden. He had an extensive practice, especially in diseases of the eye, and seemed to be absolutely tireless in his work. The universal testimony is that, as a man, von Ammon was distinguished above all things by conscientiousness. Nothing that he did was done badly, or, to all appearances, in haste. The sole exception, perhaps, in this regard, is his literary work. In this, marks of haste do now and then appear. His services to surgery in general are very great, much greater however, are those to ophthalmology. He is said to have written 65 important articles, and his books, 7 in number, are without exception valuable. He was also the cause of much original and excellent work being performed by others -chiefly, of course by his own associates and pupils. Among these latter may be mentioned, Gescheidt, Lechla, Bech, Wimmer, Warnatz, Schön, Klemmer, Beger, Froebelius, and Zeis. von Ammon's most original work was done in relation to iritis, strabismus, symblepharon, and congenital ocular defects and malformations. His work on *Iritis* is so thorough and so carefully based on anatomical and pathological considerations as to make all previous investigations into the nature of this disease appear elementary. His treatise on *Ocular Defects and Malformations* was not, contrary to what has been suggested "the first upon this subject" but it was certainly the best upon this subject, and, at the present day (1913), it has not been superseded entirely. Aside from the "posterior scleral protuberance of Ammon," which presumably, will always continue to bear the name of its distinguished discoverer, what ophthalmologist, without thinking of this brilliant investigator, can call to mind such ocular malformations as epicanthus, the very name of which he invented, blepharo-ptosis, coloboma of the iris and of the lens, ankyloblepharon, blepharophimosis, and microphthalmus? von Ammon's books are as follows: 1. "*Ophthalmoparacenteseos historia. Spec. medico-histor. Quo commentatur in variis hujus operat. ad cataract. sanand. Methodos hucusque institutas et in instrumenta hunc in usum inventa.*" Cum tab, aer. incisa." Gottingae 1821. 2. "*Kurze Geschichte der Augenheilkunde in Sachsen. Eine med.hist. Skizze bei Eröffnung der neuen Erziehungs- und Arbeits-Anstalt für Blinde in Dresden.*" Leipzig 1824. 3. "*Brunnendiätetik oder Anweisung zum zweckmässigen Gebrauche der natürlichen und künstlichen Gesundbrunnen und Mineralbäder*" (Dresden 1825, 1828, 1835, 1841, 1854; Polish edition, 1827). 4. "*Die ersten Mutterpflichten und die erste Kindespflege zur Belehrung junger Frauen und Mütter*" (Dresden 1827, 1835, 1839, and so on even to the 13th edition). 5. "*Quaestio anatomico-physiol. de genesi et usu maculae luteae in retina oculi humani obviae.*" *Acced. tab. in aes incisa.* Vinariae 1830. 6. "*De Iritide.*" ... Leipzig 1838. 7. "*Klinische Darstellungen der Krankheiten und Bildungsfehler des menschlichen Auges, der Augenlider und der Thränenwerkzeuge nach eignen Beobachtungen und Untersuchungen.*" Hierzu 55 Tafeln mit 965 ophthalmoklinischen Abbildungen. Berlin 1847, Fol..8. "*Die plastische Chirurgie nach ihren bisherigen Leistungen kritisch dargestellt*". Berlin: G. Reimer, 1842; 9. *Acyclia irideremia und hemiphakia congenita. Zur Lehre von den angeborenen Krankheiten des menschlichen Auges.* Bonn 1858, 10. "*Histoire du développement de l'œil Humain*" (translation by Van Biervliet) Bruxelles 1860. He also founded the journal *Zeitschrift für Ophthalmologie* American Encyclopedia of Ophthalmology, vol.1,p.319-321.Albert.JPW

Amrith, Shantha (1948 -) Female Ophthalmologist practising in Singapore. Graduated from Thanjavur Medical College in the Southern Indian State of Tamilnadu in 1971 and awarded a medal for the best graduating female student. Spent four years training in Ophthalmology under Prof L. P. Agarwal at the Rajendra Prasad Eye Institute in the All India Institute of Medical Sciences, New Delhi, at the end of which she obtained the M.D. degree in Ophthalmology. She was awarded a medal for the best out-going student in the year 1975. Worked in England for 18 months and obtained a D.O (Diploma in Ophthalmology) in 1977 and an F.R.C.S (Ophth) from the Royal college of Edinburgh in

1979. Worked in Kenyatta National Hospital, Nairobi for three months in 1979, and managed a wide range of eye diseases prevalent in East Africa. Moved to Singapore in 1980, and has been working in Singapore since 1981. Special interest is in Ophthalmic Plastic, Reconstructive and Orbital Surgery. In 1987, she spent two months with the Oculoplastic team in Sydney Eye Hospital, New South Wales, Australia. Since 1987, she has been running the oculoplastic service in the National University Hospital, Singapore. Later in 1989, she took up a two month fellowship in Oculoplastic and orbital surgery in the University of Cincinnati, Ohio, USA. She has been a part-time clinical tutor in the National University of Singapore. Has also participated in the teaching of eyelid and orbital diseases and surgery to post-graduate fellows under the auspices of the School of Post-graduate Medical studies since it was started. She has been an active member of the cranio-facial team, especially in the management of complex facial trauma in the National University Hospital. Currently a consultant in the Singapore National Eye Center (SNEC), but spending most of the working hours in the Department of Ophthalmology in the National University Hospital which is a subunit of SNEC. (National Eye Center, 11, Third Hospital Avenue, Singapore 168751; phone: 65-7725317/18; fax: 65-7777161; e-mail: ophv14@nus.edu.sg) (SM)

Amsler, Marc (1891-1968) Swiss ophthalmologist, long-time Director of the University Eye Clinic, Zurich, and Professor of Ophthalmology at the University of Zurich. Amsler studied medicine at the Lausanne university, earning his MD there in 1915. His doctoral thesis, sustained in 1916, was titled *Contribution à l'étude de la rétinite hémorragique, notamment de son étiologie et de son pronostic*. He worked for a time in the Eye Clinic under professor Samuel Eperon. After Eperon's death, the clinic was directed by Jules Gonin. Amsler started his career as a pupil of →Gonin in Lausanne, where he was deeply engrossed in the first attempts at surgical treatment of retinal detachment. It was Amsler, who in numerous publications and lectures, advanced the conception of treatment of retinal detachment by surgical closure of the retinal tear. In 1944, after the death of Alfred →Vogt, Amsler was appointed Director of the University Eye Clinic, Zurich, and thus became Vogt's successor. In Zurich his research efforts turned from the retina to the aqueous humour, analysis of which was made possible by the introduction of the diagnostic anterior chamber puncture. For more than a decade he carried out important research on the behavior of the aqueous in acute and chronic iridocyclitis. Amsler's interest in the aqueous continued and he and his collaborators introduced the fluorescein test for determination of the permeability of the blood aqueous barrier. Thus the school of Zurich under Amsler's guidance built up, so to speak, the science of pathophysiology of the aqueous humour. He contributed, with S. Schiff-Wertheimer, a chapter in Baillart's *Traité d'Ophtalmologie : Le décollement de la rétine*. He wrote, with Fl. Verrey and A. Huber, about aqueous humour: *L'humeur aqueuse et ses fonctions* Paris, Masson, 1955, and also authored *Method of using the tests charts of qualitative vision* (Zurich 1949). With Brückner, Streiff, Franceschetti and Goldman he edited *Lehrbuch der Augenheilkunde* in 1948. Amsler wrote also a little booklet titled *Contribution à l'Étude de la Métamorphose Rétinienne* (Zurich 1951). In addition to his research activities Amsler was fond of seeing patients from all over the world and was a fine, precise surgeon, particularly in the field of retinal detachment. He wrote a book on Keratoconus, a subject in which he was interested from the early days of his scientific career. *AJO* 1969,67:274-275; *Kürschners Gelehrten- Kalender* 1966 (only mentioned). *BJO* 1968,52:575 (Duke-Elder) JPW.

Anagnostakis, Andreas (1826-1897) Greek ophthalmologist born in Crete. He studied at the Universities of Athens, Berlin (v.Graefe), and Paris (Desmarres) receiving his M.D. in 1849 at the last-named institution. Returning to Athens to practice ophthalmology, he was appointed Director of the ophthalmiatric Institute in 1854, and Professor of Ophthalmology in the Athens University in 1856. In 1877 he became University Rector. From 1854 until his death he was one of the collaborators of the *Annales d'Oculistique*, and, from 1850 to 1860, was one of the editors of the *Journal Médical d'Athènes*. His numerous writings, some published in modern Greek, are especially, though not alone, valuable for the history of ophthalmology. Among the most important are: *Essai sur l'exploration de la rétine et des milieux de l'oeil sur le vivant, au moyen d'un nouvel ophthalmoscope*. Paris 1854 ; *Remarques pratiques sur le Traitement Chirurgical de*

L'entropion et du Trichiasis (1857) De l'ophtalmologie en Grèce et en Egypte (Bruxelles, 1858) Mélanges Ophthalmologiques (Athenes, 1861) ; Contributions à l'Histoire de la Chirurgie Oculaire chez les Anciens (1872) ; Encore deux Mots sur l'Extraction de la Cataracte chez les Anciens (1878). Many of his statements concerning the ophthalmology of ancients, though long believed in absolutely, have been overthrown by the later investigations of Julius →Hirschberg. Albert

Anderson, Ringland Joseph (1894-1961) Australian ophthalmologist. Joseph Ringland Anderson was born at Lilydale, Victoria, Australia. Like many another son of the manse, he was blessed with more than the average allowance of intelligence and determination. From Scotch College, Melbourne, he proceeded to the University of Melbourne, where he gained the M.B., B.S. degrees in 1916. He then joined the medical branch of the Australian Imperial Forces, and served their 45th Battalion as regimental medical officer, gaining the Military Cross in 1918, and reaching the rank of Captain. From 1919 to 1921 he was mainly engaged with intensive postgraduate preparation for his subsequent career as an ophthalmologist. Having obtained the F.R.C.S. at Edinburgh in 1919, he worked with the late Sir John Parsons and others at Moorfields Eye Hospital, and passed the D.O.M.S. examination in 1921. After returning to Melbourne, Anderson was soon launched into a full program of hospital work, and was appointed Ophthalmic Surgeon to the Alfred Hospital in 1923. He also found time to strengthen his qualifications by the F.R.A.C.S. (1930) and the M.D. (1932). The impact of his book *Detachment of the Retina*, published by the Cambridge University Press in 1931, was inevitably lessened by the fact that Gonnin's revolutionary work on this subject had begun to attract world-wide attention while Anderson's work was being written. Nevertheless Anderson's book contained many sound observations, and the work that it involved gave him an abiding concern with the problem of retinal detachment. His work on Hydrophthalmia: *Hydrophthalmia, or Congenital Glaucoma, its Causes, treatment and Outlook* (1939) was another important contribution to ophthalmology. Early in the 1930s Anderson became interested in disorders of ocular muscle balance. He felt that some of the pioneer claims concerning orthoptic treatment were too optimistic, but he firmly believed that, with proper selection of patients, orthoptic treatment offered a great opportunity to improve binocular function. He was also convinced that, whatever differences of opinion there might be with regard to the efficacy of treatment, there could be no reasonable doubt that orthoptic investigation by properly trained auxiliaries was an immense help in everyday practice. He wrote: *Ocular Vertical Deviations and the Treatment of Nystagmus* (London 1947, 2nd edition Philadelphia 1959). When the Second World War came, Anderson's special knowledge of ocular muscle imbalance was an immeasurable asset for the Royal Australasian Air Force to which he was appointed as consultant ophthalmic surgeon, as well as to the Australian Navy. Anderson was a wide traveller and an assiduous attendee at Congresses, not only in Australia where he was often an office-holder and a principal contributor to the program, but also throughout the world. His speech as Australian representative at the inaugural ceremony of the XVI International Congress in London, 1950, was remarkable for its virile sincerity. Even more memorable was his masterly survey of ocular muscle imbalance delivered in New York 4 years later at the XVII International Congress of Ophthalmology. The ground covered in this talk, together with much other first-class work, can be found in the second edition of his *Ocular Vertical Deviations and the Treatment of Nystagmus*, published by the British Medical Association in 1959. BJO 1961,45:640. JPW

Ando, Fumitaka (1935-) Japanese Ophthalmologist, Head of the Department of Ophthalmology, Nagoya National Hospital. Born as the 3rd generation in an Ophthalmology family, he graduated from Nagoya University in 1963, studied Ophthalmology at the University under Prof. →KOJIMA Koku and received his Doctor of Medical Sciences in 1968 (thesis: *Studies on oscillatory potentials in the glucose loading test in diabetes*. J. Jpn. Ophthalmol. Soc. 72: 1232, 1968). He is an expert in vitreoretinal diseases and their treatment and serves as Visiting Professor to Nagoya University, Tokyo Medical University and Fukushima Medical University. He has been productive and has published over 250 papers that include "Usefulness and limit of silicone in management of complicated retinal detachment. Jpn. J. Ophthalmol. 31: 138, 1987" and "Influence of systemic conditions due to diabetes mellitus on visual outcome after vitrectomy. Folia Ophthalmol. Jpn. 47: 306, 1996". He is a member of Club Jules Gonnin and of the

International Vitreous Society. He served as the President of the following congresses: 30th Japanese Ergothalmological Symposium (1988), 29th Congress of the Vitreoretinal Society of Japan (1990), 37th Ergothalmological Symposium (1995) and 13th International Ergothalmological Symposium (1990, Singapore). He is the Chairman of the Asian Fund of Ophthalmologist Training: he has trained many Vitreo-Retina specialists from Asian Countries at his Department, and the trainees are playing a central role in their home Countries. (Department of Ophthalmology, Nagoya National Hospital, 4-1-1 San-no-maru, Naka-ku, Nagoya460-0001, Japan. phone: +81-5-2951-1111, fax: +81-5-2951-0664)(SM)

Andrade, Eduardo Penny (1872-1906) Venezuelan. This well known specialist in diseases of the eye, ear, nose and throat, as well as being an excellent bacteriologist, was born in Maracaibo, Venezuela and received his early education there. Andrade entered the Medical Department of the National College of Maracaibo in 1888, moved next year to the University of Caracas, and finally received his professional degree at Georgetown University in 1895. He was then a member for two years of the Venezuelan Legation at Washington. While in this city he studied bacteriology in the hygienic laboratory of the Marine Hospital Service. Next he devoted himself to the diseases of the eye, ear, nose and throat. In 1901 he entered on a course of study at the New York Ophthalmic and Aural Institute. In 1902 he went to Cuba, and graduated there at the University of Havana. Shortly afterward, he proceeded to Jacksonville, Florida, where he became director of the state bacteriological laboratory, a position which he held until his death. Andrade was a very versatile man, spoke several languages, was a fine extemporaneous orator. He is said on good authority to have been the first to discover the existence of Malta fever in Venezuela and the first "to find and report " a case of filariasis in the State of Florida. American Encyclopedia of Ophthalmology, Vol. 1, p.413-414.

Andreae, August Wilhelm (1794-1867) German oculist and historian of ophthalmology born in Neuhaldensleben. His father before him was physician of some prominence. Graduating in 1814 at the University of Berlin, Andreae entered at once on the performance of his professional duties in the Chief Field Hospital of the Prussian Body Guard. In this capacity he accompanied the army on the second and the last expedition against Napoleon. Returning, from the wars in 1815, he studied ophthalmology for two years in Vienna under →Beer and →Jaeger. In 1817 he settled at Magdeburg for the practise of his speciality. However, like many another distinguished oculist, he was not merely an eye-doctor. At the College of Medicine and Surgery at Magdeburg, he delivered lectures not only on ophthalmology but also on general pathology and on therapeutics, and, it would seem with remarkable success in all three of these branches. He also became a director of the College, as well as medical adviser to the government, and, in addition to the very exacting activities implied by these positions, he performed the still more exhausting functions of a prolific and interesting general medical and special ophthalmologic writer. Among his medical works may be mentioned the following *Grundriss der gesamten Augenheilkunde* (in two parts, 1834 and 1837, 2d ed., 1846). This is not a large treatise but is a clear, exact and interesting monograph. It has been pronounced by no less an authority than →Magnus "the best ophthalmic text-book of the pre-ophthalmoscopic period." Others are, *Aus den Vorträgen über specielle Augenheilkunde*, 1834. *Über die Augenentzündung in Allgemeinen*, 1835. *Zur ältesten Geschichte der Augenheilkunde*, 1841-43. The last named work, though to some extent superseded by later treatises, is still (1913) of very great interest to all who delight in the history of ophthalmology. It may be said of his *Die Augenheilkunde des Hippocrates*, 1843, that it is a work of monumental scholarship (the first of its kind after Wallroth's *Syntagma de Ophthalmologia Veterum*). →Hirschberg declares "it deserves high praise, because it brings carefully together every passage of the great Hippocratic collection which deals either with the eye or with ocular diseases, or with the treatment of these affections, and has thereby rendered lighter the task of all subsequent workers in the same field, myself included." American Encyclopedia of Ophthalmology, vol. 1, p.414 – 415. Albert

Andrew, James Henry (1874-1937) American ophthalmologist, born at Cambridge, New York. He graduated from the Polytechnic Preparatory School in Brooklyn and received his M.D. at Bellevue Medical College, New York, in 1896. After nine years of general practice

he limited his work to ophthalmology, having served for four years at the New York Eye and Ear Infirmary under Marple. In 1908 he was appointed Assistant Surgeon, and later Associate Surgeon, on Jameson's Clinic at the Brooklyn Eye and Ear Hospital. In 1925 he became Attending Surgeon, a position occupied by him with honor until his death. Andrew brought to his work the highest traditions of the medical profession. He was thoroughly trained for his specialized field of service, unusually gifted in the skills and techniques of the ophthalmologist, and conscientiously devoted to the welfare of his many patients. AJO 1937,21:443

Andrieu A celebrated itinerant quack, who, in 1748, announced himself in Paris as "*the celebrated eye-operator from Lyons.*" His services were much in request for a time, but little else is known about him. American Encyclopedia of Ophthalmology, Vol.1, p.416

Anel, Dominique French ophthalmologist who was born in Toulouse in 1769. According to →Pansier, he was an Italian, but, →Hirschberg has pointed out, this is undoubtedly a mistake. When a mere boy he became a kind of menial assistant to a surgeon in the St. Jacques Hospital at Toulouse, and, while serving in this capacity, made some slight discovery in connection with osteomalacia. The discovery was reported in a journal, and, by this incident, the young man's surgical ambitions became thoroughly aroused. After a short period of study he was accepted as surgeon on a French man-of-war. Returning from the navy he betook himself to Paris, where he expected preferment through the intervention of a rich and powerful relative. Various events, however, conspired to thwart his plans, and the result was that, for three years and a half, he studied in the Jardin Royal, the School of Medicine, the Amphithéâtre of St. Côme, the Hôtel Dieu and the Charité. Then, for a very short time, he served as surgeon major to a regiment of infantry. During this period, however, he made a number of powerful friends, and, at its close, by special invitation from the Viennese Court he journeyed to the capital of Austria to consult with the famous de Tondeur, Surgeon to the Emperor. The next two years he spent in Vienna. Then we find him, at the invitation of a (German nobleman) friend, accepting a position with the army in Italy. He accompanied the troops on three expeditions, and also spent much time in Rome, Bologna and Florence. All the while he was studying, observing, investigating. In Mantua he was made Doctor of Surgery. In Turin he was appointed body-physician to the queen. He was taken ill in Genoa on the way back to his native town Toulouse and as a consequence of this illness he, it seems, to have spent the next three years there. In 1716 he went to Paris, where he limited his practice to diseases of the eye and became famous. His greatest services lay, of course, in the field of ophthalmology, specially in the surgery of the lachrymal apparatus. It was in 1712 that he performed the first of his long series of operations for the relief of lachrymal fistula. He was the author of "*Nouvelle méthode de guérir les fistules lacrimales*" Turin 1713 and "*Suite de la nouvelle methode de guérir les fistules lacrimales*" Turin 1714. American Encyclopedia of Ophthalmology, Albert

Ang, Beng Chong (1942 -) Singaporean male ophthalmologist. Visiting Senior?Consultant, Singapore National Eye Center, Head Division of Vitreoretinal Surgery, Eye Department, National University Hospital, Singapore and Visiting Professor, Tianjin Medical College, Tianjin, People's Republic of China. He graduated with M.B.B.S. from Singapore University in 1967 and studied ophthalmology under Dr Eddy Donaldson of Sydney Eye Hospital, Sydney, Australia. He was made Fellow of the Royal Australasian College of Surgeons in 1973. He specializes in vitreo-retinal diseases with special interest in diabetic retinopathy. He has published on "*Natural History of Diabetic Retinopathy: Treatment with Photocoagulation*", Transactions of the Asia-Pacific Academy of Ophthalmology, Vol VII: 327-333, 1979; and "*Cryoapplication in Diabetic Retinopathy*", Int. Ophthalmol. 9: 139-142, 1986. He has co-authored 2 books — "*Developments in Ophthalmology: Ocular Microsurgery*". Vol 1, S Karger AG, Switzerland, 1979 and "*Fison's Retinal Detachment Surgery*", 2nd Edition, P G Medical Books, 1989. He is a member of the National Commission on Diabetes, Honorary Secretary of the Asia-Pacific Intraocular Implant Association, member of the Editorial Board of the Asia-Pacific Journal of Ophthalmology. For his services he was awarded the Distinguished Service Award by the Asia-Pacific Academy of Ophthalmology in 1983, the Singapore National Eye Center Gold Medal in 1997, and the Award for Outstanding Contribution to the establishment and Development of International Intraocular Implant Training Center in

Tianjin, People's Republic of China. (Dr Ang Beng Chong: Visiting Senior Consultant, Singapore National Eye Center, Head Division of Vitreoretinal Surgery, Eye Department, National University Hospital: Eye Clinic Singapore, #02-38 Gleneagles Annexe Block, Gleneagles Hospital, 6A Napier Road, Singapore, 258500. Phone: (65) 4666 666; Fax (65) 733 3360; e-mail: limsiewming@pacific.net.sg & eyeclinic@pacific.net.sg) (SM)

Ang, Chong-Lye (1955-) Singapore Ophthalmologist. He graduated from the University of Singapore with M.B.,B.S. Trained in Ophthalmology at the Department of Ophthalmology, Singapore General Hospital. Awarded the Fellow of the Royal College of Surgeons, Glasgow (Ophthalmology) in 1985. Conferred Fellow of the Royal College of Ophthalmology, United Kingdom in 1989. Trained under Professor Ian J Constable at the Lions Eye Institute, Perth, Western Australia, he specializes in diseases of the vitreous and retina since 1989-90. He served as the Chairman of the Singapore Society of Ophthalmology for two terms from 1992-93 and 1993-94. Currently, he is the Clinical Head and Director, Vitreoretinal Division, Singapore National Eye Center. (Dr Ang Chong Lye, Singapore National Eye Center Pte Ltd, 11 Third Hospital Avenue, Singapore 168751; Phone: (65)2277255; Fax: (65)2277290, e-mail: sneacl@pacific.net.sg) (SM)

Angell, Henry Clay (1829-1911) American. One of Boston's noted ophthalmologists and one of the first to practice that speciality in the United States, born in Providence, Rhode Island. He was a graduate of Hahnemann Medical College, Philadelphia, class of 1853, and later studied for three years at Vienna University, after which he settled down to practice his speciality in Boston at 16 Beacon street. Angell joined the American Institute of Homeopathy in 1853, the year of his graduation in medicine, thus making his period of membership the phenomenal one of fifty-eight years. He became a member of the Massachusetts Homeopathic Medical Society in 1856, his name being on its roll at the time of his death. His loyalty to and interest in the cause of homeopathy as well as his literary tastes and qualifications are shown by, his assuming the editorship of the *New England Medical Gazette* in 1866. He thus became the first editor of this journal, although he later relinquished the post to Dr. I. T. Talbot and devoted himself to his speciality. For many years he was a member of the staff of the Massachusetts Homeopathic Hospital as its first ophthalmic surgeon. He was one of the small band of homeopaths interested in the evolution and establishment of Boston University School of Medicine. He was a member of its first Faculty and remained its professor of Ophthalmology until 1893, a period of twenty years, then he was succeeded by his associate in the department, John Payne. His chief contribution to medical literature was a text book "*A treatise on diseases of the eye*" Boston 1871, for students and general practitioners which went through at least seven editions and was noteworthy for being the first on the homeopathic treatment of these diseases. Furthermore: "*How to take care of our eyes, with advice to parents and teachers*" Boston 1878 and *The sight and how to preserve it*. London 1880. American Encyclopedia of Ophthalmology, vol.1,p.463-465.Albert

Ango, Pierre (1640-1694) French Jesuit scientist, who taught mathematics at Caen. He was the author of "*L'optique divisée en trois livres ou l'on démontre d'une manière aisée tout ce qui Regarde*" Paris 1682. Ango's outline of a wave theory of light, posited eight years prior to Huygens' *Traité de la Lumière* (1690), establishes this work's significance to the history of optics. Ango, like Huygens, acknowledges a debt to the unpublished work of Jesuit scientist Ignace Gaston Pardies (1636-1673), who posited a wave theory based on optical experiments with reflected and refracted rays. Albert, Hirschberg, JPW

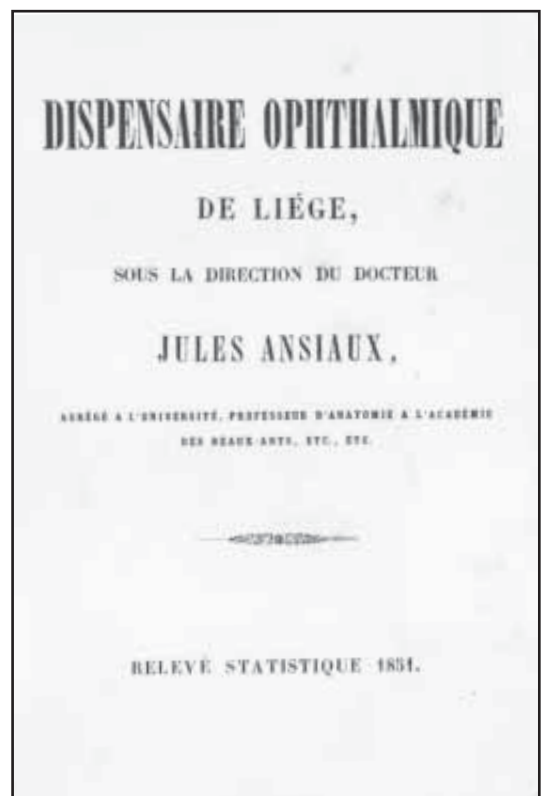
Anseth, Arvid (1925-) Swedish-Norwegian ophthalmologist. Born in Norway, Anseth moved to Sweden in 1944. He started his medical studies at the University of Lund, Sweden the same year and became Doctor of medicine in 1952 at the same University. He became Resident, junior and senior ophthalmologist and assistant Professor at the University Eye Clinic of Lund 1953-1971, Research Fellow at the Retina Foundation in Boston,Mass.,U.S.A.1959-1961 where he developed a method for separation of the glycosaminoglycans in the corneal stroma. This method was applied to describe the alterations of these substances at different pathological changes in the cornea. 1972 Anseth was offered the Professorship in Ophthalmology at the newly opened University Clinic in Tromsø, Norway, the northernmost University in the world. He participated in organizing the medical studies and the teaching activities at the new University for six

years. 1977 he was appointed Professor and Chairman at the Department of Ophthalmology at the University in Trondheim in the middle part of Norway, and 1980 he was appointed Professor and Chairman at the Department of Ophthalmology at the National Hospital, University of Oslo, Norway and worked there until he retired in 1993. 1979 he got the Bjerrum Reward in Copenhagen, Denmark. His main interests as ophthalmologist have been corneal research and corneal surgery. He has introduced modern techniques in keratoplasty in several of the main Eye Clinics in Scandinavia and stimulated research activities in the corneal field. Selected publications are as follows: Acta Ophtalmol 1957,35:73,85; Nord Med 1960,63:823; Svensk Lakartidn 1960,57:1785; Berlingska Boktryckeriet, Lund, Sweden 1961: "*Glycosaminoglycans in the corneal stroma and their alterations during development and regenerations*" (Thesis); Exp Eye Res 1961,1:25,99,106,116,122; Abstr V Intern Congr Biochem, Moscow 1961 p.377; Invest Ophtalmol 1962,1:793; Acta Ophtalmol 1963,70:1330; Acta Ophtalmol 1964,42:341,345; Nord Med 1964,72:1490; *Proceed of the advanced Study Institute of NATO, St.Andrews 1964, "Structure and Function of Connective and Sceletal Tissue"*, Butterworths,London 1965 p.506; Acta Ophtalmol 1965,43:281; Acta Ophtalmol 1966,44:180; Exp Eye Res 1967,6:107; Acta Ophtalmol 1967,45:684,688; Acta Ophtalmol 1968,46:909,912; Svensk Laekartidn 1969,65:2571; Trans of the Swedish Ophtal Soc 1968,245 Exp Eye Res 1969,8:297; Exp Eye Res 1969,8:310,438; Acta Ophtalmol 1969,47:1181; Textbook in Ophtalmology (Ed. von Bahr) Stockholm 1972,p.113,115; Acta Ophtalmol 1970,48:455; Carbohydr Res 1970.15:73; Nord Med 1969,82:1452; Exp Eye Res 1971,11:251; Acta Ophtalmol 1971,49:552; Biochem Biophys Acta 1970,215:522; Svensk Laekartidn 1971,68:3692; "Corneal grafting" (Ed T.A.Casey). Butterworths. London 1972 p.59; Israel J Med Sciences 1972,8:1543; Exp Cell Res 1974,88:193. (AB)

Ansiaux, (Nicolas-Gabriel) Antoine-Joseph (1780-1834) Belgian surgeon. His father was physician of the prince-bishop. He obtained a surgery degree in Paris in 1803. In Liège he opened a school of surgery in 1806. He was the chief surgeon of the public hospitals and one of the three first professors of the Liège faculty of Medicine. Although a general surgeon he published also on *inflammation of the nasal duct* (1804) and treatment of *lacrymal fistula* (1816). (Verriest)

Ansiaux, Jules-Antoine (? -1869) Belgian ophthalmologist. Ansiaux obtained the M.D. degree in Liège in 1833. He obtained also a special doctorate. He was professor of anatomy at the Academy of Fine Arts. (Verriest)

Ansiaux, Nicolas-Joseph-Victor (1802-1882) Belgian ophthalmologist, son of Antoine-Joseph →Ansiaux. He obtained the M.D. degree in Liège in 1823 with a thesis *on lacrymal fistula*. He was resident in the department of →Sichel in Paris. He worked for the Liège public hospitals since 1828 and taught theoretical and practical ophthalmology from 1838 to 1860 (among many other surgical matters). He published on *eyelid reconstruction* (1841), on *ocular foreign bodies*, on *lens luxation*, and on *the activity of his eye department from 1845 to 1850* (scrophulous ophthalmia was much diagnosed and blood-letting much practiced). He was member of the (French) Belgian Academy of Medicine.(Verriest)



Nicolas-Joseph-Victor Ansiaux

Anstis, Stuart, Ph.D. (?) British born American scientist. Anstis was born in England and was educated at Winchester and at Corpus Christi College, Cambridge. He took his Ph.D. at Cambridge with Prof. Richard Gregory. He has taught at the University of Bristol, U.K. and at York University, Toronto, Canada. Since 1991 he has taught at the University of California, San Diego (UCSD). He has been a visiting scientist at the Smith-Kettlewell Institute, San Francisco, the San Francisco Exploratorium, and at IPRI in Japan. He has published about 120 papers on visual perception, including the perception of real and apparent motion, Pulfrich's Pendulum, movement after-effects, contingent after-effects, coloured after images, normal and defective colour vision in babies, adaptation to gradual change in luminance, and the apparent size of holes felt with the tongue. Has also worked on hearing, including adaptation to frequency-shifted auditory feedback, hearing with the hands, adaptation to gradual change in loudness, and perfect pitch; and on motor after effects after jogging on a treadmill. With George Mather and Frans Verstraten he edited a book: "*The motion after effect: A modern perspective*" (MIT Press) and published (selection): Mather, G., Verstraten, F. A. J. & Anstis, S. M. (1998) *The motion after-effect: A modern perspective*; Anstis, S. M., Howard, I. P. & Zacher, J. (submitted to "Perception & Psychophysics") *After effects from stepping around on a turntable.*; Anstis, S. M., Kontsevich, L. L. & Tyler, C. W. (submitted to "Perception") *Demonstrating the temporal contrast sensitivity function*; Cavanagh, P. & Anstis, S. M. (submitted to "Perception") *The boogie woogie illusion*. Anstis, S. M. (1998) *Picturing peripheral acuity*. Perception, 27, 817-825; Anstis, S. M., Stuerzel, F., Spillmann, L. (1998) *Spatial distortions in rotating patterns*. Vision Research, in press; Anstis, S. M., Verstraten, F.A.J. & Mather, G. (1998) *The motion after effect: a review*. Trends in Cognitive Science; Anstis, S. M., Hutahajan, P. and Cavanagh, P. (1998) *Optomotor test for wavelength sensitivity in guppyfish* (*Poecilia reticulata*) Vision Research 38; Anstis, S. M. and Ho, W. A. (1998) *Nonlinear combinations of luminance excursions during flicker, afterimages and binocular fusion*. Vision Research 38, 523-539; Spillmann L., Anstis, S. M., Kurtenbach, A. & Howard, I. P. (1997a) *Reversed visual motion and self-sustaining eye oscillations*. Perception 26, 823-830; Anstis, S. M. (1997b) *Experiments on motion aftereffects*. In: Harris, L. and Jenkin, M. (Eds): *Computational and biological mechanisms of visual coding*. Cambridge University Press; Anstis, S. M. (1996) *Adaptation to peripheral flicker*. Vision Research, 36, 3479-3485; Mather G, Anstis S (1995) Second-order texture contrast resolves ambiguous apparent motion. Perception 24, 1373-1382; Anstis, S. M. and Ramachandran, V. S. (1995) *At the edge of movement*. In: *The artful eye*. Gregory, R. L., Harris, J., Heard, P. and Rose, D. (Eds). Oxford University Press, pp. 232-248; Anstis, S. M. (1995) *Aftereffects from jogging*. Experimental Brain Research 103, 476-478; Arnold, K. and Anstis, S. (1993) *Properties of the visual channels that underlie adaptation to gradual change of luminance*. Vision Research, 33, 47-54; Anstis, S. M. (1992) *Visual adaptation to a negative, brightness-reversed world: Some preliminary observations*. In: *Neural networks for vision and image processing*. G. A. Carpenter, S. Grossberg, Eds. MIT Press, Cambridge, MA., pp. 1-14; Anstis, S. M. (1992) *Hidden assumptions in seeing depth and motion*. In: Gorea, A. (Ed): *Representations of Vision*. Cambridge UP. He has given over 250 invited presentations on his research throughout the USA, Europe and Japan, including an invited address in the President's Symposium at the annual meeting of the Society for Neurosciences a few years back and the 1998 Max Wertheimer Lecture in Frankfurt. His work has been featured in Discover magazine (June 1993) and in occasional television programs. He has won awards as an outstanding teacher at York University and at Earl Warren College, UCSD, where he was invited to give the commencement speech to 8000 people at the graduation ceremony in June 1999. He now lives in Del Mar, California. sanstis@ucsd.edu (JPW)



Heihachi Aoki

Antoine, Jean see **Maitre-Jan, Antoine** His classic book was published in Dutch under the name Jean Antoine "*De besondere heel-en genees-konst der oogsiekten*" Leyden 1714.

Aoki, Heihachi (1906-1979) Japanese Ophthalmologist. He graduated from the Faculty of Medicine, Tokyo Imperial University (now Tokyo University) and received training in Ophthalmology, under Prof.→ISHIHARA Shinobu. He was appointed a Lecturer at the University in 1937, and in the next year he was granted the Doctor of Medical Science from Tokyo University. He was appointed the Professor and Chairman, at the Department

of Ophthalmology of Gunma University in 1946: the position he held until retirement in 1972. During his tenure, he served as the Director of the University Hospital and The Dean of the Faculty of Medicine. Subsequently, he was granted the title Professor Emeritus of the Gunma University. He served the Japanese Ophthalmological Society as a Council Member during 1947-1972. He delivered a lecture [Acute trachoma without mixed bacterial infection] at the 9th Congress of the Japanese Society of Clinical Ophthalmology, and a special lecture [Ocular diseases and Thymus and other endocrine organs] at the 72nd Congress of the Japanese Ophthalmological Society. He also served as the President of the 25th Congress of the Japanese Society of Clinical Ophthalmology. (SM)

Appelmans, P.J. Maurice (1902- ?) Belgian ophthalmologist. Appelmans was born in Gooik (Flemish Brabant). After obtaining his M.D. degree in Leuven in 1925 he worked during 3 years in Zaire (in those times Belgian Congo). From 1928 he specialized in ophthalmology under Anatole Vanderstraeten and became aspirant at the Belgian National Fund for Scientific Research. In 1936 he was appointed to succeed to Vanderstraeten and to teach ophthalmology in both national languages. He has been the secretary and thereafter the president of the Fondation Médicale de l'Université de Louvain, which allowed him to return several times to Zaire, still a soft spot in his heart. Accordingly an important part of Appelman's scientific production concerns tropical ophthalmology, more particularly ocular trypanosomiasis, filariasis, rhinosporidiosis and avitaminosis. He wrote a large number of other papers, especially on ocular pathology. Some were very early contributions, such as on radiotherapy of palpebral epitheliomas in 1930 and the description of a case of ocular toxoplasmosis in 1950. It is also in the early fifties that Appelmans begun to use at the Leuven Institute of Physics the electron microscope which was donated by the congolese mining company Union Minière du Haut-Katanga. He prepared 4 editions of his textbook "*Leçons sur les maladies des yeux*". He has been secretary of the Belgian Ophthalmological Society from 1940 to 1971. He retired from the University of Leuven in 1972, leaving his department to his two permanent collaborators, Jean Michiels and Luc→Missotten. He is full member of the Belgian Academy of Medicine and was its president in 1978. Since its reopening in 1834 French was the only official language of the Catholic University of Leuven till 1911 when some courses were given in Dutch. Ophthalmology was taught also in Dutch since Appelman's appointment in 1936. When the University decided in 1962 to confer full autonomy to both linguistic systems Appelmans choose the French one, but he continued to teach in both universities and to lead an undivided department of ophthalmology up to his retirement in 1972. Then Jean Michiels was appointed by the French speaking university, while Luc Missotten was appointed by the Flemish university, but the ophthalmological department remained unsplit up to the displacement of the French-speaking section to Woluwe in 1978. (Verriest)

Appleton, Budd (1929-1999) American ophthalmologist, retired colonel at the US Army Medical Corps. Appleton matriculated at Columbia University in New York in 1950 and at New York Medical College in 1954. He served in Korea and returned for his residency in ophthalmology at Walter Reed Army Medical Center, Washington, DC, finishing in 1959. He served as the chief of the Ophthalmology Service at Fort Hood, Tex, from 1960 to 1962 and was the division surgeon, 7th Infantry Division, Korea, from 1963 to 1964. He returned to Walter Reed Army Medical Center, and served on staff before becoming the chief of service in 1967. His position as chief of service included serving as the ophthalmologic consultant to the Army Surgeon General. He was ophthalmologist to President Dwight D. Eisenhower, Senator Henry Jackson, and King Hussein of Jordan. His treatment of and surgery for these high-profile patients, while stressful, was successful. He was proud of the residency program offered by his service and continued the regular outside consultant teaching conferences that allowed Mel Alper MD, Mansour Armaly MD, Mike Lemp MD, John Harry King MD, Ed Maumenee MD, Frank Walsh MD, Tom Walsh MD, Bob Welch MD, and Lorenz Zimmerman MD, to assist in the education of residents and staff. Appleton became the first professor and chair of the Department of Ophthalmology of the Uniformed Services University of the Health Sciences in Bethesda, Md. He was elected to the Alpha Omega Alpha Medical Honor Society in 1971. Along with Bernie Blais MD, Hugh Monahan MD, and Peter Y. Evans MD, Appleton was among

the primary movers in the early days of the Joint Commission of Allied Health Care in Ophthalmology. He served several terms as president of the Joint Commission and remained involved in this aspect of ophthalmology throughout his career. Appleton wrote numerous journal articles. He received the Legion of Merit at his retirement from the army in 1978. In Minnesota, he served as a clinical professor of ophthalmology at the University of Minnesota, Minneapolis, and was on staff at United and Regions Hospitals, St Paul. He served as medical consultant for the Minnesota Services for the Blind and Visually Handicapped and worked for the St Paul Health Care for the Homeless Project as ophthalmologist and director of Eye Care for the Homeless Clinic (Dorothy Day Center in St Paul). Budd was past president of the Minnesota Academy of Ophthalmology. He wrote 2 books on antique and art glass. "*A Guide to Akro Agate Glass*" Kensington 1966 and "*Akro Agate*", 1972, and with Basil BLAIR, Norma GARBER, Mark CROWE, and Michael ALVEN: *Opticianary, Ocularistry, and Ophthalmic Technology*. Ophthalmic Technical Skill Series. New Jersey 1990. For the U.S. Bureau of Radiological Health, Budd Appleton wrote: *Results of clinical surveys for microwave ocular effects* Rockville, Md., 1973. Arch Ophthal 118, 733, 2000

Aquapendente see **Fabricius Aquapendente**

Araie, Makoto (1950-) Japanese Ophthalmologist, Professor of Ophthalmology of University of Tokyo, Graduate School of Medicine. He graduated from Tokyo University in 1974 and studied Ophthalmology under Prof. →MISHIMA Saiichi: he received his Doctor of Medical Sciences in 1981 (thesis: *Aqueous humor dynamics in man as studied by oral fluorescein*, Jpn. J. Ophthalmol. 24: 346, 1980). He further studied in 1983-1985 at Stanford University CA, U.S.A. with Dr. David M. Maurice (Araie & Maurice: *The loss of fluorescein, fluorescein glucuronide and FITC-dextran from the vitreous by the anterior and retinal pathways*. Exp. Eye Res. 52:27, 1991). He is the Professor and Chairman of the Department of Ophthalmology of the University of Tokyo, Graduate School of Medicine since 1997. His professional assignments are Councillor (1997-) and Executive Councillor (1999-) of the Japanese Ophthalmological Society, Councillor (1989-) and Executive Councillor (1998-) of Japanese Glaucoma Society, Councillor (1986-) and Executive Councillor (1994-) of Japanese Society of Ocular Pharmacology. His editorial assignments are Editor of *Jpn. J. Ophthalmol.* (1997-), *J. Jpn. Ophthalmol. Soc.* (1995-), *J. Jpn. Soc. Ophthalmic Surgeons* (1988-), *Folia Ophthalmol. Jpn.* (1991-) and *International Glaucoma Review* (1999-). He is Executive Committee Member of Asian-Oceanic Glaucoma Society (1996-) and is a member of the International Society of Glaucoma of the International Congress (1990-) and of the International Society for Eye Research (1990) and other international Societies. He received Alcon Research Institute's International Award in 1993. (Department of Ophthalmology, Tokyo University Graduate School of Medicine, 7-3-1, Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan. phone: 81-3-3815-5411, fax: 81-3-3817-0798, e-mail: araie-tyk@umin.ac.jp)(SM)

Araki, Masasuke (1950-) Japanese Neurobiologist working on the Retina. He graduated from Kyoto University, Faculty of Science in 1974, and received his Doctor of Sciences from Kyoto University in 1979 (thesis: *Transdifferentiation of lens and pigment epithelial cells from neural retina of the chick embryos*). He is the Professor of Developmental Neurobiology, Department of Biological Sciences of Nara Women's University since 1998 and he is working on molecular and cellular mechanisms of the development of optic vesicle and differentiation of retinal neurons. His many publications include "*Localization of iodopsin in the chick retina during in vivo and in vitro cone differentiation*. Invest. Ophthalmol. Vis. Sci. 31:1466, 1990" and "*Developing rat pineal cells manifest potential of neuronal differentiation in vitro*. Neuroscience Research, 20: 57, 1994. He is a member of Japanese Society for Developmental Biology, Japan Neuroscience Society, Japanese Society for Zoological Sciences and the International Society for Eye Research. (Nara Women's University, Faculty of Science, Kita-Uoya Nisimachi, Nara, 630-8506, Japan; phone & fax: 81-7-4220-3411, e-mail: masaaraki@cc.nara-wu.ac.jp) (SM)

Aranzio, Giuliemo Cesare (1530-1589) Italian. Aranzio was a pupil of Maggi, and Professor of Anatomy and Medicine in Bologna. He discovered, or in any event first accurately described, the *pes hippocampus*. He undoubtedly discovered the *coracobrachialis muscle*, the *foramen ovale*, the *ductus arteriosus*, and the *corpora Arantii*.

In ophthalmology, he discovered the *levator palpebrae superioris* muscle, and, it is sometimes said, the retinal image. As to this latter averment, however, there is much doubt. American Encyclopedia of Ophthalmology.

Archigenes (48 -117) A distinguished Roman eclectic physician, who was born in Apamea. He seems to have passed most of his life in Rome, for he is often mentioned in the satirist Juvenal. His writings undoubtedly exercised a great and lasting influence over Galen (A. D. 131-210) the greatest physician of antiquity after Hippocrates. As an ophthalmologist he is not of much importance, for his only writing on the eye is a brief section, ophthalmic remedies, in a work on materia medica. American Encyclopedia of Ophthalmology, vol.1,p.560

Arcoleo, Giuseppe (? - ?) Italian ophthalmologist who was director of the ophthalmologic clinic at the University of Palermo from 1867 to 1875. He authored "*Sulla corneite: e sue varie forme patologiche.*" Palermo 1859. Albert

Ardi-Nana. Physician to Esarhaddon, king of Assyria, who reigned B. C. 681-668. Two of the letters of this very ancient ophthalmologist (both directed to the king) are still extant. The more interesting runs as follows: "To the king, my lord, thy servant, Ardi-Nana. May it be peace in the highest degree to the king, my lord; may Ninip and Gula give cheer of heart and health of body to the king, my lord. It is extremely well with that poor man whose eyes are diseased. I had applied a dressing to him; it covered his face. Yesterday, at evening, I undid the bandage which held it, I removed the dressing which was upon him. There was pus upon the dressing as much as the tip of the little finger. Thy gods, if any of them has put his hand to the matter, he has indeed given his order. It is extremely well. Let the heart of the king, my lord, be cheered. In seven or eight days he will be well." (Ninip and Gula were the Assyrian gods of healing.).American Encyclopedia of Ophthalmology, Vol.1, p.561.

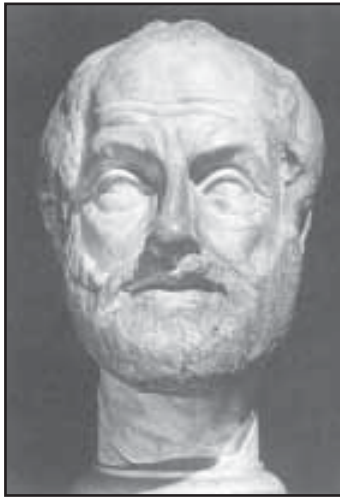
Arganaraz, Raúl (1884-1964) Latin American, professor of ophthalmology at the University of Buenos Aires. For 28 years, until his resignation in 1953, he was head professor. Born in Rio Cuarto (Cordoba, Argentina), he taught English while he was studying medicine. He was an outstanding student and, due to his qualifications, he became resident at the Hospital de Clinicas. He was graduated in 1911 and became an assistant professor in 1917. He was one of the founders of the Argentine Ophthalmological Society and a member of the American Academy of Ophthalmology and Otolaryngology and of the International Council of Ophthalmology. Arganaraz contributed more than 150 papers to the literature. His book, *Manual de Oftalmologia*, has been for many years the textbook for medical students in Latin America and Spain, and a guide for new ophthalmologists of these countries. AJO 1964,58:1077-1078; Brit. J. Ophthal.1965, 49:386



Uruu Arisawa

Arisawa, Uruu (1881-1947). Japanese Ophthalmologist. He graduated from Tokyo Imperial University, Faculty of Medicine in 1906, and received training in Ophthalmology under Prof.→KOMOTO Jujiro at Tokyo University. He studied at Freiburg University under Prof. Th.→Axenfeld for 4 years, 1909-1914. On his return to Japan, he practiced in Osaka, and next year he was appointed Professor and Chairman of the Department of Ophthalmology at Osaka Medical School (now Osaka Medical College). In 1918, he was granted the Doctor of Medical Science from Tokyo University, and the same year he retired from the Medical College and practiced in Osaka. He served as the President of Osaka Ophthalmologists Association. In 1930, the 8th Congress of Japan Medical Society and 34th Congress of the Japanese Ophthalmological Society was held in Osaka and Prof. Th. Axenfeld was invited to deliver special lectures, and ARISAWA was the host during Axenfeld's travel throughout Japan. (SM)

Aristotle. This immortal philosopher, as well as "*Father of the Natural Sciences,*" was the son of a famous physician, Nicomachus, who was himself descended from another physician, Nichomachus, alleged to have been the grandson of the old Greek god of healing, Aesculapius. Aristotle was born at Stagira (whence his surname, "the Stagirite") near Mount Athos, B. C. 384. He spent twenty years in company with Plato, at Athens, then three with Hermias, the Eunuch, tyrant of Atarneus. After that, he was called to Macedonia, where, at the court of Phillip, he was appointed instructor to Phillip's son,



Aristotle

Alexander, afterwards known as "the Great." While at this court, Aristotle supplicated Phillip to restore the former's native city, Stagira, which Phillip had destroyed, and his entreaty was granted. "He also made laws for the citizens. ". Then the great philosopher and founder of modern science went to live at Athens, where, in the covered walks round the temple of the Lycean Apollo, on the east side of the city, he set up his school in opposition to the Platonic school (now under the management of Zenocrates) which was conducted in the Academia gardens on the west side of Athens. Because of his continually walking up and down in the Lyceum with his disciples, "till the time for anointing themselves came," as Diogenes Laertius puts it, he was called the " Peripatetic," and his philosophy "the Peripatetic philosophy." His school of philosophy is also often known as "the Lyceum, while Plato's, for a similar reason, is called "the Academy." Aristotle was a peculiar looking man, according to all accounts, having small eyes and very thin legs, as well as, probably, other unprepossessing physical characteristics. Besides, in the attempt to make himself attractive, he spoke with "a lisping voice," arranged his hair with the utmost extravagance, and even indulged in very conspicuous dress and rings. Very magnetic he was, however, despite all these adverse circumstances, on account of his abundant flow of new and true ideas, which rapidly produced in the hearer a sweet forgetfulness of his physical imperfections. For thirteen years Aristotle walked and talked in the Lyceum, it is more than probable that, in the course of this period it was that he wrote the astounding volumes which, though not appreciated fully in antiquity, ruled in the middle ages not only supreme among secular writings, but, one might almost add, alone. Of his genuine works, the following, only, are extant; (there were many others) : 1. *Topics*. 2. *Prior Analytics*. 3. *Posterior Analytics*. 4. *On Sophistical Refutations*. 5. *Art of Rhetoric*. 6. *Nicomachean Ethics*. 7. *Politics*. 8. *On the Art of Poetry*. 9. *A Physical Discourse*. 10. *On the Heavens*. 11. *On Generation and Destruction* 12. *Meteorologics*. 13. *Researches about Animals*. 14. *On Soul*. Appendices to the preceding work- (a) *On Sense and Sensible Things*. (b) *On Memory and Recollection*. (c) *On Sleep and Waking*. (d) *On Dreams and Prophesying in Sleep* (e) *On Longevity and Shortlivedness*. (f) *On Youth and Old Age*. (g) *On Life and Death*. (h) *On Respiration*. 16. *On Parts of Animals*. 17. *Locomotion of Animals*. 18. *On Generation of Animals*. 19. *The Metaphysics*. Though none of the works in this list is devoted exclusively to ophthalmology, Aristotle is, nevertheless, of great ophthalmologic importance because of the numerous observations and inferences concerning the human and animal eye, which are scattered about in his various compositions. These can, perhaps, best be grouped as follow (1) Those Relating to the Human Eye, (a) its anatomy, (b) its physiology (including his theory as to the nature of light), (c) its pathology (to all intents and purposes limited to errors of refraction and senile failure of accommodation). (2) Those Relating to the Animal Eye. American Encyclopedia of Ophthalmology, Vol.1,p.577-586.

Arkle, John Stanley (1890-1969) British ophthalmologist. Arkle was born in Newcastle upon Tyne, and after a short spell of studying to become an actuary decided to make his career in Medicine. At Durham University Medical School in Newcastle upon Tyne he was a brilliant undergraduate; he won many prizes, was awarded a gold medal, and graduated M.B., B.S. with honours in 1913. He served with the R.A.M.C. throughout the first world war and was awarded the O.B.E. in 1919 for his valuable services. After the war he studied at Moorfields Eye Hospital and later at Edinburgh where he took the F.R.C.S.E. in ophthalmology in 1920. In 1949 he was elected to the F.R.C.S. England *ad eundem*. He was appointed honorary assistant ophthalmic surgeon to the Royal Victoria Infirmary, Newcastle upon Tyne, in 1920 and in 1928 became full surgeon and head of the department and also lecturer in ophthalmology at Durham University. For some years he was also honorary ophthalmic surgeon to Durham County Hospital and the Fleming Memorial Hospital for Sick Children. A regular attendee at ophthalmological meetings and congresses, he was President of the North of England Ophthalmological Society in 1949 and of the Section of Ophthalmology at the British Medical Association annual meeting in 1957. He retired from the posts of Departmental head and Lecturer in 1950, five years before he was due to do so because he felt this would help his juniors who had been absent during the war years. Nevertheless, such was his greatness that he continued to serve the hospital as Associate Surgeon until his final retirement in 1955. BJO 1970,54:144; Brit. med. J. 1969,4:693.



Ferdinand von Arlt

Arlt, Ferdinand Ritter von (1812-1887) Austrian, one of the most distinguished ophthalmologists of all the ages, Arlt was the son of a humble blacksmith at Obergraupen, Bohemia where he spent his boyhood days. He attended the grammar-school at Leitmeritz, and the University at Prague, where he graduated in 1839. An ophthalmologic pupil of Professor J. N.→Fischer, he acted from 1846 to 1849 as substitute-professor of diseases of the eye in the Prague University, and, from August 1849 till July 1856, as incumbent of the same position in his own right. Beginning in 1856, he lectured with world-renowned success on diseases of the eye at the University of Vienna, until July 1883, when, as a result of the Austrian law, he had reached the age-limit, and so was compelled to retire. From this time on, however, until his death, he continued in active ophthalmic authorship and in private practice. His writings are very numerous. Aside from journal articles, these are: "*Pflege der Augen im gesunden und kranken Zustande, nebst einem Anhang über Augengläser*" Prague 1846; improved edition, Prague, 1868. In this little volume, Arlt calls on the medical profession to fit spectacles and eye glasses themselves, instead of leaving so important a matter to opticians. "*Krankheiten des Auges*" (3 vols, Prag 1851, 1853, 1856)[GM 5865]; "*Bericht über die Augenlinik der Wiener*

Universität 1863-1865 unter Mitwirkung des Prof. Dr. Ferdinand Arlt, herausgegeben von Dr. Max Tetzler, Dr. Lucian Rydel und Dr. Otto Becker". Wien: W. Braumüller, 1867; "*Verletzungen des Auges*" Vienna, 1875[GM 5912]; "*Blessures de l'Oeil* Paris 1877 (translation by G. Haltenhoff, Professor of ophthalmology in Geneva); "*Injuries of the eye and their medico-legal aspect.*" Translated by Chas. S. Turnbull, Philadelphia 1878; "*Über die Ursachen und die Entstehung der Kurzsichtigkeit.*" Wien 1876; "*Die Kurzsichtigkeit, Entstehung und Ursachen* Wien, 1878. "*Klinische Darstellung der Krankheiten der Binde-, Horn- und Lederhaut, dann der Iris und des Ciliarkörpers*" Vienna, 1881. "*Klinische Darstellung der Krankheiten des Auges*" Wien 1881; "*Clinical studies on diseases of the eye*" translated by Lyman Ware. Philadelphia 1885.(The English translation of "*Klinische Darstellung der Krankheiten des Auges*"); "*Zur Lehre vom Glaucom.*" Wien 1884; "*Operationslehre*" in : (Graefe-Saemisch, *Handbuch der gesamten Augenheilkunde*, Bd. III, 2 Teil, Leipzig, 1874). In 1855, he became joint editor with →Donders of "*Graefe's Archiv für*



Ophthalmologie". Arlt was distinctly and undeniably one of the "pathfinder" in ophthalmology. Indeed, in almost every book and article that he wrote, he exercised a decidedly formative influence on the entire profession. Thus, it was largely due to his influence that the test-types of →Jaeger and of →Snellen came into use, that oculists began to fit glasses themselves, that the view that short-sight was produced by lengthening of the antero-posterior diameter of the eye was generally adopted, etc. As a teacher, he was even more successful than as a writer. Those who had the pleasure of attending his lectures have declared that even the dullest

student would listen to Arlt's every word with almost breathless interest. It was owing to Arlt's influence that Albrecht von →Graefe turned his attention to ophthalmology. A long succession of oculists who afterward became famous were trained by this deeply scientific and yet inspiring teacher. American Encyclopedia of Ophthalmology, Vol.1, p.587-588.

Armaignac, Henry (1846- ?) French ophthalmologist. He was professor of ophthalmology at the Ecole pratique de la Faculté de Medecine de Paris, a laureate of the French Academy of Medicine and a foundation member of the French Ophthalmological Society. He had been chief of the Sichel clinic in Paris. He wrote «*Traité élémentaire d'ophtalmoscopie, d'optométrie et de réfraction oculaire*» Paris 1878 and *Mémoires et Observations d'ophtalmologie pratique* Paris 1889. Albert. JPW

Arneemann, Justus. (1763-1806) German surgeon, writer, and medical historian. A man of highly irritable temperament, he was nevertheless possessed, as some believed, of a charming personality, and, as all admitted, of a brilliant intellect. When only 24 years of age, he was made professor at Göttingen. Nine years later he founded his Private Surgical Hospital, and, the year following, his *Magazine for Surgical Science*. He wrote a *System of Surgery*, in which he devoted a moderate amount of attention to the eye, and which

secured the mild approval of some of the general surgeons of his day. His *Review of the Best Known and Most Frequently Employed Surgical Instruments of Ancient and Modern Times* fared better. It was, however, severely condemned, the ophthalmic part in particular, by no less a person than Joseph Beer. Like many another physician, Arnemann was often in deep financial water. In 1803, because of his debts, he fled to Hamburg. There he succeeded for a time, but, in 1806, in a fit of despondency, he took his life by shooting himself in the Wandsbecker forest. American Encyclopedia of Ophthalmology, Vol.1, p.601.

Arnold of Villanova. A famous Spanish general physician (1235-1313) who became physician-in-ordinary to Peter III of Aragon, and who wrote a number of important works of a general character. His only ophthalmologic composition, "*Libellus Regiminis de Confortatione Visus*", written at the request of Pope Clement V, possesses little of value. It is merely an account of ocular hygiene, and is nothing but a compilation, chiefly from the Arab, Mesue. American Encyclopedia of Ophthalmology, Vol.1,p.602

Arnold, Dennis Jacob (1855-1919) American San Francisco ophthalmologist and otolaryngologist, founder of the San Francisco Polyclinic, was born at Baltimore and graduated from Georgetown College in 1871. Three years later he received the M. D. at Washington University, Baltimore, being the youngest graduate of the college up to that time. He then went to Europe, where he studied the eye ear, nose and throat for several years. Returning to Baltimore, he practiced in that city for a time, but, having married, he moved to San Francisco, where he practised as ophthalmologist and oto-laryngologist until his death. After he founded the Polyclinic, Arnold devoted most of his time to its welfare. He was, for a very long time, the president of this institution, as well as the professor of diseases of the eye, ear, nose and throat therein.AJO 1920, 3:307

Arnold, Friedrich A. (1803-1890) German physiologist born at Edenkoben, Germany. Arnold received his M.D. at the University of Heidelberg, where he was a pupil of Tiedemann. He became a well-known professor of anatomy and physiology at Zurich, Freiburg, Tübingen, and, for many years, at Heidelberg. Arnold was among the pioneers in the scientific anatomical study of the eye; Arnold's ganglion, Arnold's fold, and Arnold's membrane are named after him. In relation to the eye, he wrote: "*Anatomische und physiologische Untersuchungen über das Auge des Menschen*". Heidelberg und Leipzig 1832 which was his major work on the anatomy of the eye, and "*Icones nervorum capitis*." Heidelberg 1860, in which he describes his discovery that the cornea was equipped with lymphatic channels. He doubted the existence of ciliary nerves described by Friedrich Schlemm, and located the circulus venosus iridis, now termed the circulus iridis arteriosus major. American Encyclopedia of Ophthalmology, Vol.1,p.602; Albert

Arrasi. A renowned Arabian philosopher, physician, and ophthalmologist, who lived from 850 to 932 A. D. *see Ar-Razi.*

Ar-Razi, Mohammed ibn Zakariyah Abu Bekr. (850-932) He was also called **RHAZES, ARRASI, EL RAZI, ER RAZ, ABUBATER, ABUBERTUS, ABUBETER, and BUBIKIR.** This great Arabian physician was born at Rai (hence his names, Rhazes, Ar-Razi, Arrasi, El Razi, etc.) He became at first a cithern-player, later, philosopher, physician, court physician, medical teacher and author. He received his medical education in Bagdad, and there, too, he became a director of the hospital as well as professor in the medical college. In his prime he was one of the most widely known and highly honored of physicians, and patients came from the farthest portions of the civilized world seeking his services. In his old age, however, he fell on bad times, and died, totally blind and in abject poverty. He is thought to have been a teacher of rare endowment and a man of great sympathy for the sick. He was, beyond all question, not only very learned, but wholly independent in his scientific observations rarest of qualities in mediaeval times. **Ar-Razi**, or Rhazes, is chiefly remembered by general practitioners for his little book, "*De Variolis et Morbilis*" (On Smallpox and Measles) which is truly the earliest monograph on, but not exactly "the earliest mention of," smallpox, in the annals of medicine. The work shows great powers of independent observation and thought. However, **Rhazes's** magnum opus is *Al-Hawi*, or "*Continens*" (The Content -i. e., of medicine). This encyclopaedic treatise does really meet the exactions of its ambitious title, for it ranges over the totality of the science and art of healing as these were known and practiced in the author's time. The

second book of this work is the one that chiefly concerns the ophthalmologist. This book, indeed, takes up almost, but not quite, every phase of mediaeval oculistic science. Here, however, we will not exhibit **Rhazes's** ophthalmology, because, in its essence, it is very much the same as that of **Ali ben Isa**, which is set forth fully under the name of that author. It may be mentioned, however, that, in the second book of the "*Continens*", occurs the famous passage on cataract extraction which has been so often referred to as proving that the modern mode of extracting cataract was invented by Antyllus. The passage in question runs as follows (in the Latin translation, the Arabic original being lost) : "*Dixit Antilos: Et aliqui aperuerunt sub pupilla et extraxerunt cataractam; et potent, esse, eum cataracta est subtilis; et eum est grossa, non poterit extrahi, quia humor egrederetur eum ea. Et aliqui loco instrumeilti posuerunt concilium vitreum et sugendo cam suxerunt albugineum eum ea.*" The fact, is, however, that, until the absolute demonstrations of →**Brisseau** and →**Maitre-Jean** in 1705, it was not even known that a cataract was an opaque crystalline lens, the supposition being that the morbid affair consisted of an inspissated humor which had "flowed down" (hence the term "cataract") into the space or chamber imagined to exist between the crystalline lens and the pupil. American Encyclopedia of Ophthalmology, Vol.1,p.602-603.

Arruga, Hermenegildo (1886-1972) Spanish ophthalmologist. Arruga's family came from Aragon and his father, Eduardo Arruga, an ophthalmic surgeon, was born in Barcelona. Here H. Arruga was born and started his medical studies at the age of 16, completing them in 1908. Thereafter the town council of Barcelona gave their brilliant student a scholarship to study in France and Germany. He worked under Landolt, de Lapersonne, Hirschberg and (Alfred) Graefe. In 1909 he published his first paper on the serodiagnosis of syphilis, in 1926 his Thesis, presented in Madrid, was on a "*simple and efficient modification of dacryocystorhinostomy*", and his last paper, published in 1969, reviewed 1000 encircling operations in the treatment of retinal detachment, a technique he himself introduced. It was through this subject that he sprang to international fame. A close friend and disciple of Jules Gonin (during his time in Lausanne he wrote *Conférences Ophthalmologiques*, published in 1937), with him and Weve of Utrecht, Arruga may be said to have converted ophthalmologists throughout the world to adopt the new surgical method of treatment of a condition hitherto incurable. He lived on the upper floor of his magnificent clinic in Barcelona whither an unending stream of patients flocked from all over the world as well as ophthalmic surgeons from many lands. Here the instruction was painstaking and the hospitality superb; the lucky ones spent weekends with him and his family in his house built on the edge of a cliff at Cap Rubi on the Costa Brava. His life in Barcelona was interrupted during the Spanish Civil War. While it lasted his family lived with colleagues in Europe and he went to South America where he spent a period of concentrated activity teaching and practising surgery and doing much to raise the standard of ophthalmology in that continent. Arruga's published papers ran into several hundreds, mainly on retinal detachment, the surgery of cataract, keratoplasty, dacryocystorhinostomy, and the participation of the eye in systemic diseases. His two classical books were *Retinal Detachment*, published in four languages in 1936, an extension of his revolutionary contribution to the International Congress in 1933 on the "*Aetiology and Pathogenesis of Retinal Detachment*", and his *Cirurgia Ocular*. This is a superb and beautifully illustrated volume derived essentially from his own practice with a critical appreciation of the work of others, first published in 1946, of which several editions followed in three languages; the third English edition, translated from the fourth Spanish edition, appeared in 1962, the chapter on the surgery of the extrinsic muscles being written by his son, Alfredo. Fortunately, for his unique professional activities -and also for his qualities as a man- Arruga received a multitude of honours. In Spain he was created a Count in 1950 and he received the Grand Cross of four Orders. To these were added Orders from Greece, Venezuela and Brazil, the honorary memberships of 30 ophthalmological societies, honorary degrees from Barcelona and Heidelberg, the Honorary Fellowship of the Royal College of Surgeons of Edinburgh and a host of civil awards and professional medals among which he treasured most the international Gonin Medal. In his honour the Hispano-American (now the Spanish) Ophthalmological Society instituted a medal to be granted every four years. He published also: *Conférences ophthalmologiques*, Lausanne 1937 BJO 1972,56:509-510; JPW

Asad ad-din Yaqub b. Ishaq al-Mahalli. A Jewish physician of Mahalla, Egypt, who flourished at the close of the 12th century, and who wrote a work entitled, "*Concerning the Vision.*" American Encyclopedia of Ophthalmology, Vol.1,p.638.



Takeo Asanuma

Asanuma, Takeo (1886-1949) Japanese Ophthalmologist. He graduated from the Faculty of Medicine, Kyoto Imperial University (now Kyoto University), and received Ophthalmology training at Kyoto University under Prof. ASAYAMA Ikujiro, and graduated from the Postgraduate School of Kyoto University. In 1921, he was appointed the Professor and Chairman of the Department of Ophthalmology of Nagasaki University. He submitted a dissertation [Experimental studies of Marchi degeneration in the optic nerve and optic tract] and was granted the Doctor of Medical Science from Kyoto University in 1937. He served as the President of the 39th Congress of the Japanese Ophthalmological Society in 1935. He retired from the Nagasaki University in 1935 and practiced in Nagasaki, and served as the President of the Medical Association of Nagasaki. (SM)



Ikujiro Asayama

Asayama, Ikujiro (1861-1915) The *first* Professor of Ophthalmology at Kyoto Imperial University. He graduated from the Faculty of Medicine of the Imperial University (now Tokyo University) in 1884, and studied Ophthalmology under J. SCRIBA and UME Kinnojo. In April of that year he was appointed the Professor of Ophthalmology at Kyoto Medical School (now Kyoto Prefectural Medical University) and the Director of Kyoto Prefectural Hospital. He played a key role in the foundation of the Kyoto Medical Society in 1886 as the vice-president. He served as the Professor of Ophthalmology for 14 years, and the experience at this hospital was published in 1893: "*Poliklinische Augenkrankheiten aus den Jahre 1891 in der ophthalmologische Abteilung des Kioto Hospitals in Japan*" Centralblatt fuer praktische Augenheilkd, 17:220,1893. In 1898, the Government decided to build a new Imperial University in Kyoto and ordered him to study Ophthalmology in Germany to be appointed the Professor of this new University of Kyoto on his return. Dr. Asayama stayed in Germany for 3 years, from June 1898 to January 1902, and received the *Doktor der Medizin* from the University of Würzburg. While he was in Germany, he was appointed the assistant Professor of Kyoto Imperial University and was promoted to Professor and Chairman on his return to Japan. He also received the Doctor of Medical Science degree from Tokyo University in 1903. Prior to his promotion to Kyoto University in 1893, he and Dr Ohnishi together with 14 Ophthalmologists decided to publish a new professional journal [Ganka Zasshi: Journal of Ophthalmology]: this was the first professional journal of Ophthalmology in Japan. Dr. ASAYAMA was one of the promoters of the Foundation of the Japanese Ophthalmological Society which held its first Congress in February 1897. The *Journal of Ophthalmology* was then integrated into the *Acta Societatis Ophthalmologicae Japonicae*, the Journal of the Japanese Ophthalmological Society. He served as the President of the Second (1898) and 7th (1903) Congress of the Japanese Ophthalmological Society held in Kyoto. He developed an ophthalmoscope of his own design (Asayama Ophthalmoscope) and many other instruments. He described the Central Serous Retinopathy by the use of his own Ophthalmoscope in 1898. He became ill and died during his tenure and the autopsy revealed tuberculosis as being the cause of his death. He educated many brilliant Ophthalmologists, to name a few: K.→ICHIKAWA, S.→SUGANUMA, Y.→KOYANAGI, K.→FUJIWARA, S.→MORI, S.→FUNAISHI and many others. Among many publications, he published in the German language: *Ueber die Resorption des Kammerwassers von der vorderen Flaeche der Iris*: v Graefe Arch. Ophthal. 51: 98:1900; *Zur Anatomie des Ligamentum pectinatum*, v. Graefe Arch. Ophthal. 53:113,1902; *Vollstaendige mikroskopische Untersuchung eines Falles von Sympathischer Ophthalmie*. V. Graefe Arch. Ophthal. 54:444,1902. (SM) AJO 5:926-928

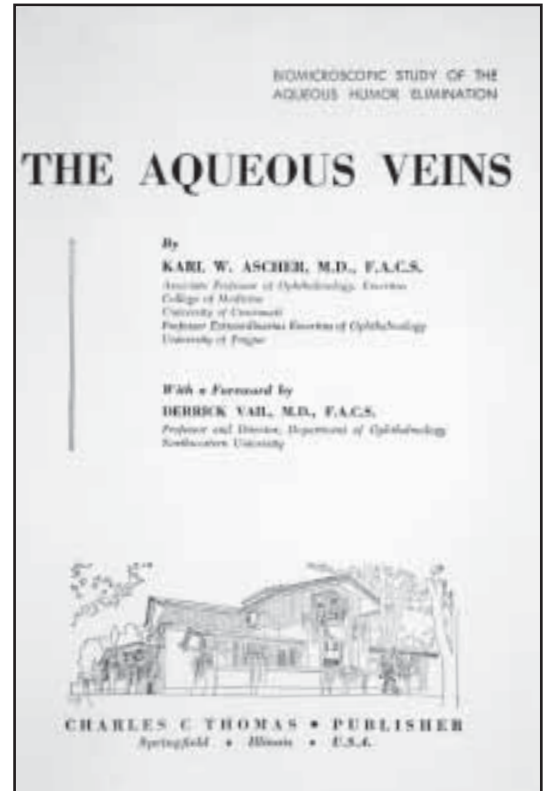


Ryouji Asayama

Asayama, Ryouji (1904-1993) Japanese Ophthalmologist. He graduated from the Faculty of Medicine, Kyoto Imperial University in 1928, and received his Ophthalmology training at the Postgraduate School of Kyoto University under Prof. ICHIKAWA Kiyoshi, and then was appointed a lecturer at Kyoto University. In 1950, he was appointed the Professor and Chairman of the Department of Ophthalmology of Kyoto University, the position he held until retirement in 1968. In 1955 he served as the President of the 59th Congress of the Japanese Ophthalmological Society, and delivered the Special Lecture [Various phases of endophthalmitis] at the 66th Congress of the Society in 1962. He served as the Director of

the Kyoto University Hospital and also a Councillor of the Japanese Ophthalmological Society. He received the title, Professor Emeritus of Kyoto University in 1968. After retirement, he served as the Director of Osaka Teishin Hospital (a National Hospital under the Ministry of Posts and Telecommunications) during 1968-1975. The Government conferred on him The Second Order of the Rising Sun in 1974 in recognition of his outstanding service. (SM);

Ascher, Karl W. (1887-1971) American ophthalmologist of Cincinnati, Ohio. Born in Prague, he received his degree of "Universae Medicinae Doctor" from the German Karl-Ferdinands Universitaet Prague, 1911. He was a resident at the University Eye Clinic at Strassburg, Alsace, for one year and then returned to Prague as a resident in ophthalmology at the University of Prague. Ascher was a captain with the Austro-Hungarian Army during World War I and was a prisoner in Siberia for two years. He then served as privat-docent in ophthalmology at the University of Prague from 1922 to 1937 when he became associate professor. In 1939, Derrick→Vail provided Dr. Ascher the position of research associate at the University of Cincinnati, and made it possible for Dr. and Mrs. Ascher to evade the European holocaust. They arrived in New York in September of 1939 on the last ship to cross the Atlantic with lights ablaze. He was subsequently named assistant professor, associate professor, and in 1962, he became professor emeritus. Early in 1941 he was assigned to work with Tom D. Speies at the Hilman Hospital, Birmingham, Alabama, on the ocular aspects of vitamin deficiencies. This led to the discovery of the aqueous veins (Am. J. Ophth. 25:31, 1942). A skilled and prolific author, Ascher published over 160 scientific articles dealing with all phases of ophthalmology. He pioneered in keratoplasty, described the use of colored contact lenses for the management of ocular albinism, and published widely concerning glaucoma and cataract surgery. His book *The Aqueous Veins* (Springfield 1961) culminated his observations of these vessels and in 1953 the Section on Ophthalmology of the American Medical Association awarded him the Knapp medal which had not been awarded the previous 12 years. Ascher taught and practiced actively until his retirement at the age of 79. AJO 1972,73:140



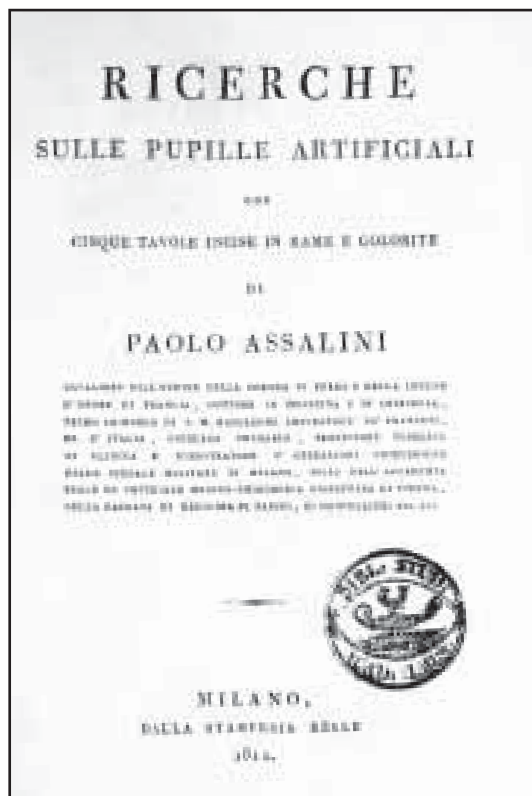
Asclepiades of Bithynia. A famous physician who flourished in Rome in the first century before Christ. He was the founder of the school of "methodists". He composed no work on ophthalmology, but, from a passage in Galen, it would seem that, in a book of his which was devoted to external remedies, there was a part, or division, which discussed of external remedies for the eye. The passage in question runs as follows: "Asclepiades furnished the best and most complete exposition concerning both dry and fluid remedies, and the collyria of the *Asclepiadean Collection*, in the first book of *External Remedies*." American Encyclopedia of Ophthalmology, Vol. 1, p.639.

Ashton, Norman Henry (1913-2000) British ophthalmologist, Professor Emeritus from London University, former Director of Pathology at the Institute of Ophthalmology, founder of the study of the pathological basis of eye disease in the UK, and founder of *Fight for Sight* in Britain. His legacy to ophthalmology comprises not only the results of his own research but also the structures he has left behind. His clear thinking was central to the creation of the current Institute of Ophthalmology building on a joint site with

Moorfields Eye Hospital. And by pivotal contributions to the establishment and growth of the national charity *Fight for Sight*, he has ensured that the current generation of researchers are in a position to carry on where he left off. Born in London, Ashton read medicine at King's College London and Westminster Hospital Medical School. After qualifying in 1939 he specialised in pathology and was appointed as a pathologist to the Kent and Canterbury Hospital from 1941 to 1945 before carrying out his military service with the Royal Army Medical Corp in West Africa and Egypt from 1945 to 1947. In 1948, the Institute of Ophthalmology invited him to the directorship of pathology, a position he held until 1978. During his time at the institute he built up a laboratory of international repute that has contributed enormously to eye research and provided a clinical service to Moorfields Eye Hospital, as well as hospitals throughout the world. During this period he provided an inspirational focus for innumerable clinicians and basic scientists who he introduced to the exciting world of applied science, and its potential to resolve clinical problems. In parallel, he was responsible for the training of the first generation of ophthalmic pathologists in the UK. His major research contributions related to diseases of the retinal blood vessels: diabetic retinopathy, hypertensive retinopathy and, most notably, the retinopathy of prematurity. In respect of the last of these, he made the key discovery that excessive oxygen given to compensate for breathing problems associated with premature birth can cause an obliteration of growing retinal blood vessels followed by disorganised regrowth and scarring. His observations led to the careful control of oxygen delivery to premature infants and saved the sight of countless babies. He was interested in all aspects of ophthalmic pathology but one that held a particular fascination was the study of worm infestations. He was the first in Europe to identify *Toxocara canis* (the dog roundworm) as a cause of retinal disease in children. One of his most significant contributions to the development of ophthalmic pathology as a discipline was his key role in establishing the European Pathology Society, of which he was made life president. This truly European enterprise, which is as healthy and vigorous today as it has ever been, was in many ways ahead of its time and has done much to improve diagnostic standards and to raise the profile of the subspecialty. A founder of *Fight for Sight* in 1965, Ashton was chairman from 1980 until 1991 when he became a patron. *Fight for Sight* is one of the foremost charities supporting eye research in the UK and has raised millions of pounds. In honour of his achievements in research and his close involvement with *Fight for Sight*, the new Institute of Ophthalmology building in Bath Street was named after him; a new research wing of this building was opened 1999. Ashton saw an intellectual challenge in everything around him and was endowed with limitless curiosity. His imagination was captured by a friend's frustration at not being able to catch trout in his favourite stretch of river. By application of his usual thorough approach to such matters, Norman discovered that the eyes of the trout in that stretch of the river were infected with a trematode fluke that damaged their lens, making them blind and unable to see the angler's fly. Ashton was also a talented artist, taking special delight in still life paintings in oils. Ashton received many academic honours during his career. Most notably, these include his election in 1971 as a fellow of the Royal Society and his appointment in 1976 by Her Majesty the Queen as Commander of the Order of the British Empire. He received the Proctor Medal in 1957, being the first non American to be awarded that honour. Numerous other awards include the Doyne Medal in 1960, the Gonin Medal for ophthalmology in 1978 (introduction by Jules François, laudatio by Bernardo Streiff), the first Jules Stein Award for outstanding ophthalmic achievement in 1981 (with A Patz), the International Pisart Vision Award in 1991, the Buchanan Medal of the Royal Society in 1996, and the Helen Keller prize for Vision Research in 1998. He was president of five medical societies of pathology and ophthalmology, was given the mastership of the Worshipful Society of Apothecaries, the award of an honorary doctorate by the University of Chicago in 1973, and was made an Emeritus Professor of pathology at the University of London in 1978. *BJO* 2000,84:443. *Publications de l'Université de Lausanne*, Vol. 49, 1978. JPW

As-Sadili, Sadaqa b. Ibrahim al-Misri. This author was one of the latest of the Arabian ophthalmologists. (He flourished in the second half of the 14th century and was the author of the last Arabian text-book on the eye. This work, which bears the somewhat tautologic title, "*Oculistic Aids for Diseases of the Visual Apparatus*" is divided into five main parts, in each of which theory as well as practice is given its appropriate share of attention. The first division deals with the necessary functions of the eyes, and of the anatomy of the

organ in question; the second, of general medical, as well as oculistic principles; the third is devoted to such diseases of the eye as are perceptible to the senses, their symptoms and their treatment; the fourth, so far as possible, to ocular diseases not perceptible to the senses; while the final chapter discusses the names, nature, and values of general as well as of ophthalmic medicines. Especially interesting, in the fourth section of the first division of this book, is the exposition of the three theories at that time held regarding the nature of vision. American Encyclopedia of Ophthalmology, Vol.1,p.644-647.



Assalini, Paolo (1759-1840) Italian ophthalmologist born in Reggio, who studied in Paris and Vienna. In 1811 he became first surgeon to Napoleon and professor of surgery at the military hospital at Milan. Afterward, Assalini worked for most of his career in Naples as a private physician. He made improvements to Pellier's lid retractor and to Scarpa's cataract needle, and was the *first* to use the procedure of iridodialysis, in 1782. He wrote: "*Discorso sopra un nuovo stromento per l'estrazione della cateratta.*" Pavia 1792; "*Observations on the disease called the plague ... the ophthalmy of Egypt and on the means of prevention*" New York 1806; "*Ricerche sulle pupille artificiali*" Milano 1811; "*Osservazioni mediche sull'ottalmoblenorrea*". Catania 1825 and "*Ricerche mediche sul mal d'occhi epidemico, con un cenno sul modo di far pupille artificiali e di operare cateratte.*" Napoli 1836.

As-Samarqandi, Abu Hamid Muh. b. Ali b. Omar Nagib ad-din. Arabian physician of the middle ages, who perished in the conquest of Herat by the Tartars, A.D. 1222. His writings are: *On the Causes and Symptoms of Diseases* and *On the Anatomy of the Eye*. The latter possesses considerable ophthalmologic interest. American Encyclopedia of Ophthalmology, vol.1,p.647-649.

Assicot, L. (1873-1916) French ophthalmologist. Professor of Clinical Ophthalmology at the School of Medicine of Rennes and ophthalmologist to the Hôtel-Dieu of the same city. Killed in Douaumont/Verdun during the world war of 1914-1918. The Ophthalmoscope 1916.

At-Tabairi, Abul Hasan Ali b. Sahl b. Rabban. This distinguished son of the still more distinguished Jewish physician, Rabban at-Tabari, was the teacher of the immortal Rhazes and body-physician to the Caliphs Mutasim and Mutawakkil. He flourished in the 9th century A. D. He wrote a comprehensive treatise on general medicine, in 30 books and 360 chapters. He also made a number of translations, presumably excellent, from Indian works on ophthalmology, but none of these have descended to our day. American Encyclopedia of Ophthalmology, vol.1,p.677.

At-Tamuni, Abu Abdallah Muh. b. Abmad b. Said. Arabian physician, who flourished in the latter portion of the 10th century, practised, first in Jerusalem; after A. D. 980, however, in Egypt. His only ophthalmic writing is: *A Chapter on the Nature of Ophthalmia, its Kinds, its Causes, and its Cures*. American Encyclopedia of Ophthalmology, vol.1,p.677.

Aub, Joseph (?- 1888) American ophthalmologist, born and educated in Cincinnati, receiving his professional degree at the Medical College of Ohio in 1866. He then pursued the exclusive study of ophthalmology at Vienna, London and Berlin. Returning to America, he was for some time assistant to Herman →Knapp, at the New York Ophthalmic and Aural Institute. In 1872, settling in his native city, he began the practice of ophthalmology on his own account. An excellent scholar, a skilful operator, he was very successful from the very beginning of his work. For seventeen years he was ophthalmologist to the Cincinnati Hospital, and, for 5 years was Professor of Ophthalmology in the Cincinnati Medical College. His chief fault was over-application to his practice. As a result of his almost unremitting labors, he became ill and, when it was altogether too late to be of benefit, he journeyed to the South, seeking there the health that could never be his again. Becoming convinced of the uselessness of further endeavors in this direction, he returned to Cincinnati, where he died soon after. American Encyclopedia of Ophthalmology, vol.1,p.677-678.

Aubert, Hermann (1826-1892) German professor of physiology at Rostock, whose studies of vision included the discovery of "Aubert's phenomenon"-the circumstances of an optical illusion. He invented "Aubert's binocular corneal microscope," which produces an upright picture by double inversion of an image. He wrote: "*Physiologie der Netzhaut*" Breslau 1865.

Augusteyn, Robert C. (1941-) Australian biochemist and vision scientist. Following doctoral studies in protein chemistry in the Biochemistry Department at the University of Queensland, in 1969, Augusteyn joined the laboratory of Abraham Spector in the Ophthalmology Research Division at the College of Physicians and Surgeons of Columbia University. There he spent 3 years investigating the structure of the lens protein, alpha-crystallin. He returned to Australia in 1971 to take up a biochemistry teaching appointment at the University of Melbourne where he remained for 20 years. He taught a variety of courses in a variety of disciplines, including dentistry, medicine, science. In 1991 he accepted the invitation to become Director of the National Vision Research Institute of Australia. His early work in Australia concentrated on the role of oxidation in the development of cataract and earned him the 1979 Shorney Prize for the most substantial contribution to knowledge in ophthalmology by an Australian in the to the lens, including ageing, metabolism, optics and crystallin structures. In particular, he became very heavily involved in the topic which was responsible for his introduction into vision science, the study of alpha-crystallin. In recent years, application of molecular biology techniques to the study retinal disease has been added to the portfolio of interests. Since 1971, Augusteyn has participated in the training of both ophthalmologists and optometrists, presenting undergraduate, postgraduate and continuing education courses on the biochemistry of the eye. He has also trained numerous research scientists, many of whom now occupy senior positions in the vision research community as well as elsewhere. He was one of the Foundation Directors of the International Society of Eye Research and serves on a variety of organizations concerned with different aspects of vision care, public awareness, research and training. His publications include two annual review volumes of the Eye (1979 and 1980), book chapters on cataracts and lens proteins, 90 refereed publications in major biochemical and vision journals as well as over 100 reports and abstracts. He has made significant contributions to the understanding of nuclear cataract formation documenting oxidative damage and changes in antioxidant protective pathways in the lens and formulating the hypothesis that hydrogen peroxide is the agent responsible. In the area of alpha-crystallin, his extensive physicochemical studies have provided detailed information on the structure, identified factors important in generating the quaternary structure and led to the proposal that alpha-crystallin may be a protein micelle. (SM)

Aung, Than (1938-) Myanmar Ophthalmologist, Professor and Head of the Department of Ophthalmology, Institute of Medicine (1), Yangon. He graduated from Institute of Medicine in Yangon in 1961 with M.B.,B.S. degree granted, extended his studies in London, receiving there DO (1967) and then in Edinburgh where he received his F.R.C.S. in 1972. On homecoming, he was appointed Professor at the Institute of Medicine in Yangon in 1991 and conjointly he served as Consultant Ophthalmic Surgeon at Eye ENT Hospital, Yangon. He holds the position of the past President of the Eye ENT Section of Myanmar Medical Association (1997-1999), and is a member of the Advisory Committee of Trachoma Control and Prevention of Blindness Program of the Ministry of Health. He is also a member of the National Eye Bank Central Committee of the Ministry of Health. He is a member of the Asia Oceanic Glaucoma Society (A OGS), and besides Glaucoma, he is also interested in Retina and Strabismus. Some examples of his many publications are *Long term follow-up of trabeculectomy*, Proc. 1st Surgical and Allied Specialties Conference, Yangon, p295, 1982, *Surgical results in strabismus operations*. ibid. p 220, *Classification of congenital glaucoma* 2nd AOGS Meeting, Tokyo 1999 and *Ophthalmology in Myanmar* (Ed) Lim K. H. et al. in *Ophthalmology awakens in Asia*, Singapore 1999. (Department of Ophthalmology, Eye Hospital, 30 Natmuk Road, Yangon, Myanmar. Fax: +95-1-549638). (SM)

Avempace (c.1138 - ?) Also known as **ABu BeKR Mohammed IBN BADJEH**. Arab-Spaniard philosopher, poet, physician and oculist who lived successively in Saragossa, Seville, Granada and in Fez (Morocco) about 1172 where he became Vizier to the

Almorawides. He was poisoned by, or on instigation of, jealous physicians. His most important writings are on pharmacology, in which he mentions a number of remedies for diseases of the eye. American Encyclopedia of Ophthalmology, Vol.1,p.716.

Avenzoar. He was, in addition, known as **ABU MERWAN IBN ZOHR**, or **ZUHR**; also called **ABIMERON** and **ABUMERON**. This most distinguished representative of Spanish-Arabian medicine, and the most illustrious member of a highly distinguished Jewish family, was born at Pentaflor, near Seville, in the latter part of the 11th century. His father and his grandfather were famous philosophers and physicians. Avenzoar himself, however, restricted his studies, or, at all events, his professional work, almost exclusively to medicine. He was especially famous as a clinician, and was, it is scarcely necessary to add, a keen observer and a profoundly original thinker. His master in the healing art was plainly Galen, but him the great Arabian, unlike most of the other physicians of the middle ages, did not follow slavishly. His most important book is *al-Teisir* (Alleviation by means of Remedies). In this book he takes an unusually hopeful view of many diseases, and even (in decided opposition to Galen) declares that amaurosis is curable. Concerning the cataract operation, however he is decidedly pessimistic, naively observing: Extraction is impossible, reclination permissible only. "The ophthalmic portions of his work are not, on the whole, of very great value. He left a famous son and grandson, named, respectively, Abu Bekr Muhammed b. Abd Al-Malik Ibn Zuhr and Abu Muhammed Abdallah b. Abu Bekr Muh. Ibn Zuhr. Each of these descendants surpassed his ancestor as an ophthalmologist. He died A. D. 1162.

Avenzohar. A celebrated Jewish ophthalmologist who flourished in Spain at the end of the eleventh century. See **Avenzoar**.

Averill, Thomas Leshe Francis (1928-1994) New Zealand ophthalmologist. Born in Christchurch, Averill was educated at Christ's College, Christchurch, at Canterbury University College and then at the Otago Medical School. He spent two years as house surgeon to Palmerston North Hospital and then came to Britain to study ophthalmology at Moorfields, obtaining the DO in 1959 and his Fellowship in Ophthalmology in 1966. In 1967 he was appointed visiting ophthalmologist to Christchurch Hospital, having brought back from Britain a wealth of experience in new techniques for treating retina] detachment, and remained an expert in this field, being one of the first to use the laser for these operations. He earned following titles: MRCS and FRCS 1966; MB ChB Otago 1955; DO 1959; FRACO. NZ Med J 1995, 108:212. LFRCS

Averroes. Also known as **IBN ROSH**, and called "**THE MOHAMMEDAN SPINOZA**." This distinguished contemporary, pupil, and friend of →Avenzoar was born at Cordova, Spain, A. D. 1126. His father and his grandfather were judges, and he himself became a Cadi. As a judge he had a wide reputation. In 1196 he was appointed governor of Andalusia. Soon, however, he was accused by his enemies of heresy, and condemned to exclusion from the community of true believers. The place of his banishment was a Jewish colony near Cordova, called an-Nisada. He was soon recalled, however, and sent to Morocco, where he was bitterly persecuted till his death. He was a very industrious man, and is said to have spent, in all his adult life, only two nights without working—that of his wedding-day and that of the day which followed his father's death. He wrote on a vast variety of subjects—philosophy, philology, astronomy, law, and medicine. His chief medical work is generally called by its mediaeval Latin title, "*Colliget*" (Kitab al Kullijat" The General Principles of Medicine). The Colliget soon took rank as a high authority, second, in fact, only to the Canon of Avicenna. In a word, it is a whole system, or encyclopedia, of medicine, rather impractical, however, and thoroughly saturated with philosophy. As an ophthalmologist Averroes is greatly inferior to a number of other Arabians—notably Ammar and Ali ben Isa. He is nevertheless important for the history of optics, inasmuch as he wholly departed from the purely theoretical views of the nature of vision which had been laid down by the ancients and, for the most part, by mediaeval writers as well.

Avicenna. *In Arabic:* **ABu ALI AL-HUSAIN B. ABDALLAH B. AL-HUSAIN B. ALI AS-SAIH AR-RAIS IBN SINA**. This greatest of all Arabian physicians (for this reason generally called by the Arabs simply The Prince or The Chief) was born at Khorassan A. D. 980. At the age of ten he knew (it is asserted) the Koran by heart, and the greatest difficulty which his teachers met in connection with the instruction of this wonderful pupil

was to keep him supplied with subjects. At the age of 17 he was called in consultation in the case of the Emir, Nuch ben Mansur, and acquitted himself most creditably. The death of his father—a high official at Bokhara—having left him rich, Avicenna began a life of dignified and successful wandering. He passed from court to court, in the various capacities of physician, astronomer, author, teacher, and, finally, vizier—a dignity which he reached in Hamadan. Charged with treason, he was imprisoned. He escaped, however, and fled to Ispahan. Being here entertained with great cordiality, he remained for 14 years. He was all his life a great student and a wicked man. In his 58th year he died, as a result, it is said ‘ of excessive study and dissipation. Some still unkindly writers aver that he perished because, when sick, he took his own medicine. He was a very prolific and a very interesting writer. His works, declared to amount in number to 105, were in prose and in verse, and treated of law, astronomy, philosophy, mathematics, statesmanship, and medicine. Avicenna was not an original medical writer, but was an excellent compiler. His medical Magnum Opus, “*Kanun*” (Canon), was only a sort of combined codification and amplification of Galen, Paullus, and others of the Greeks. The literary form, however, was so delightful that the book at once took rank above the “*Kingly Book*” of Ali Abbas and even the *Hawi* of →Rhazes. It became the Canon indeed, not only for its own immediate time and place, but for Western lands also through half a thousand years. Though chiefly a general practitioner, Avicenna also deserves high praise as an accurate and logical ophthalmologist. His writings on the eye are comprised in the third division of the third book of The Canon. As an ophthalmologist, however, Avicenna wrote, it would seem, from an inextensive personal experience in the treatment of eye-diseases. He has also been severely criticised for paying too little attention to the most important subjects like trachoma and cataract.

Awaya, Shinobu (1933-) Japanese Ophthalmologist, Professor Emeritus of Nagoya University. He graduated from Nagoya University in 1958 and studied Ophthalmology under Prof. →KOJIMA Koku: he received his Doctor of Medical Sciences from the University in 1965 (thesis: *Studies on Amblyopia*. J. Jpn. Ophthalmol. Soc. 69: 328-342, 1965). He served as the Professor and Chairman of the Department of Ophthalmology of Nagoya University from 1985 to 1997. His research interest is in Pediatric Ophthalmology and Strabismus, and he gave the Society’s Award lecture “*Binocular functions in amblyopia and strabismus*” (J. Jpn. Ophthalmol. Soc. 101: 891, 1997) at the 101st Congress of the Japanese Ophthalmological Society. Many other publications include “*Amblyopia in man, suggestive of stimulus deprivation amblyopia*, Jpn. J. Ophthalmol. 17:69, 1973” and “*Observations in patients with occlusion amblyopia: results of treatment*. Trans. Ophthalmol. Soc. U.K.99: 447, 1979”. He served to the Japanese Ophthalmological Society as a Councillor (1973-1999), Board of Directors in charge of finance (1987-1991) and Board of Directors in charge of International relations (1997-1999), and he is Honorary Member of the Society since 1999. He also served the International Strabismological Association as a Councillor (1978-1994), as the Secretary-Treasurer (1982-1990) and the President of the Association (1990-1994). (Kawasaki University of Medical Welfare, 288 Matsushima, Kurashiki, 701-0193, Japan. fax: 81-86-463-1473, e-mail: kghawaya@kariya-gh.or.jp (SM)



Theodor Axenfeld

Axenfeld, Theodor (1867-1930) German ophthalmologist born in Smyrna, the son of Julius Axenfeld, a missionary. He was educated in Germany and studied medicine at the Universities of Marburg and Berlin. He took his M.D. degree in 1890. He studied ophthalmology under Prof. →Schmidt-Rimpler and more especially Prof. →Uthoff. He worked at pathology with Marchand and bacteriology with Rubner and C. Fraenkel. He spent the winter 1894/95 in the laboratory of Hermann von →Helmholtz. During the years 1895/97 he was lecturer at the Universities of Marburg and Breslau and in 1897 he was called to the University of Rostock as Professor of Ophthalmology and Director of the University Eye Clinic. He remained in Rostock until 1901 when he accepted a call from the University of Freiburg and here he remained for the rest of his life, in spite of many calls from other universities. The chief reasons for his refusal of these calls were that at Freiburg he had an admirably designed and equipped ophthalmological institute and that being a small town he was not unduly worried by a large number of private patients. He always maintained the point of view that chiefs of clinics should keep themselves as free from private practice as possible in order that they should be able to devote themselves to

scientific work. It was to this aspect of ophthalmology that he gave most of his time and to which he made many notable contributions. His first important paper was "Über die eitrig metastatische Ophthalmie (Graefe Archiv 1894,40,III: 1-129) [Suppurative



Metastatic Ophthalmia],” This paper is a model of what a completed investigation should be. It gives a detailed picture of the disease, the bacteriological findings, and the pathological changes, based upon experimental and clinical data, and remains to-day the classical paper on this subject. It was awarded the Graefe Prize by the Heidelberg (now German) Ophthalmological Society. This was followed in 1895 by the “*Etiology of the Serpiginous Ulcer of the Cornea*,” in which he showed the important role played by the pneumococcus in the production of this condition. Then in 1896 came the discovery of epidemic pneumococcus conjunctivitis and diplobacillary conjunctivitis “*Beiträge zur Aetiologie der Bindehautentzündungen. Ueber chronische Diplobacillenconjunctivitis*. (Ber. Ophthal. Ges. Heidelberg 1897,25:140-155) [simultaneously with Victor→Morax]. In 1902, based upon the enormous experience acquired in Rostock, he published “*Das Trachom*,” an exposition of all the various manifestations and complications of this plague and the best means of dealing with it, both individually and as a social question. The humanitarian and philanthropic aspect of the man was shown first in 1905 when he used as his subject for a Rectoral address “*Blindness and Care of the Blind*.” In this subject he showed a continuous interest and always used his great influence to bring about an amelioration of the conditions of life for the blind in all social levels. From 1901 onwards he became interested in tuberculosis of the eye and many articles on this subject came from his laboratory and in 1909 the description of the condition “*Periphlebitis retinae tuberculosa*.” In 1907 appeared the book “*Bakteriologie in der Augenheilkunde*” (Ophthalmological Bacteriology) which was translated into English in 1908 by MacNab. In

1908 he published in the French language his work “*Le catarrhe printanier*.” In 1909 appeared the “*Lehrbuch der Augenheilkunde*” (Textbook of Ophthalmology) which went through many editions, and has been translated into many languages. The number of papers and books published under his own name amounts to nearly 200 and besides this there are a larger number which, emanating from his clinic and laboratory, owe their inspiration to him, but bear the names of those who worked under him. In 1899 he became associated with Zehender in the editorship of the *Klinische Monatsblätter für Augenheilkunde*.” In the following year Zehender retired and this important publication was carried on by Axenfeld alone from that time. In 1915 he assumed jointly with Elschning the editorship of the big Graefe-Saemisch “*Handbuch der Augenheilkunde*” and in that year appeared the first edition of the “*Operationslehre*” to be followed in 1922 by a second edition. In 1898-1928 appeared the volumes “*Pathologie des Auges*” as part of the “*Ergebnissen der allgemeinen Pathologie*” of Lubarsch and Ostertag. Axenfeld was the recipient of many honours, both in his own and foreign countries. Besides many ribbons and stars of knightly orders, the University of Freiburg made him first Dean of Faculty of Medicine and later, Rector of the University. In 1925 he became President of the German Ophthalmological Society and he was German representative on the League of Red Cross Societies for the Prevention of Blindness. He was an honorary member of many foreign medical societies and in 1929 was awarded the Lucien Howe gold medal of the American Ophthalmological Society for his “Great services to Ophthalmology.” He had previously received the Graefe Medal of the German Ophthalmological Society. In 1928, he and →Wessely represented Germany at the meeting of delegates which arranged the 1929 International Congress at Amsterdam. BJO 1930,14:537-539. [GM 5938;5941] JPW

Ayscough, James (d. ca. 1762) British, 18th century London spectacles- and microscope-maker. He wrote for the layman “*A short account of the eye and nature of vision, chiefly designed to illustrate the use and advantage of spectacles*” of which the fourth edition appeared in London 1755. Albert

Azuma, Ikuo (1930-) Japanese Ophthalmologist, Professor Emeritus of Osaka Medical College. He is a graduate of Osaka University in 1955 and studied Ophthalmology under