

La Chambre, Marin Cureau de (1594-1669) French physician. La Chambre was born at Le Mans, France, and became physician to Louis XIII and advisor to Louis XIV, who valued him for his supposed ability to assess the character and abilities of a person on the basis of physiognomy alone. La Chambre, one of the first members of the Académie Française (1635) and of the Académie de Sciences (1666), wrote on a wide variety of medical and non-medical topics, especially psychology; his best-known work is *Les caractères des passions* (1658-1663). He wrote also : *La lumière* Paris 1657 and *Nouvelles observations et conjectures sur l'iris*. Paris 1662. JPW

La Charrière, Joseph de (? -1690) French surgeon of Annecy, France. He practiced surgery in his native city after some years of training in Paris. His treatises on anatomy and surgery are compilations containing little that is original; the surgical work, however, enjoyed considerable popularity, going through many editions and translations. He wrote: *Nouvelles opérations de chirurgie* Paris: D. Horthemels, 1692 and *Anatomie nouvelle de la tête de l'homme, et de ses dépendances* Paris 1703. JPW

La Harpe, Jean Jacques Charles de (1802-1877) French physician who wrote *De tubuli metallici immissione in cura obstructionis ductus nasalis*. Göttingen 1827. JPW

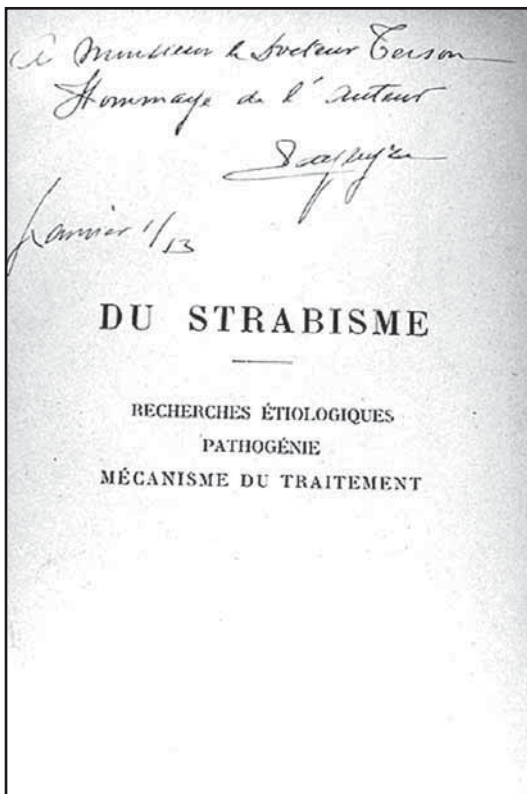
La Hire, Gabriel Philippe (1677-1719) French physician, son of Philippe de La Hire. Little is known about him. In ophthalmology he wrote *Remarques sur la cataracte et la glaucoma* in : *Mémoires de l'Académie royale des sciences pour l'année 1707*, 553-555, Paris 1709. JPW

La Hire, Philippe de (1640-1718) French mathematician, physicist, and astronomer of Paris, whose research and writings encompassed a diversity of theoretical and applied scientific subjects. La Hire was born in Paris. His father, Laurent de la Hire, a famous painter and engraver taught him the principles of his art, but Philippe had already a taste for geometry that had all the time increased during a journey to Italy that he undertook in 1660, because of a failing health. His father was at that time already dead for three years. On his return to France he continued his geometry studies and was soon discovered by Desargues who invited him to finish the second part of his treatise *Traité de la Coupe des Pierres*. La Hire was successively hired by Colbert and Louvois for geodesical works and level surveys. He also worked together with Picard on the map of France and finally executed the high levelling works necessary to bring water of the Eure (a small river) to Versailles. The foundations of La Hire's reputation as a geometrician was laid with the publication of his *Nouvelle Méthode de Géométrie pour les sections de superficie coniques et cylindriques qui ont pour base des cercles ou des paraboles, des ellipses ou des hyperboles* Paris, 1673. La Hire became a member, in 1678, of the Académie Royale des Sciences, of which publication, the *Recueil* are indebted to him for more than 80 "Mémoires" (contributions). He published 1685 in the "Journal des Scavans" (vol.23 :196-200 & 219-224) *Dissertation sur la conformation de l'œil* and in 1694 (in: *Mémoires de mathématique et de physique*) his treatise *Traité des différens Accidens de la Vuë*, reprinted in 1730. La Hire reproduced Jean Méry's experiment of the immersion of a cat and gives, in *Mémoires à L'Académie des Sciences* (1709), a logical explanation of the neutralization of the corneal optic and about vision of the retina. He published in 1685 his *Sectiones Conicae in norem libros distributae* which was acclaimed in all western European countries. But La Hire was also much interested in the analysis of Descartes theories proven by his three treatise that he published in 1679: 1) *Nouveaux éléments des sections coniques* 2) *Les Lieux Géométriques* 3) *La Construction ou Effectation des équations*. Amongst other works he authored we find also: *La Gnomonique ou l'art de tracer des cadrans ou horloges solaires sur toutes sortes de surfaces par différentes pratiques, avec les démonstrations géométriques de toutes les opérations* (1682), *Des Cycloïdes* (1676), *École des Arpenteurs* (1689), *Tabulae Astronomicae* (1702), *Description et explication des Globes qui sont placés dans le pavillon du château de Marly* (1704). He was professor of mathematics at the Collège Royal de France and at the Academy of architecture. Other papers (Mémoires) published by La Hire are: *Explication de quelques faits d'optique et de la manière dont se fait la vision*, (*Registre des procès-verbaux de l'Académie royale des sciences*, 23, 103 r°-113 r°), Paris, Archives de l'Académie des sciences, 1709 ; *Explication de quelques faits d'optique et de la manière dont se fait la*

vision, in *Mémoires de l'Académie royale des sciences pour l'année 1709*, 95-106, Paris, Jean Boudot, 1711. La Hire was twice married and had from these marriages eight children. Two of those (of different mothers) became academicians: Gabriel-Philippe (1677-1719) and Jean-Nicolas (1685-1727). See also: *Œuvres diverses de M. de La Hire*, Volume IX of the *Mémoires de l'Académie royale des sciences depuis 1666 jusqu'à 1699*, Paris, Compagnie des Libraires, 1730. File «Philippe de La Hire», Paris, at the Archives of the l'Académie des sciences. Extracted from Robert Heitz *History of Contact Lenses*, volume 1 (chapter IV), in Hirschberg *History of Ophthalmology*, Vol.XI,3a. Ostend Wayenborgh 2002. JPW

Laaser, Guillaume-Constantin. A French quack of the 18th century, who practised chiefly at Marseilles, Avignon, Aix, and Montpellier. He sold a "Teinture Anisole." "...which cures all sorts of diseases in the eye except the blind [sic] ; it is worth 6 francs an ounce." American Encyclopedia of Ophthalmology, Vol.9, p. 6886

Laey, Jean-Jacques see De Laey



Lagleyze, Pedro (also Pierre) (?-1916). South American ophthalmologist from Buenos Aires, Professor of clinical ophthalmology in the faculty of medicine of Buenos Aires and President of the Academy of Medicine. Lagleyze was the founder of the ophthalmic society of Buenos Aires. Lagleyze wrote a 409-pages manual on strabismus: *Du Strabisme*, Paris 1913. JPW

Lagrange, Felix (1857-1928) French ophthalmologist, born in Soumensac, a little village in the Gascogne. Being an exceptional pupil at the grammar school, his parents, of modest status, made a financial sacrifice by sending Felix to the college, and later to the Bordeaux University. At the age of only 26 years, he was already a lecturer in Surgery. He was sent by the war minister to Tonkin. Back in France, he found his place occupied by another surgeon, and maybe it was that, that directed him to ophthalmology. As an ophthalmologist, his first interests focused on strabismus and refraction anomalies, which he studied at the children's hospital. At the same time, he undertook important research on tumors of the eye which he published regularly in ophthalmic journals. After fifteen years of studies on this topic, he published the results in a book that became famous in France: *Traité des Tumeurs de l'Oeil, de l'Orbite et des Annexes*, Paris 1893. He also made studies on the ciliary body and glaucoma. Lagrange was a prolific writer. He authored: *Valeur Therapeutique de l'élongation des nerfs* Paris 1885; *Anatomie Pathologique et pathogénie du chalazion*, Paris 1889; *Leçons sur les Anomalies de la Refraction et de l'Examen du Sens Chromatique et du Champs Visuel*, Paris 1890; *Traité pratique des Anomalies de la Vision*,

Paris 1892; *Études sur les tumeurs de l'oeil, de l'orbite et des annexes*. Paris 1893; *Précis d'Ophthalmologie*, Paris 1897 (3rd ed.1907); *Traité des Tumeurs de l'Œil*, 2 vols., Paris 1901-1904; *Rapport sur le Diagnostic et le Traitement des Tumeurs de l'Orbite*, Paris 1903; *Les Fractures des de l'Orbite par des Projectiles de Guerre*, Paris 1917; *Atlas d'Ophthalmoscopie de Guerre*, Paris 1918 (French and English text !); *Précis d'Ophthalmologie* of which the 4th ed. appeared 1921; *Glaucome et Hypotonie*, Paris 1922; *Traitement du Glaucome Infantile*, Paris 1925 and, finally, he edited, with Valude, the 9-volumes-set of the *Encyclopédie Francaise d'Ophthalmologie*. A selection of his main papers was published by his pupils at the occasion of his 70th birthday: "*Félix Lagrange et ses élèves*", Paris 1927. JPW

Lahav, Moshe (1939-1998) American ophthalmologist of Israeli birth. After he was awarded an MD degree by the Hebrew University and Hadassah Medical Center, Jerusalem, Israel, in 1969, Lahav extended his postgraduate education in the United States, choosing a career in ophthalmology. He applied to Yale University, New Haven, Conn, for a residency position. During his residency he participated in the rotation that the program at Yale University had established in Des Chapelles, Haiti, at what was then

Gwen and Larry Mellon's Albert Schweitzer Hospital, named after the dedicated world leader in Lambaréné, Gabon. After his 3-month rotation in Haiti, the administration was reluctant to let Moshe leave, so strong had been the ties he had created, so loving his compassionate manner under trying circumstances. After completing his residency at Yale University, Moshe Lahav received training in retinal and ophthalmic pathology at the Armed Forces Institute of Pathology, Bethesda, Md, then resumed a faculty position at Yale University for 2 years before returning to the Hadassah Medical Center for 5 years. Here he helped in the development of retinal surgery and gave leadership to the experimental and diagnostic eye pathology laboratory. He subsequently returned to the United States and rose to the rank of professor of ophthalmology at both Tufts University, Medford, Mass, and Boston University, Boston, Mass, where he became director of the Boston Veterans Administration service. Lahav became a member in the American Ophthalmological Society and was also involved in other clinical and research organizations. Arch Ophthal 117,142,1999

Laibson, Peter Robert (1933-) American Ophthalmologist, Professor of Ophthalmology, Thomas Jefferson University School of Medicine, and Co-Director of Cornea Service, Wills Eye Hospital, Medical Director, Lions Eye Bank of Delaware Valley. Graduated from the University of Vermont 1955 with a B.A. cum laude and the State University of New York Downstate Medical Center 1959 with M.D. degree. Ophthalmology training was at the Wills Eye Hospital as a resident (1961 – 1964) and then an N.I.H. Fellowship (1964 – 1965) as a research fellow and a corneal fellow at the corneal research unit, Retina Foundation (with Claes→Dohlman and Saiichi→Mishima) and at Massachusetts Eye & Ear Infirmary (1964 – 1965). He has served in the following positions: Research Associate in microbiology Boston University, (1965–1969), Associate Professor of Ophthalmology Temple University (1966–1971), Associate Professor of Ophthalmology, Thomas Jefferson University (1971–1979) and Professor of Ophthalmology Thomas Jefferson University (1979 to date), Director of the Cornea Service, Wills Eye Hospital (1973 – 1999), currently Co-Director of the Cornea Service, Director, Lions Eye Bank of Delaware Valley (1973 to date), President, Medical Staff, Wills Eye Hospital (1982 – 1984), President, Castroviejo Society, President, International Castroviejo Society (1985 – 1987), Member, Editorial Board, *Archives of Ophthalmology* (1974 – 1984), Member, Editorial Board *Cornea*, *Video Journal of Ophthalmology*, Editor, *Yearbook of Ophthalmology* (1988–1993), Member Board of Councillors, American Academy of Ophthalmology (1986–1992), Member Program Committee American Academy of Ophthalmology (1989-1994), Chairman, Committee on Guidelines for Corneal Fellowship Training, American Board of Ophthalmology (1998-2000). He has been a Member of the following professional and honorary societies: Phi Beta Kappa, Sigma Xi, American Academy of Ophthalmology, American Ophthalmological Society, Pennsylvania Academy of Ophthalmology, ARVO, Castroviejo Society, American Medical Association, Corresponding member of Colombian, Brazilian and Chilean Ophthalmological Societies. He presented 21 named lectures, including The Castroviejo Lecture at the American Academy of Ophthalmology. He is a recipient of Life achievement honor award American Academy of Ophthalmology; October 1999. He is co-author of over 250 articles in refereed journals. As the Director of Corneal Fellowship Program at Wills Eye Hospital, he has trained 115 fellows for a one year training programs at Wills Eye Hospital: 25 of these fellows are overseas and 90 in the United States. Samples of publications are “*Blood viscosity, serum hexosamine and diabetic retinopathy*; Diabetes 10: 393-395, 1961” (with David Cogan and Merola) and “*An evaluation of Double Blind IDU therapy in 100 cases of herpetic keratitis*. Trans. Am. Acad. Ophthalmol. Otolarygol.; Jan-Feb 1964” (with Irving Leopold), “*Reactivation of Herpetic Keratitis in rabbits. Repeated reactivations in the same host*. Arch. Ophthalmol. 1977: 244-248, 1967” (with Sidney Kibrick), “*Corneal Infiltrates in EKC*, Arch. Ophthalmol. 84:36-40, 1970”, “*Dystrophic changes in the anterior cornea*. Arch. Ophthalmol. 85: 378-382, 1972” (with Jonathan Trobe), “*Disorders of the corneal epithelium: A clinical pathological study of dot geographic and fingerprint patterns*. Arch. Ophthalmol. 92: 475-482, 1975” (M. Rodrigues, B. Fine, and L. Zimmerman). Dr. Laibson and his associates, as well as fellows, published on all of the currently available antiviral medications in the treatment of herpes simplex virus infection. He was part of the

prospective evaluation of radial keratotomy which was conducted by his ex-fellow, George→Waring, and also part of the Herpetic Eye Disease Study, which detailed the ineffectiveness of Acyclovir for stromal keratitis and prophylactic use of oral Acyclovir being effective to prevent recurrent herpes. Dr. Laibson has been interested in ocular viral disease, as well as corneal dystrophies, and corneal transplantation. He has been active in the American Academy of Ophthalmology and in the Corneal Fellowship Program, which the American Board of Ophthalmology is in the process of formalizing. Dr. Laibson has worked with the American FDA and was a member of the original Medical Advisory Board of the FDA when it was first established in 1971 to investigate therapeutic and cosmetic soft contact lenses. His associates, Elisabeth J. Cohen and Christopher J. Rapuano, work with him at Wills Eye Hospital and their Cornea Service has been host to numerous visitors from around the world, in addition to their corneal fellows. (Cornea Service, Wills Eye Hospital, 900 Walnut street, Philadelphia, PA 19107-5598, U.S.A.; Phone: +1-215-928-3180, Fax:+1-215-928-3854; e-mail: plaibson@SHRSYS.HSLC.ORG) (SM)

Lallemand, Claude-Francois (1790-1853). French surgeon and genito-urinary specialist, of some importance in ophthalmology. Born at Metz, he received his medical degree at Paris in 1819, and at once was appointed to the chair of surgery at Montpellier. His most important writing, and that which rendered him famous was "Observations sur les Maladies des Organes Génito-Urinaires" (2 parts, Paris and Montpellier, 1825-27) of which there were numerous editions and translations. He was a distinguished operator, and became, in course of time, by far the most celebrated surgeon in southern France. In the above-mentioned work he discussed the ocular disturbances dependent on undue seminal losses and he also wrote an article on the formation of the artificial pupil. In 1845 he removed to Paris, and there remained in philosophic retirement until his death. American Encyclopedia of Ophthalmology, Vol.9, p. 6993.

Lam, Shun-chiu Dennis (1959-) Chinese ophthalmologist, Professor and Chairman, Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong (CUHK). He received M.B. and B.S. (1984) and started basic ophthalmic training in Hong Kong and subsequently extended his studies in the U.K.: Diplomate in Ophthalmology (Ireland, 1987; Glasgow, 1988) and Fellow of Royal College of Surgeons (Edinburgh, 1988) and Fellow of Royal College of Ophthalmologists (U.K., 1990). On home coming, he was elected to Fellow of Hong Kong Academy of Medicine (Ophthalmology, 1993) and Fellow of College of Ophthalmologists of Hong Kong (1994). Since late 1998, he has been in the present position as above, and conjointly he serves as Honorary Director of the Joint International Eye Center of CUHK and Shantou Medical College of the People's Republic of China, PRC (1998-), Honorary Chief Service of the Hong Kong Eye Hospital (1999-), Red Cross Hospital of Yunnan Province, PRC (1996-), and Guang Zhou First Municipal People's Hospital (1996). He also serves as Hon. Advisor of the Lions Clubs International "Sight First China Action" Project (1999-), Executive Member and an "Ambassador of Hope" of the Lifeline Express-Train Hospital for Eye Surgery (1997-), Visiting Professor to Shantou University Medical College (1998-), Shanghai Medical University (1999-) and The Tamil Nadu Dr. M.G.R. Medical University, India (1999-). He is a member of many National and International professional societies, e.g. President of the Asia-Pacific Society of Eye Genetics (2001-), Council Member of the Asia-Pacific Academy of Ophthalmology (APAO, 1999-), Board Officer of the Asia-Pacific Intraocular Implant Association (1998-), Vice-President of the Hong Kong Society of Transplantation (1999-), Medical Advisor of the Lions Hong Kong Eye Bank (2000-), Honorary Secretary of Hong Kong Ophthalmological Society (1989-1995) and Member of Organizing Committee of the XV APAO Congress (1995). He is the founding Editor-in-Chief (1995-1999) and an Advisor (1999-) of *Hong Kong Journal of Ophthalmology* and an editorial board member to *Asian Journal of Ophthalmology* (1998-) and serves as a reviewer to *Eye* (UK), *J. Cat. Refr. Surg.* (USA) and *Ophthalmology* (USA). His main interest in Ophthalmology is anterior segment diseases, and some examples of his many publications are "*Immediate argon laser peripheral iridoplasty as treatment for acute attack of primary angle-closure glaucoma: a preliminary study.* Ophthalmology 1998; 105:2231-6" and "*Management of severe flap*

wrinkling or dislodgment after laser in situ keratomileusis. J. Cataract Refract. Surg. 1999; 25:1441-7" and "Truncation mutations in the TIGR gene in individuals with and without primary open angle glaucoma. Invest Ophthalmol Vis Sci. 2000; 41:1386-91". For his outstanding contributions, he received many Awards, that embrace Global Leaders for Tomorrow (2000), Achievement Award of the American Academy of Ophthalmology (2000), Ten Outstanding Young Persons of the World (1995), Ten Outstanding Young Persons of Hong Kong (1994), the Most courteous Doctor of the Prince Wales Hospital (1993 & 1994), Youth Ambassador of Hong Kong (1982 & 1985) and many others. (Dennis S.C. Lam, FRCS, FRCOphth. Chairman, Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong Eye Hospital, 147K Argyle Street, Kowloon, Hong Kong. Tel: (852) 2762 3157, Fax: (852) 2194 1369, email: dennislam@cuhk.edu.hk)

Lambert, Antoine. A 17th century French surgeon of Marseilles, who devoted considerable attention to ophthalmology. Born at Luc, Provence, he was a self-made man, his only instructor having been "*a master surgeon at Marseilles*" who taught him to shave, to bleed and to cup. Settling at Marseilles, he was esteemed especially as an operator on the eye. In his "*Les Commentaires et les Oeuvres Chirurgicales d'Antoine Lambert, natif du Luc, Maître Chirurgien à Marseille, Divisé en Cinq Parties*" (Marseilles, 1662; 2d ed., Lyon, 1671; 3d ed., Marseilles, 1677) a chapter is devoted to his treatment of fistula lachrymalis, as follows: "Having opened the fistula with the scissors and hollow sound, and having thoroughly explored with a slender probe, which is a trifle curved, the dilated orifice and the open sinus both above and below, we take a little plug, proportioned to the length and width of the fistula, which we fill from its point to its middle with the ointment composed of two parts of the white of Rhazes and one of sublimate made into a powder. One fastens to the plug a thread, of which a certain part should be allowed to hang outside the fistula, for the purpose of enabling the plug to be withdrawn more easily, after its action is finished. The plug having been passed to the bottom of the sinus, is set chiefly under and against the glans [caruncle] between the eye and the orbit, where callous flesh is gathered together." The plug is left in place from 8 to 12 hours; and if, after the fall of the eschar (for the ointment in question was very escharotic) the process could be resorted to as often as might be necessary. The treatment was so painful that the lids swelled enormously (they could not be opened for two or three days), and "vomiting and cardialgias" were also produced. If, after the eschar had been removed, the bone was discovered to be carious, then it was touched a number of times with aquafortis or the spirit of vitriol or of sulphur, which was placed in the bottom of the sinus, by means of a pledget of cotton fastened to the end of a sound by twisting. If this did not suffice, Lambert employed what he called *sirigation* i.e., *lavage* with a solution composed of 2 1/2 oz. of alcohol and an equal quantity of *eau de chaux* in which had been dissolved 4 or 5 grains of sublimate. When, however, the caries was deep, the actual cautery was employed. American Encyclopedia of Ophthalmology, Vol.9, p. 6993-6994

Lambert, Johann Heinrich. (1728-1777.) German philosopher and mathematician, who was born at Mülhausen in Upper Alsace. In 1764 Frederick the Great made him a member both of the Council of Architecture and of the Academy of Sciences. Lambert was the first to formulate (in his "*Photometria*") a scientific basis for the measurement of light. He wrote several other scientific and philosophical works. American Encyclopedia of Ophthalmology, Vol.9, p. 6994-6995

Lamorier, Louis (1696-1777). French surgeon born at Montpellier. He studied 1718-20 under Méry at the Hôtel-Dieu, Paris. Returning to Montpellier, he became successively professor at the School of Surgery, surgeon to the Hospital of Saint-Eloi and Fellow of the Royal Society of Sciences. He wrote no books, but a number of excellent articles from his are to be found in the *Memoirs of the Royal Society of Sciences* in the Royal Academy of Surgery at Paris. In 1729 he published in the Memoirs of the latter-named society paper entitled: "*A New Method of Operation for Lachrymal Fistula.*" His method consisted essentially in perforation of the lacrimal bone—a procedure neither new nor useful—though it has been proposed once more, as both, in this, the 20th century. American Encyclopedia of Ophthalmology, Vol.9, p. 6996

Lamure, Francois de Bourguignon Bussière, Seigneur de (1717-1787). A famous French physiologist, who paid considerable attention to the physiology of the eye. Born at Fort Saint-Pierre (Martinique) he received his degree in medicine at Montpellier in 1740. He practised for a time at Montpellier, and became an instructor in medicine. For a time he practised in Paris, but returned to Montpellier, and in 1750, on the death of Rideux, he received a master's chair. He was made a Fellow of the Royal Society of the Sciences, and, shortly before his death, became dean of the Montpellier faculty. He was a ceaseless vivisector, and was widely known as a teacher. His only strictly ophthalmic writing was a thesis, written in competition for the professorship above-mentioned, *Presbytiae Theoriam et Curam Exponere*, in which he takes the position that presbyopia is caused by flattening of the cornea and lens. American Encyclopedia of Ophthalmology, Vol.9, p. 7004

Lancisi, Giovanni Maria (1654-1720) Italian physician, born at Rome, he studied (as happened in the case of so many famous physicians of his day) at first theology, then medicine. He received his medical degree at the Collegio di Sapienza in 1672. In 1684 he became professor of anatomy at the same institution. Among his pupils who afterwards became celebrated were Malpighi and Tozzi. He was finally appointed body physician to Popes Innocent XI and Innocent XII. His general achievements (including a number of important books) do not need to be mentioned here. He is chiefly to be remembered by ophthalmologists because of the fact that he was one of the little band (Valsalva, Morgagni, Benevoli, et al.) who succeeded in securing the acceptance of "*the new cataract doctrine*" in Italy. The history of this new doctrine is, in brief, as follows: Throughout antiquity and the middle ages, and even during the first few centuries of the present period, the belief was universal that a cataract consists of a deposit of corrupt and inspissated "humor" in a (wholly imaginary) space between the pupil and the lens. About 1643, →Quarré, a Frenchman, began to teach that a cataract is really a hardening and opacification of the lens itself. →Rolfinck, a German, in 1656, made actual anatomical demonstration of the truth of this theory. The matter attracted but little immediate attention, and, indeed, was soon forgotten absolutely. Thirty or forty years later, however, two more Frenchmen, →Brisseau and →Maitre Jan, took up the cudgels for the new doctrine, and, after a bitter fight, succeeded in securing its acceptance. To the great →Heister belongs the credit of having carried "the new theory about cataract" into Germany. Lancisi and Valsalva repeated at Rome the experiment of couching a cataract in the dead human subject, and then, by dissection, showing that it was really the lens itself that had been "*dethroned*." American Encyclopedia of Ophthalmology, Vol.9, p. 7004-7005

Landesberg, Max(? – 1895). Rumanian-Italian ophthalmologist. Born at Jassy, then the capital of, Moldavia in Rumania, he received his medical degree at Berlin in 1865, his dissertation being "*On Conjunctivitis*.". Having studied ophthalmology with von →Graefe, →Schweigger, →Schelske, and →Waldau, he settled at first in Philadelphia, U.S.A., then moved to New York City, and, finally, to Florence, Italy. American Encyclopedia of Ophthalmology, Vol.9, p. 7006

Landi, Pasquale (1817- ?). Italian physician, who seems to have paid considerable attention to ophthalmology. Born at Porrone, he received the degree of M. D. at Sienna in 1841. He practised in Florence, Sienna and Pisa, and held a number of teaching positions. The date of his death is not known. His only ophthalmologic writing is "*Dell Ottalmia Catarrale Epidemica Nelle Milizie Austriache Stanziato in Firenze*" (Florence, 1851). American Encyclopedia of Ophthalmology, Vol.9, p. 7006-7007

Landolt, Edmond (1846-1926) Swiss ophthalmologist. Landolt was born in Aarau. He received his MD in 1869 in Zürich. He studied ophthalmology under Knapp (Heidelberg), Arlt (Vienna, A.v.Graefe and Helmholtz (both Berlin), under Horn in Zürich and Donders and Snellen in Utrecht. In 1874 Landolt settled in Paris co-directing, with Emil Javal the Laboratoire d'Ophthalmologie, having a private practice and working at the Institut des Jeunes Aveugles. Among his many accomplishments in the field of physiological optics is the discovery of "Landolt's bodies" between the rods and cones of the outer nuclear layer of the retina; he also investigated the functions of the ocular muscles and devised a new

advancement operation. Landolt wrote: *Le grossissement des images ophthalmoscopiques*. Paris: A. Delahaye, 1874 ; *Die Einführung des Metersystems in die Ophthalmologie*. Stuttgart: Ferdinand Enke, 1876. *Leçons sur le diagnostic des maladies des yeux* Paris : A. Delahaye, 1877 ; *Manuel d'ophtalmoscopie* Paris: Octave Doin, 1878 ; *A manual of examination of the eyes. A course of lectures delivered at the "école pratique"* Translation by Swan M. Burnett, Philadelphia 1879; *The artificial eye of Dr. E. Landolt* [translated by E.A. Browne]. London 1879; *The refraction and accommodation of the eye and their anomalies*. Edinburgh 1886. *Uebersichtliche Zusammenstellung der Augenbewegungen im physiologischen und pathologischen Zustande*. Breslau: Kern's Verlag (Max Müller), 1887. (→Magnus, *Augenärztliche Unterrichtstafeln*, Heft 3); and with P. Gyax *Thérapeutisches Taschenbuch für Augenärzte*. Wiesbaden 1897. With Louis de Wecker he edited the *Traité Complet d'Ophthalmologie* , 4 vols., Paris A. Delahaye, 1880-1889. Landolt designed an ophthalmoscope and a ophthalmodynamometer named after him. JPW



J.-F.-Parfait Landrau

Landrau, J.-F.- Parfait (1797- ?) French ophthalmologist (a quack ?), born in Maule, Pas de Calais, France. Nothing could be found about him, except on the title page and portrait in his booklet published in 1844. It says there that he is an ophthalmologist and director of the Institut ophtalmologique de Lyon, corresponding Member of the Société de Medecine de Niort. He wrote: *De La Kistotomie posterieure ou déchirement de la Cristalloide posterieure après l'extraction etc.* with *Reflexions pratiques sur les diverses méthodes d'opérer la cataracte* Paris & Lyon 1844. JPW

Landrau, Louis. French ophthalmologist. See Rivaud-Landrau.

Lane, Jonathan Homer. (1819-1880) American naturalist born in Geneseo, N. Y., who graduated from Yale and entered the United States, Coast Survey in 1847. After a period of service in the patent-office he returned to the coast survey, and thereafter became connected with the bureau of weights and measures (1869-80). He attained considerable note as an astronomer, being sent on expeditions to observe solar eclipses at Des Moines, Iowa (1869), and Catania, Spain (1870). A member of many scientific bodies, he contributed numerous articles on electricity and astronomy to scientific journals. Among his numerous inventions were a machine for finding the roots of the higher equations, a visual telegraph, and an improved basin for the mercurial horizon. American Encyclopedia of Ophthalmology, Vol.9, p. 7007

Lang, John (1859-1896). Scottish-Canadian ophthalmologist. Born at Dumbarton, Scotland, he became L.R.C.P.(Edinburgh) and L.F.P.S.(Glasgow). In 1884 he was House Physician to the Glasgow Eye Infirmary, then lived in China seven years, being there in charge of the Amoy Mission Hospital. In 1892 he moved to Victoria, B. C., where he practised with great success as ophthalmologist, and was ophthalmic surgeon to the Provincial Royal Jubilee Hospital. He received a number of severe injuries in the Point Ellice Bridge accident, May 26, 1896, and, in consequence, died a few weeks later. American Encyclopedia of Ophthalmology, Vol.9, p.7010

Lang, William (1852-1937) British ophthalmologist, born in Exeter the son of Isaac Lang. He was educated at the Moravian School in Lausanne and acquired a good working knowledge of French and German. In 1870 he entered the London Hospital, at the age of 18, and qualified as M.R.C.S. in 1874. He became F.R.C.S. in 1879. He served as House Physician and House Surgeon, and later on was demonstrator of physiology and anatomy in the Medical College. Here he met J. E. →Adams, and so was directed to ophthalmology. He became Assistant Surgeon to the Central London Ophthalmic Hospital in 1879, Ophthalmic Surgeon to the Middlesex Hospital in 1880, and followed Adams at Moorfields in 1884, to whose practice he also succeeded. He was one of the 113 founders of the Ophthalmological Society. He was senior Vice-President in 1903 and acted as President due to the death of David Little. In 1916 he acted as President of the Ophthalmological Section of the Royal Society of Medicine. Lang was not a prolific writer, nevertheless, his output was considerable, and his more important publications were of great value. From 1881, when he became one of the founders of the Ophthalmological Society, until 1906 the records show that he often brought cases

forward and joined in discussions. In 1882 he published, with W. A. FitzGerald, a paper on the movements of the eyelids in association with the movements of the eyes. This was his first paper of note and in it the action of the inferior rectus muscle in the downward movement of the lower lid is proved. Sir William → Gowers had previously stated that the lower lid was depressed by the pressure of the limbus upon the margin of the lower lid. After the paper had been written the authors discovered that Bonnet and Richet had described the action of the inferior rectus muscle 40 years previously! In 1886 he was a member of the Committee which reported on 211 cases of sympathetic ophthalmitis. In 1887 he published his account of the insertion of an artificial globe into Tenon's capsule after excising the eye. This operation had been independently suggested by Adams → Frost in the previous year. In 1888 he described the condition of the ciliary processes and suspensory ligament of the lens after removal of the iris. In this case the iris had been torn away by an accident, and the eye was otherwise normal. Lang was unable to see any result from the application of atropine or eserine in the eye, although the eserine produced a characteristic pain in the eye. In 1889 he offered an explanation of enophthalmos following a blow upon the eye, which retained full visual acuity, by suggesting that the orbital sac had become herniated into the antrum of Highmore. In 1892 he showed a case of chancre of the semilunar fold of conjunctiva which was followed by interstitial keratitis in the affected eye. In 1895 appeared his only book " *The Methodical Examination of the Eye.*" It was put out as Part I of a *Guide to the Practice of Ophthalmology for Students and Practitioners.* At various times in later life he made efforts to write further volumes which were to include one on operative surgery. For this some photographs were taken of him operating. In 1895 he also took part in the discussion on the operative treatment of myopia by removal of the crystalline lens. He pointed out the tendency to detachment of the retina following the removal of senile cataract in myopic patients. It was the experience he gained in needling the lens in high myopia and the subsequent removal of the softened lens matter that led him to devise the incision in the upper part of the cornea midway between the limbus and the centre of the cornea, so as to avoid prolapse of iris and also permit the detachment of any capsular synechia which might follow and for which he devised his well known twin knives in 1889. He was the *first* to prove that the iridescent crystals seen in a senile cataract were typical cholesterol crystals. Lang was for many years the editor of the *Royal London Ophthalmic Hospital Reports*, and he contributed several important papers in collaboration with Sir James Barrett, who was then living in London. The first was in 1886 on *The Refractive Condition of the Eyes of Mammalia.* - A great variety of animals were examined, 185 eyes in all, and the majority were hypermetropic. In the same year appeared a long and elaborate paper on the action of miotics on the accommodation. This was a continuation of Donders' work published in 1864. In 1887 they published a paper that had considerable practical importance, as it is upon the information contained in it that the use of cycloplegics in refraction work is built. This paper was "*The Action of Myotics and Mydriatics on the Accommodation.*" It is the record of a patient and careful investigation, and in it was introduced an enquiry into the action of a mixture of homatropine and cocaine (often known as Lang's drops), and of the extremely ingenious oily solution of these alkaloids. It was also shown in this paper how easily and safely the action of these drugs can be controlled by the subsequent use of eserine. The last paragraph in the paper announces " *After paralysis of the sphincter pupillae and ciliary muscle has been effected by the application of homatropine or of homatropine and cocaine, the application of eserine causes a constriction of the pupil, and an approximation of the near point to such an extent that in the great majority of cases the individual can, in a few minutes, resume work of all kinds without inconvenience.*". In 1888 appeared two papers on convergent concomitant strabismus in which were considered the results of treatment of convergent strabismus by the correction of the refraction error with and without tenotomy: the possibility of alteration of vision in the squinting eye: familial tendency to strabismus: age of onset and alleged causes: whether amblyopia is the cause of strabismus, and the influence of atropine on concomitant convergent strabismus. In 1889 Lang published, with Casey A. → Wood, an examination of the patellar tendon reflex in sixty-two cases of interstitial keratitis. It was absent in 10 per cent and "decidedly abnormal" in 30 per cent. Lang improved many of the instruments in common use. The McHardy perimeter, until it was superseded by better models, was improved by him in many ways. Another matter that will always be

associated with Lang's name is the importance of focal sepsis in inflammatory diseases of the eye, and the elimination of focal sepsis as far as possible before operations on the eye are undertaken. Lang's attention was drawn to the consideration of oral sepsis by Afr. William Hern. Mr. Hern had noted the frequent co-existence of oral sepsis and rosacea, and Lang had been one of the earliest to note the connection between keratitis and rosacea. From this hint Lang began to preach the danger of oral sepsis and although others carried the matter to extremes, few will deny how important is focal sepsis in connection with eye disease. BJO 1937,568-572;Lancet 1937,2:224;Brit. Med.J.1937,2:189;Treacher Collins *History & Traditions of Moorfields* 1929.

Lange, Otto (1852-1913) Russian ophthalmologist born in St. Petersburg. Lange received his M.D. at Dorpat in 1879. He emigrated to Germany in 1886, becoming ophthalmologist to the government hospital at Braunschweig and professor at that city's university (1904). Lange wrote on the embryology and anatomy of the eye, on glaucoma, and on external eye diseases: *Topographische Anatomie des menschlichen Orbitalinhalts* Braunschweig: A Harald Bruhn, 1887. JPW

Langenbeck, Bernhard Rudolph Konrad von (1810-1887) German surgeon. Langenbeck was born at Padingbittel, Germany, the nephew of K.J.M. Langenbeck and cousin of M.A. Langenbeck. He received his M.D. in 1835 at Göttingen with a dissertation on the anatomy of the retina. After a few years as lecturer at Göttingen, he became professor of surgery at Kiel (1842) and Berlin (1848-1882); he died at Wiesbaden. Considered the greatest clinical surgeon and teacher of his time in Germany, Langenbeck invented new operations for excising the lower jaw and the joints of the leg and arm, and new methods of plastic surgery. He founded the Archiv für klinische Chirurgie (1861) and the German Society of Surgery. In the second of his two publications on ophthalmology, he was the first to accurately describe the nature of medullary retinal sarcoma. *De retina; observationes anatomico-pathologicae*. Göttingen: Dieterich, 1836. American Encyclopedia of Ophthalmology, Vol.9, p. 7007-7008. JPW

Langenbeck, Konrad Johann Martin (1776-1851). German anatomist, surgeon, and ophthalmologist, father of Maximilian Adolf Langenbeck and uncle of the famous Bernhard Rudolph Konrad von Langenbeck. Born at Horneburg, Germany, he received his medical degree at Jena in 1798, presenting as a dissertation *Diss.Inaug. Sistens Paradoxa Medica Secula XVIII.* He then proceeded to study for a time in Vienna, where his attention was directed especially to ophthalmology by Joseph →Beer. Returning to Horneburg, he practised there for one year; then, having been decreed by the Government a stipend for the purpose, he studied at Würzburg and, once more, at Vienna. In 1802 he became privatdocent at Göttingen, as well as surgeon to the Academic Hospital. Owing, however, to disagreements with →Himly, with whom he was associated in this hospital, he resigned his post in 1807, and founded a Clinical Institute for Surgery and Ophthalmology in a newly constructed surgical hospital in the same city. In 1814 he became full professor of anatomy and surgery, as well as surgeon-general of the Hanoverian army. In 1816 he became an aulic councillor. In 1840 he was made Superior Medical Councillor, but, in 1848, in consequence of certain machinations against him, he was ousted from the surgical chair, though allowed to retain the anatomical. This embittered his life, and, according to Gurlt, did much to hasten his death. He died Jan. 24, 1851, in his 75th year. Langenbeck was a man of impressive presence, brilliant intellect and eloquent speech. He was a rapid and dextrous operator, partly from his very nature, but more, perhaps, from his absolute mastery of anatomy and of operative technique. He arose early and worked late, and many are the tales of his seemingly inexhaustible energy and patience. Langenbeck's most important ophthalmologic writings are: 1. *Prüfung der Keratonyxis*. (1811. Also, *Bibl. f. Chir.*, 1809, II, p. 537; 1811, ! V, p. 33. *Neue Bibl.*, 1818, 1, and 1820, II, p. 418.) 2. *Ueber Trichiasis und Entropium*. (*Neue Bibl. f. Chir.und Ophth.*, 1, 3, 415, 1818.) 3. *Künstliche Pupillen-Bildung*. (N. B., 1, 676-736.) 4. *Belladonna Erweitert, erst nach der Blut-Entleerung, die Pupille*. (N.B., 11, 13.) 5. *Ueber Exophthalmos*. (N. B., III, p. 329.) 6. *Ansichten des Baues vom Menschlichen Auge, Welche bei der StarOperation, bei der Pupillen-Bildung und beim Schwarzen Star von Wichtigkeit sind, durch Abbildungen Erläutert*. (N. B., III, 1 and 2.) 7. *Förderung des Ophthalmologischen Studium*. (N. B., III, p. 453.) 8. *Ein Neuer Wirkungskreis meines*

Koreoncion.(N. B., IV, p. 98, 1822.) 9. *Der Nervus Sympathicus in der Pathogenie.* (N. B., IV, p. 729, 1828.)-American Encyclopedia of Ophthalmology, Vol.9, p. 7008-7009

Langenbeck, Maximilian Adolf (1818-1877). German ophthalmologist, son of Konrad Johann Martin Langenbeck, and cousin of the renowned Bernhard Rudolph Konrad von Langenbeck. Born at Göttingen, he studied at Göttingen, Paris, Vienna, Berlin, and again at Göttingen at the latter university receiving his medical degree in 1842. The following year he qualified as privatdocent at his alma mater in anatomy, surgery and ophthalmology. In 1846 he was made extraordinary professor, but in 1851, because of the death of his father, he settled in Hannover, where he practised many years. In 1865 he was called to the Upper Medical Collegium, but soon resigned. Maximilian Adolf Langenbeck is chiefly to be remembered as the reinventor and the only effectual introducer of the fixation (fixing) forceps. He was also instrumental in securing the final victory of cataract extraction over the needle operation. In addition to numerous works of a general surgical character, he wrote: 1. *Klinische Beiträge aus dem Gebiet der Chirurgie und Ophthalmologie.* (Göttingen, 1849.) 2. *Die Insolation des Menschlichen Auges, oder Glaskörperstich und die Accomodationsfasern.* (Hannover, 1859.) 3. *Lehre von der Accomodation und ihre Störungen.* (Memorabilien 1870.) American Encyclopedia of Ophthalmology, Vol.9, p. 7008-7010

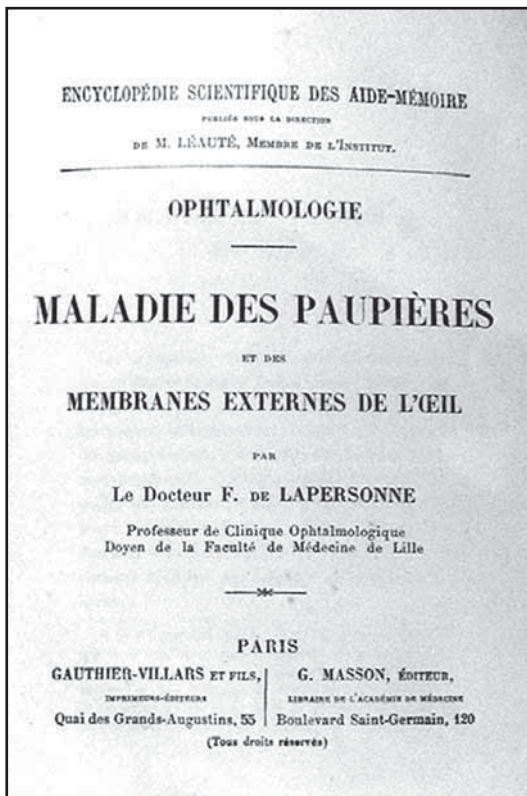
Langguth, Georg August (1711-1782) German anatomist of Leipzig. He received his M.D. at Leipzig in 1738, and from 1742 until his death was professor of anatomy and botany at Wittenberg. He was the author of numerous minor academic dissertations and occasional pieces: *De Luce ex pressione oculi ...* Witemberg: Prelo Ephr. Gottlob Eichsfeld, 1742.

Lannegrace (?-1890). French professor of physiology who devoted some attention to the physiology of vision. The date and place of his birth are not ascertainable. He was made associate professor of anatomy at Montpellier in 1878, and, in 1885, succeeded Rouget in the chair of physiology. In the *Archives de Médecine Expérimentale* (1885) he describes a number of experiments, performed on dogs and monkeys, in which he seeks (1) to establish that cortical lesions in the brain of the dog and of the monkey produce, according to their seat, sometimes homonymous hemianopia, sometimes crossed amblyopia (2) to demonstrate the mechanism by which cortical lesions produce these two kinds of visual defects. American Encyclopedia of Ophthalmology, Vol.9, p. 7011

Lantsheere see De Lantsheere, Joseph

Lao, Yuan-Xiu (also Katherine Lao) (1919-) Chinese ophthalmologist, Professor of Ophthalmology of Peking Union Medical College. She graduated from the Yale-in China Medical College, Hunan, in 1944 and completed Ophthalmology residency at the University Hospital in 1948. Subsequently, she graduated from the Graduate School of Medicine of University of Pennsylvania, U. S. A. in 1950. On home coming, she worked at the Peking Union Medical College, as the Instructor (1953-1956), Associate Professor (1956-1979) and she is currently the Professor since 1979. She has served as a Consultant to the Eye Research Center of the Chinese Academy of Medical Sciences, Editor of the Chinese Journal of Ophthalmology, Member of Ophthalmology Scientific Research Evaluation Committee, Chinese National Science and Technology Committee, Member of the Academic Committee of the Chinese Academy of Medical Sciences, Chairman of the Peking Ophthalmology Society (1964-1982), and Member of the International Perimetric Society. Her main interest has been perimetry, and some examples of her many publications are *Bilateral papilloedema associated with lumbo-sacral intraspinal tumor.* Chinese Medical J. 200; 113(3): 201-205, *Blindness due to sellar region tumor caused apoplexy.* Chinese Medical J. 1980; 93(7): 465-473, *Vascular architecture of the human optic chiasma and bitemporal hemianopia.* Chinese Medical Science, March 1994, Vol.9, No. 1, p. 38-44 and *Visual field defects in 50 cases with supra-chiasmal visual pathway lesions.* J. Appl. Ophthalmol. 1993, 11: 138. She also wrote many books, e.g. *Clinical Perimetry* 2nd ed. 1965 etc. She is a recipient of many Honor Awards from the Ministry of Health, Ministry of Education, and from the National Society of Medicine for her outstanding scientific achievements and for her service in

education. Professor Lao, Peking Union Medical College Hospital, 1 Shuai Fu Yuan, Beijing 100730, P. R. China. phone: +86-10-65296357 (SM)



Lapersonne, Félix de (1853-1937) French ophthalmologist. De Lapersonne was born at Toulouse in 1853. His medical studies were carried out in Paris with such distinction that he received an appointment at Lille, where he became Professor of Ophthalmology in 1890. Eleven years later he was recalled to Paris to succeed the great Photinos → Panas. Most of his reports and papers are to be found in the *Bulletin de la Société Française d'Ophthalmologie* and in the French ophthalmological journals. He became a member of the *Académie de Médecine* in 1914, and its President in 1931, in which year he was made a Commander of the Legion of Honor. On the inauguration of the *Association Internationale de Prophylaxie de la Cécité* at the *XIII Concilium Ophthalmologicum* he became its first President. The Association has been organized with great skill and shares offices in Paris with the *International Association against Tuberculosis*. For his work in this direction he received the Leslie Dana Gold Medal in 1934. The combined meetings of the "Association" with the *International Organization against Trachoma* owed a great deal of their success to de Lapersonne's forethought and presidency. Among other monographs, he wrote: *Etude clinique sur la maturation artificielle de la cataracte* Paris 1883 and *Maladie des Paupières et des membranes externes de l'Œil* Paris 1893. BJO 1937,21:525

LaPiana, Francis G. (1937-) American ophthalmologist, Residency Program Director Washington National Eye Center at Washington Hospital Center. Dr.LaPiana received his MD from George Washington University School of Medicine in 1962. His internship (1962-63) and ophthalmology residency (1966-69) were completed at Walter Reed Army

Medical Center. He served a fellowship in ophthalmic pathology at the Armed Forces Institute of Pathology from 1970-71 and a preceptorship in oculoplastic and orbital surgery from 1976-77. He retired from service as a Colonel in the United States Army in 1995, having served in Ethiopia and Vietnam. He was chief of the division of ophthalmology, department of surgery, at the Uniformed Services University of the Health Sciences in Bethesda from 1981-1995, and continues to hold an appointment as professor of surgery there. He also served as consultant in ophthalmology to the Army Surgeon General from 1991-1995. He has given more than 125 presentations, and has authored or co-authored more than 70 journal articles, book chapters, book reviews, letters to the editor, discussions, films and posters. He has conducted 19 research projects. Dr.LaPiana joined the staff of the department of ophthalmology at Washington Hospital Center in 1995.(AB)

Laplace, Pierre Simon, Marquis De, (1749-1829), the greatest of French mathematicians, was the son of a farmer at Beaumont near Trouville. He studied at Caen, and at Paris, where he attracted the notice of D'Alembert by a paper on dynamics. When professor in the Royal Military School he acquired a reputation by his mastery of mathematical science and its application to practical astronomy-solving a problem which both Euler and Lagrange had grappled in vain. Associate of the Academy of Sciences in 1773 and member in 1785, he established the generalization that our planetary system is stable, that what had been termed irregularities were not disturbing the general equilibrium, but necessary to it. This solution of the *mechanical problem of the solar system*, as he termed it, has bestowed upon astronomy the *Three Laws of Laplace*. The insight of Laplace as an astronomer was apparent in his explanation of the "secular inequalities" in the motions of the planets Jupiter and Saturn. He was the first to construct a complete theory of the satellites of Jupiter, and his investigation of the tidal theory has been characterized by Airy as "*one of the most splendid works*" in the history of mathematics. After the 18th Brumaire, Bonaparte made him Minister of the Interior. In 1799 Laplace entered the senate, and in 1803 he was appointed chancellor. He was created count under the empire, and in 1815 a peer, in 1817 a marquis, by Louis XVIII. Elected to the Academy in 1816, he was next year president. In his memoir on the

"attraction of spheroids" are first set forth the two celebrated means of applying analysis to physical problems Laplace's coefficients and the potential function which are requisite in the theory of attractions and in the more abstruse parts of electrical science. American Encyclopedia of Ophthalmology, Vol.9, p. 7014-7015.

Laqueur, Ludwig (1839-1909). German ophthalmologist, especially renowned for, his studies in glaucoma and sympathetic ophthalmia. Born at Festenburg, Silesia, he studied medicine at Breslau, Berlin, and Paris, receiving the degree of M.D. at Berlin in 1860, and at Paris in 1869. For a time he practised as ophthalmologist at Lyon, France, but, in 1872, was made extraordinary professor of ophthalmology at Strassburg, and, five years later, full professor as well as Director of the University Hospital for Eye-Patients in the same institution. Laqueur is generally given the credit for having introduced physostigmine for glaucoma. He wrote a large number of articles on the subject of glaucoma, and suffered from the disease himself. Operated on by →Horner, he recovered his vision. An abstract of Laqueur's *"An Account of My Own Case: Glaucoma"* was made by H.→Herbert, as follows: *This is the third instance of the publication of a personal experience of chronic glaucoma by an ophthalmic surgeon. There is nothing exceptional in the facts. But eye surgeons must feel an interest in the personal narrative of one of themselves, a trained and accurate observer.* Laqueur, like →Javal, was a Jew, exemplifying the racial predisposition. His case fortunately ended well, like that of W.→Wagner of Odessa, and in contrast with Javal's well-known tragic record. The present account, published after the patient's death, was written in 1902, twenty-two years after a cure, obtained by iridectomy in both eyes. There were thus many years during which Laqueur was able to appreciate the debt which he owed to von→Graefe, who had rendered cure by operation possible. Laqueur states that his eyes were always somewhat sensitive to light. This sensitiveness was increased during numerous recurrences of slight conjunctivitis, which troubled him from the age of 22 onwards so that he frequently had recourse to the use of neutral-tinted glasses. Both eyes were emmetropic until at the age of 33 he acquired a slight astigmatism of the right eye, 0.75 D with the rule apparently from the pressure of a pince-nez with a strong spring, worn during a three weeks' holiday. At 35 years of age the prodromal stages of glaucoma began with the appearance of a mist before the right eye one hot day in July, 1874, as he was returning late to mid-day dinner, very tired. During the meal the mist appeared also before the left eye, and when he turned on a light he saw the ominous colored rings which were to embitter his life in the following years. The hardness of both eyes confirmed the diagnosis. The symptoms passed off in a few hours, and did not return for two or three months. Subsequent seizures were almost all confined to the right eye. Of these there occurred many hundreds, the intervals between them gradually lessening until sometimes three attacks occurred in one day, each lasting an hour or more. Occasionally they occurred even during the night or on awakening in the early morning. (A detailed description of the symptoms was published in v.Graefe's *Archiv.* Bd. XXXI.) The diameter of the halo-figure measured only 8°-9°. In the severer attacks of rather long duration the colours of the rings were paler, and even disappeared altogether at times, thus producing a colourless halo. There was neither pain nor marked injection of the eyes at any time; nor was there any contraction of the visual field, though the visual acuteness sank to $\frac{3}{4}$ - $\frac{1}{10}$ of normal during the attacks of tension. Among the exciting causes of the attacks there came more and more into evidence the influence of the emotions anger, passion, shame, and even the pleasurable excitement of stirring music or of a theatrical performance. Want of food, also breathing bad air in close, stuffy rooms, brought on a rise of tension, which, on the other hand, was shortened or ended by exercise in the open air. In 1876 the patient learned the value of physostigmine, and afterwards obtained unflinching relief by it, a single instillation always sufficing. The frequent recurrences, interfering with his work, led him to consult Horner, of Zürich, in December, 1878. The latter advised palliative treatment for a time, with strict dieting and small doses of quinine. But in March, 1880, he iridectomised the right eye. In those days cocaine-anesthesia was not known. The operation was thus performed without an anesthetic, the eye being free from injection or tension at the time. (The visual acuteness and visual field still remained normal.) The incision was made with a keratome, and the pain resembled that of a somewhat severe burn. The healing was uncomplicated. A week later the left eye was similarly operated upon, a warning attack of increased tension having occurred in it.

The operation on this eye was followed by acute pain and injection. The onset of *malignant glaucoma* was feared, but the pain subsided after an injection of morphia, and there was no more trouble. The operations left astigmatism of 0.75 D against the rule in each eye. A year later there was one small recurrence of glaucomatous symptoms. Except for this there was no trace of tension or of its results during the remaining 28 or 29 years of the patient's life. The only troubles were some increase of the old sensitiveness to light, due to the colobomata, and annoyance and worry from the curiosity and ill manners of people who noticed and commented upon the abnormal appearance produced by the iridectomies." Laqueur died of some pulmonary affection. His most important writings are as follows: 1. *Etudes sur les Affections Sympatiques de l'Oeil*. (Paris, 1869.) 2. *Etudes Cliniques sur le Glaucome*. (*Ann.d'Oculist.*, 1869.) 3. Sur les Changements Brusques de la Refraction. (lb.) 4. Ueber Atropin u. Physostigmin. (v. Graefe's Arch., XXIII.) 5. Das Prodromalstadium des Glaucoms. (lb., XXVI.) American Encyclopedia of Ophthalmology, Vol.9, p. 7015-7017; The Ophthalmoscope 1909, p.518.

Lardner, Dionysius (1793-1859) was a popularizer of physical science; he was born in Dublin, Ireland, and educated at Trinity College, Dublin. He is best known as editor of Lardner's Cyclopaedia, 132 volumes on scientific subjects, published between 1830 and 1844. In 1828 Lardner was professor of Natural Philosophy and Astronomy at University College, London; but in 1840 lost his chair because he ran away with the wife of an army officer, who claimed \$40,000 in damages. He then came to the United States, where he made many times over that amount through lecturing. He lived in Paris from 1845-1859, and died in Naples.

Lardner, Dionysius (1793-1859), was a popularizer of physical science; born in Dublin, Ireland, and educated at Trinity College., Dublin. He first attracted attention by a *Treatise on Algebraic Geometry* (1823), and a work on *Differential and Integral Calculus* (1825). He is best known as editor of *Lardner's Cyclopaedia*, 132 volumes on scientific subjects, published between 1830 and 1844. Lardner himself wrote the volumes treating of mechanics, hydrostatics, geometry, arithmetic, heat, and electricity. This was followed up by the historical *Cabinet Library* (12 vols. 1830-32) and *Museum of Science and Art* (12 vols. 1854-56). He also wrote handbooks of natural philosophy. Amongst the 132 volumes on scientific subjects there was "*Handbook of Optics*" which went through a few editions (the American edition appeared 1851). In 1828 Lardner was professor of Natural Philosophy and Astronomy in University College, London; but in 1840 lost his chair through running away with the wife of an army officer, who claimed \$40,000 damages. Lardner then came to the United States, where he made five times that sum by lecturing. He lived in Paris from 1845 to 1859, and died at Naples. American Encyclopedia of Ophthalmology, Vol.9, p.7017-7018

Laroche, Thomas Michel Antoine Amédée Lattier de *see* **Lattier de la Roche, Thomas Michel Antoine Amédée.**

Larrey, Baron Hippolyte (1808-1895) French military surgeon, son of D.J. Larrey. Hippolyte Larrey was born in Paris, where he received his M.D. in 1832. His career covered both military service and teaching; he became professor at the Faculté de Médecine, Paris (1835), professor of surgical pathology at the French military medical school (1841), and physician-in-chief of the French army (1859)

Larrey, Baron Dominique Jean (1766-1842) French military surgeon. Larrey born at Baudean, France, and was trained in surgery by his uncle, Alexis Larrey, in Toulouse. He joined the French military service in 1787 and advancing to the position of surgeon-in-chief during the Napoleonic Wars. Larrey was the inventor of the "flying ambulances," a fleet of light, mobile conveyances that picked up the wounded during a battle rather than after its end, as had been the custom. In addition, he was a master at amputations (he performed 200 in 24 hours at Borodino) and one of the first to amputate at the hip (1803); he provided the first account of "trench foot" (1812); and he was the first to point out the contagious nature of Egyptian ophthalmia (trachoma). Larrey was the author of *Mémoire sur l'ophthalmie régnante en Egypte*. Cairo: Imprimerie Nationale, an IX, 1801 ; *Relation historique et chirurgicale de l'expédition de l'armée d'Orient, en*

Egypte et en Syrie. Paris: Demonville et Soeurs, 1803. *Mémoires de chirurgie militaire* 4 vols. Paris: J. Smith, 1812-1817 (of which an American edition was published: *Memoirs of military surgery, and campaigns of the French army* 2 vols. Baltimore: Joseph Cushing, 1814). A part of his memoirs was translated: *Observations on wounds* Philadelphia 1832; *Surgical memoirs of the campaign of Russia, Germany, and France* Philadelphia 1832 (being the translation of volume 4 of the *Mémoires de Chirurgie Militaire*). Larrey published accounts of several military engagements, from the surgeon's point of view, and treatises on a variety of clinical topics: *De l'occlusion des paupières dans le traitement des ophthalmies et des maladies des yeux* Paris 1856.

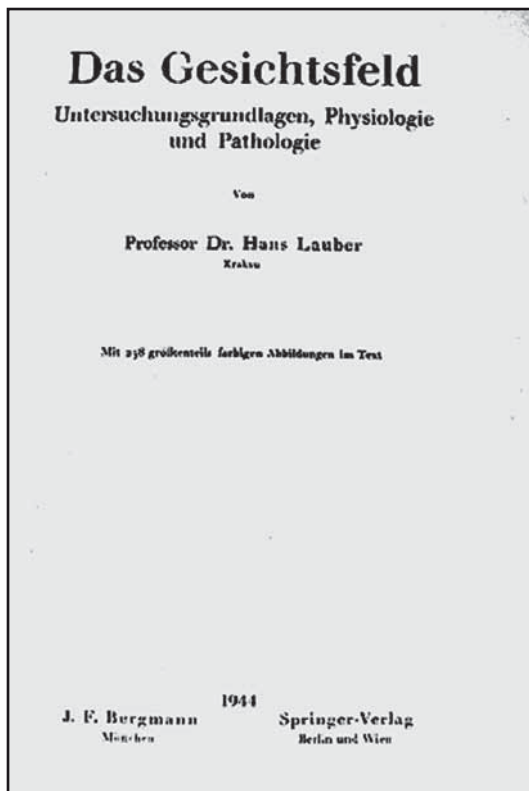
Lasnier, Henry (or Rémi). French surgeon, ophthalmologist and cutter for stone, who flourished in the 17th century, dying about 1690. He is often declared to be the first in history to teach the true nature and location of cataract. This, however, is probably a mistake. At all events, the testimony is merely heresy, resting as it does on a statement of →Palfyn (1650-1730) that an old surgeon had told him that Lasnier had told him, etc. The first to teach the true doctrine was, no doubt, →Quarré, and the first to confirm it by anatomical dissection was →Rolfinck. American Encyclopedia of Ophthalmology, Vol.9, p.7019

Lassell, William, (1799-1880), astronomer, born at Bolton, in Lancashire, England. He built a private observatory at Starfield, near Liverpool, about 1820. He also constructed reflecting telescopes of 9 in. aperture and 2 ft. aperture successively. The speculum of the latter was polished by means of a machine of Lassell's own invention. With this telescope he discovered the satellite of Neptune (1847) ; the eighth satellite of Saturn (1848), simultaneously with Professor Bond of Harvard; and two new satellites of Uranus (1851). In 1861 he set up at Malta a reflecting telescope of 4 ft. aperture and 37 ft. focal length, mounted equatorially; and made observations until 1865, chiefly of nebular and satellites. After his return to England he transferred his observatory to Maidenhead. See *Memoirs of Astron.Soc.*, Vol. XXXVI., for his work in Malta, and *Traits. Roy. Soc.* (1874) for a description of his polishing-machine. American Encyclopedia of Ophthalmology, Vol.9, p.7019

Lattier de Laroche, Thomas Michel Antoine Amédée (1785-1836) French quack. He wrote : *Mémoire sur la cataracte, et guérison de cette maladie, sans opération* Paris 1833.

A second volume appeared in 1835 under the slightly altered title *Suite au Mémoire sur la Cataracte...*etc..

Lauber, Hans von (1876-1952) Austrian ophthalmologist. Lauber became professor of ophthalmology in Krakau (Poland). He proposed to the Carl Zeiss Company, in 1929, to make trials with grinded contacts lenses for astigmatismus and myopia. The same year he published the first observation of a corneal neovascularisation under a Zeiss contact lens. He contributed to Graefe-Saemisch *Handbuch der gesamten Augenheilkunde* (2nd edition), vol.1, part 2: *Die mikroskopische Anatomie des Ciliarkörpers, der Aderhaut und des Glaskörpers* and authored an excellent monograph on perimetry: *Das Gesichtsfeld-Untersuchungsgrundlagen, Physiologie und Pathologie* Munich & Berlin 1944 (Vol.3 of *Augenheilkunde der Gegenwart*). Lauber also contributed, with W.Kolmer the anatomy of the eye in Möllendorff's *Handbuch der mikroskopischen Anatomie des Menschen*. Related to the development of contact lenses, Lauber published following papers: *Randatrophie der Kornea mit hochgradiger Kerectasia peripherica*, *Klinische Monatsblätter für Augenheilkunde*, 1909, 47: 210; Discussion in Krämer R., *Über die Massnahmen gegen Keratokonus mit besonderer Berücksichtigung der optischen Hilfsmittel, spez. der hyperbolischen Gläser*, (*Ophthalmologische Gesellschaft in Wien*, 19.06.1923), *Zeitschrift für Augenheilkunde* 1923, 51: 371-372; *Keratokonius* (*Wiener ophthalmologische Gesellschaft*, 18.02.1924). *Zeitschrift für Augenheilkunde*, 1924, 53: 265; *Kontaktglas bei Keratokonus*, (*Ophthalmologische Gesellschaft in Wien*, 21.11.1927), *Klinische*



Monatsblätter für Augenheilkunde, 1927, 79: 844; Discussion in AUST, *Ueber einige weitere Arten der Verwendung der Kontaktgläser*, (Ophthalmologische Gesellschaft in Wien, 18.03.1929), *Klinische Monatsblätter für Augenheilkunde*, 1929, 82: 535; Discussion in DEUTSCH A., *Praktische Durchführung von Myopiekorrektion mit Kontaktgläsern*, (Ophthalmologische Gesellschaft in Wien, 18.03.1929), *Klinische Monatsblätter für Augenheilkunde*, 1929,82:534-535; *Sechs Jahre getragene Kontaktgläser bei Keratokonus*, (Ophthalmologische Gesellschaft in Wien, 17.01.1930), *Zeitschrift für Augenheilkunde*, 1930,7:95.

Laugier, Stanislas (1799-1872). French surgeon, of some ophthalmologic importance. Born at Paris, he received his medical degree in 1828, and, next year, was associate professor of the Faculty. In 1831 he was appointed surgeon to the Central Bureau, as well as consulting surgeon to King Louis Phillipe. After this he was on the staff of many hospitals, but the most of his work was done at the Hôtel Dieu, where he served from 1854 until his death about eighteen years. In 1848 he received the full professorship. He was a distinguished teacher and operator, especially renowned for the cataract operation, as well as for the various procedures employed in diseased conditions of the lacrimal drainage system. His writings relate almost exclusively to general surgery. However, in 1845, he, in collaboration with G. Richelot, published a French translation of →Mackenzie's *Textbook of Diseases of the Eye*, with numerous notes. Laugier also published articles in the *Annales d'Oculistique* on the suction operation for cataract, on a depression needle, on false hypopion, and on the symblypharon operation. American Encyclopedia of Ophthalmology, Vol.9, p.7021

Laurence, John Zachariah (also Lawrence) (1830-1874) British ophthalmologist born in Paris. He was educated at University College, London (M.R.C.S., 1854) practiced in London, and in 1857 founded the Ophthalmic Hospital at Southwark, serving on its surgical staff until 1873. He was, with Thomas Windsor, the founder of the Ophthalmic Review which ceased after only three volumes (1865-1867) but was revived in 1881. Lawrence's writings deal chiefly with optical defects and their surgical correction: *Optical Defects*, 1865. With Robert Charles Moon he wrote: *A handy-book of ophthalmic surgery for the use of practitioners*. London 1866.(This book appeared simultaneously in Philadelphia). Shortly after Giraud-Teulon introduced the first binocular indirect ophthalmoscope Laurence collaborated with C. Heisch to produce a new instrument. Schett p.249. American Encyclopedia of Ophthalmology, Vol.9, p.7021-7022; JPW

Laurens, André du (1558-1609). A 16th century professor of anatomy at Montpellier, France, who devoted considerable attention to the anatomy and physiology of the eye. Born at Arles, he studied at Montpellier, and there received his medical degree in 1583. Three years later he succeeded to the chair of anatomy, which had just been made vacant by the death of Laurent Joubert. In 1600 he was called to Paris, there to become physician-in-ordinary to Henry IV. Three years later he was elected chancellor of the University of Montpellier, though still residing at Paris, where, in fact, he continued to live until his decease. Laurens wrote four books, the most important of which is *Historia: Anatomica Humani Corporis* (Erfurt, 1595; Paris, 1589, and various later editions in various cities). Ten chapters, in this book, are devoted to the anatomy and physiology of the eye. The anatomy is merely a rehash of Vesalius, while, on the other hand, the physiology is chiefly concerned with these, questions: Whether vision is caused by emission or reception? Whether anything can be seen within the eye? Why eyes are of different color? On the movements of the eyes: in all of which he merely repeats the theories of Galen and even of Aristotle. Other works written by him were: *Opera Anatomica* Leiden 1593, *Discours de la Conservation de la Vue* Paris 1598 (English edition 1599). American Encyclopedia of Ophthalmology, Vol.9, p.7022

Laurens, Frère. A French empiric of the 18th century, concerning whom we know but little. He was, for a time, a Jesuit priest, then an apothecary at Rhodes. According to the *Courrier d'Avignon* for Oct. 10, 1763, he cured obstructions, jaundice, hydropsia, hysterical vapors and dysentery, and removed spots from the eyes, both drying up their sources and fortifying and clarifying the vision. American Encyclopedia of Ophthalmology, Vol.9, p.7022

Laurent, Torvard C. (1930-) Swedish Biochemist specializing in connective tissue, especially hyaluronan (hyaluronic acid). Laurent studied at the Karolinska Institute, Stockholm, Sweden, and obtained MD in 1958 and PhD in 1957 (Thesis: *Physico-Chemical Studies on Hyaluronic Acid*, Almquist & Wiksell, Uppsala, 1957). His teachers were Dr. Endre A. Balazs and Bertil Jacobson. After research at the Retina Foundation, Boston, MA, USA 1953-54 and 1959-61 he obtained a position in Ophthalmic Biochemistry at the Swedish Medical Research Council. He held the Chair in Medical and Physiological Chemistry at the University of Uppsala, Sweden, 1966-1996 and is since then Emeritus Professor. Laurent was visiting professor at Monash University, Australia, 1979-1980. Laurent has published about 200 research articles in the field of Physiological Chemistry. Seventy five graduate students and fifty visiting scientists have been trained in his research group. The main achievement of Laurent in the period 1949-1980 concerns the physical-chemical characterization of hyaluronan and other polysaccharides and their physiological function (WD Comper and TC Laurent, *Physiological Function of Connective Tissue Polysaccharides*, *Physiol Rev* 58, 255-315, 1978). From 1980-until present the main interest has been in the metabolism of hyaluronan and its role in pathological processes (TC Laurent and JRE Fraser, *Hyaluronan*, *FASEB J* 6, 2397-2404, 1992; TC Laurent, UBG Laurent and JRE Fraser, *Serum Hyaluronan as a Disease Marker*, *Ann Med* 28, 241-253, 1996; TC Laurent (ed) *The Chemistry, Biology and Medical Applications of Hyaluronan and its Derivatives*, Portland Press, London 1998). Special research on the eye includes biochemical studies on the vitreous body together with Endre Balazs and Ulla Laurent (*J Biol Chem* 234: 422-430, 1959; *Arch Biochem Biophys* 81: 464-479, 1959; *Biochim Biophys Acta* 42: 476-485, 1960; *Exp Eye Res* 46: 49-58, 1988) and on corneal polysaccharides together with Arvid Anseth and Inger Marie Dahl (*Exp Eye Res* 1: 25-38, 99-105, 1961; 34, 83-98, 1982). Laurent has served on various research councils, international organizations, editorial boards and advisory groups. He was President of the Royal Swedish Academy of Sciences 1991-94, a member of the Nobel Committee of Chemistry 1992- and is presently Chairman of the Board of Trustees of the Nobel Foundation. He is also Science Secretary of the Wenner-Gren Foundation which supports international scientific exchange. (Torvard C Laurent: Institute of Medical Biochemistry and Microbiology, University of Uppsala BMC, Box 575, SE-751 23 Uppsala, Sweden Tel. +46-(0)18-471 41 55; Fax. +46-(0)18-51 58 70, e-mail: Torvard.Laurent@medkem.uu.se) (SM)

Laurentius, Andreas see **Laurens, André du**

Laveran, L (1812-1879). French military physician, who devoted considerable attention to ophthalmology. Born at Dunkirk, he studied at Lille, practised for a time in the Hospital at Algiers, in 1841 was professor at the Military Hospital at Metz, returned to Algeria, then became instructor in military diseases at Val-de-Grâce. He has been called the creator of French military epidemiology. Laveran's ophthalmologic writings are as follows: 1. *Note sur la Nature de la Héméralopie. (Rec.de Mém.de Méd. Mil., 1858.)* 2. *Rapport Adressé au Ministre de la Guerre sur les Faits Recueillis au Congrès Ophthalmologique de Bruxelles.* (Ibid., 2d series, Vol. XX.) American Encyclopedia of Ophthalmology, Vol.9, p.7023

Lavergne, Gaston (1927-) Belgian ophthalmologist. Lavergne was born in Hodimont (Verviers) and obtained the M.D. degree in Liège in 1952. He was in Bonn in 1952-53 under Müller and in 1958 under Meyer-Schwickerath. He worked in the Department of Ophthalmology of Liège University from 1953 as resident, from 1959 as adjunct departmental head, from 1964 as lecturer and from 1972 as associate professor. He was associated with the Belgian National Fund for Scientific Research from 1961 to 1970. He specialized in visual functions and more particularly in *fitness of automobile drivers* (1955), *critical flicker fusion rate* (1967), *static perimetry* (1970), *visual evoked potentials* (1980), and, more recently, computerised perimetry. As a member of the Liège school he worked on glaucoma, namely *ocular rigidity* (1958), *functional defects* (1959), *hypertensive uveitis* (1960), *standardization of Schiötz tonometers and biometry* (1961). Other subjects of his studies are endocrine proptosis, nystagmus, photocoagulation and surgery of the lacrymal duct. He is since 1985 the president of the French-speaking section of the Belgian Ophthalmological Society. (Verriest)

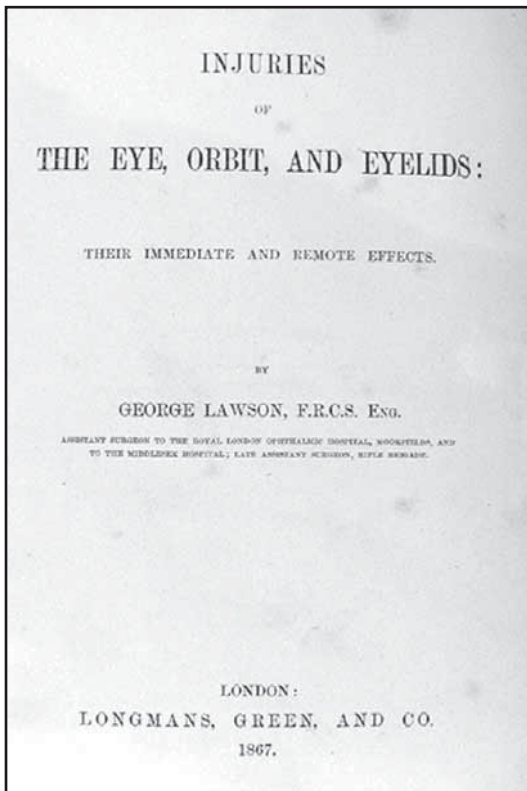
Lawford, John Bowring (1858-1934) British ophthalmologist born in Canada. Born in Montreal, the second child and elder son of Frederick Lawford, architect, and Anne Shaw Low, his wife. He was educated at a private school before entering McGill University, where he graduated M.D. in 1879. He came to London immediately and entered the medical school at St Thomas's Hospital. Having determined from an early period to devote himself to ophthalmology he became clinical assistant to Edward Nettleship, and after acting as assistant house physician at St Thomas's Hospital and resident clinical assistant at Bethlem Royal Hospital he was appointed house surgeon at the Royal London Ophthalmic Hospital, Moorfields, in 1883. He became pathologist and curator of the hospital museum in 1884, assistant surgeon in 1892, surgeon in 1895, and consulting surgeon in 1918. At St Thomas's Hospital he was elected assistant ophthalmic surgeon in 1886, and was surgeon and lecturer on ophthalmic surgery from 1891 until 1915, when he resigned and was made consulting ophthalmic surgeon. At the time of his death he was ophthalmic surgeon to the Medical Appeal Board of the Royal Navy and a member of the Committee for the Prevention of Blindness. He was secretary of the Ophthalmological Society of the United Kingdom 1895-97, and president 1911-13. He was editor of the *Ophthalmic Review* from 1910 to 1916, and was chairman of the editorial committee and afterwards the managing director of the *British Journal of Ophthalmology* from 1917 to 1926. He was also president of the Council of British Ophthalmologists, and during his tenure of the office he arranged with the Ministry of Health for the institutional treatment of children suffering from diseases of the eye. Lawford was a highly accomplished operator who used either hand with equal facility. He was endowed with an exceptional sense of duty and carried out the work of every office he filled with punctilious care. He left one-half of the ultimate residue of his fortune to St Thomas's Hospital and the other half to McGill University, Montreal. A selection of his publications is: *Eye symptoms in insanity* in Tuke's *Dictionary of Psychological Medicine*, 1892, 1,485. *Pupil reactions*. Ibid. 1892, 2, 1052. *Diseases of the orbit* in *Encyclopaedia Medica*, 1901, 8, 549. *Ocular lesions in disorders of secretory and excretory organs* in Norris and Oliver *System of diseases of the eye*, 1900, 4, 645. Lawford received following titles: M.R.C.S. 18 November 1879; F.R.C.S. 10 December 1885; M.D., M.Ch. 1879; Hon. LL.D. McGill 1921; L.R.C.P. 1880. The Times, 5 January 1934, p. 7d; Lancet, 1934,1:110; Brit. med. J. 1934,1:127.

Lawrence, John Zachariah *see* **Lawrence, John Zachariah**.

Lawrence, William (Sir William) (1783-1867) British surgeon, a pupil of Charles Bell. Lawrence was born in Cirencester (County of Gloucester) where his father was a successful surgeon. He received a classic education in a school near Gloucester. When he was 16 years old he was placed in London under the tutelage of the famous Abernethy to learn his profession as a surgeon. After three years, his master procured for him the position of lecturer of anatomy at St. Bartholomews medical school, which he continued for 12 years. At the age of 22, Lawrence received his degree from the College of Surgeons of London. At 30 he was adjunct surgeon at Bartholomews Hospital and 11 years later he was named Surgeon at St. Bartholomews (known as Barts). In 1814, Lawrence became surgeon at the Eye Infirmary, later named Royal London Ophthalmic Hospital, Moorfields where he lectured remarkably on the anatomy and on the diseases of the eye. He held this position for many years, until having too much work, he was forced to abandon this. Lawrence became, in 1815, professor of anatomy and surgery at the College of Surgery. He was very successful in this position, but theories he advocated about comparative natural history to human history brought him many enemies. It went so far, that a rival school was formed at Aldersgate Street, where he taught 1826-1827. Lawrence resigned to take over his old master's chair which he occupied for the next 37 years, having in total spent more than 60 years at St. Bartholomews Hospital. Lawrence translated at the age of 18 a Latin work "*Descriptions of the arteries of the Human Body*", at 26 he won the Jackson Prize with an *Essay on Hernia*, the same year he translated Blumenbach's *Comparative Anatomy*. In 1819 he published his famous Lectures on the Anatomy, the Physiology, the Zoology and the Natural History of Man, which provoked a general uproar. Tired of fighting his idea, at the end he bought back all the available copies of his book, but still convinced of his ideas, sent them all to America. In 1830, Lawrence

published his *Treatise on the venereal Diseases of the Eye*. The same year, C. Billard, of Angers (France) published Lawrence's lectures which had been published previously in *The Lancet* and which represent Lawrence's lectures given at Moorfields during the years 1825-1826: *Traité Pratique sur les Maladies des Yeux*. The translator added in this book a chapter of his own: "*Précis de l'Anatomie Pathologique de l'Oeil*". Three years later, the *Traité* was re-translated into English and published 1833 in London: *A Treatise on the Diseases of the Eye* of which an American edition with 12 plates was published in 1847. Finally, Lawrence published in 1863 his last work: *Lectures on Surgery*. *Annales d'oculistique*, 1867, 58:119-126. JPW.

Laws, William George (1862-1936) British ophthalmologist from Nottingham. His father was City Engineer of Newcastle-on-Tyne. Laws was born at Barrasford, Chollerton, Northumberland and was educated at Newcastle Grammar School and Durham University. His medical education was at Edinburgh University and St. Thomas's Hospital; Qualifying M.B., C.M., at Edinburgh in 1888, he came to London and took the F.R.C.S.Eng. in 1892. At St. Thomas's he came under the influence of →Nettleship and Lawford and it goes without saying that he was thus a first class clinician. Laws settled in Nottingham where he was surgeon to the Nottingham and Midland Eye Infirmary for many years and where he acquired a large practice in the city and surrounding neighbourhood. At the time of his death he held the post of Consulting Ophthalmic Surgeon to his old hospital. For many years he was a member of the Editorial Staff of the *Ophthalmic Review* and he also acted as sub-editor for some years early in the present century. Laws joined the Ophthalmological Society of the United Kingdom in 1889 and served for a period on the Council. He was also at one time a member of the Board of Directors of this journal. Apart from routine editorial work for the *Ophthalmic Review* he did not write much; but he was the author of some papers in the *Transactions of the Ophthalmological Society*, mostly of clinical type. *BJO* 1936, 20:492; *Brit med J* 1936, 1:1185; *LFRCS* 1930-1951:472



Lawson, George (1831-1903). English ophthalmologist. Born in 1830, his professional experiences began in the Crimea, where he served as military surgeon. Returning to London in 1855, he at once became a surgeon to the Middlesex Hospital—a position which he held for more than thirty-three years. In 1862 he also became Surgeon to the Royal London Ophthalmic Hospital (Moorfields). In 1852 he was made a Member, in 1857 a Fellow, of the Royal College of Surgeons of England. In 1886 he became oculist to Queen Victoria. His most important ophthalmologic writings are, *On Sympathetic Ophthalmia*. (1865); *Injuries of the Eye, Orbit and Eyelids, their Immediate and Remote Effects* (1867); also *A Manual of Injuries and Diseases of the Eye* London 1869 (4th ed., 1880) The same year, in 1869, an American edition was published in Philadelphia. *American Encyclopedia of Ophthalmology*, Vol.9, p.7025. JPW

Lawson, Sir Arnold (1867-1947) British ophthalmologist who was the fourth of seven sons of George →Lawson (1831-1903). George Lawson was a pupil of Sir William →Bowman at King's College Hospital, and went to the Crimea as an Assistant Surgeon in 1854. In May, 1855, he had a very severe attack of typhus fever that produced a complete paraplegia, and he was invalided out of the Army in January, 1856. He was already an Assistant Surgeon at Middlesex Hospital where he was a colleague of John Whitaker Hulke. George Lawson was elected Assistant Surgeon to Moorfields Eye Hospital in 1862 on the same day as Sir Jonathan →Hutchinson. He became Surgeon-Oculist to Queen Victoria, holding this appointment until her death in 1901. Sir Arnold Lawson was born at 12 Harley Street (into which his father had moved in 1863) and he was destined to spend his whole life there. He was educated at the Merchant Taylors School and in 1886 entered the Medical School at Middlesex Hospital as Senior Entrance Scholar. He did well as a student, winning the Hetley Prize in 1890 and was Senior Broderip Scholar in 1891, in which year he qualified. He graduated as M.D. in 1891 and obtained his F.R.C.S. diploma in 1893. Sir Arnold soon decided to be an ophthalmic surgeon and

joined his father in practice. He was elected to the Paddington Green Children's Hospital in 1896 after having worked with Sir John Tweedy at Moorfields. In 1900, when it was decided to increase the visiting staff at Moorfields from nine to twelve, he was elected Assistant Surgeon together with John Herbert → Fisher and Percy → Flemming. He became full surgeon in 1907 and retired in 1914, becoming Consulting Surgeon in 1923. In 1910 he joined William → Lang at Middlesex as Assistant Surgeon, succeeding him as full surgeon in 1914. In 1932 he was elected Consulting Surgeon. He served as ophthalmic surgeon to the Hospital of St. John and St. Elizabeth, and from 1914 to 1919 was ophthalmic surgeon to King Edward VII Hospital for Officers. For many years up to the time of his death he was Consulting Ophthalmic Surgeon to the Royal Hospital for Incurables at Putney and to the Royal Medical Benevolent College, Epsom. In 1914 began his important work in connection with the founding of St. Dunstan's. He became principal ophthalmic adviser to Sir Arthur Pearson in this connection and remained Chairman of the Ophthalmic Advisory Committee until his death. For this work he was appointed K.B.E. in 1920. In 1940 he was appointed Ophthalmic Consultant to the Navy. Of this he was very proud, refusing to take any fee for his services, saying that it was his contribution to the branch of the Forces in which his son served. He became suddenly ill in 1918 and the nature of the complaint was not diagnosed. He recovered almost as suddenly but in July, 1921, the true nature of his ill health became apparent when he had a serious breakdown and he spent six months in a sanatorium. After his return to work he gave up many of his appointments and for five years attended no meetings where many people were congregated. Sir Arnold became a member of the Ophthalmological Society in 1896 and after serving as a Vice-President became Treasurer in 1919, retaining the office until 1947. Lawson's literary output was not large. He re-edited and largely re-wrote his father's textbook on *Diseases and Injuries of the Eye* (6th edition 1903). He published with Sir James Mackenzie → Davidson *The treatment of Eye Disease by Radium* in Brit med J. 1910,2:1491 and a chapter *Diseases of the Iris* in: Latham & English's *System of Treatment*, 1912. Lawson also wrote: *War Blindness at St. Dunstan's* London 1922. BJO 1947,31:251-254; Brit med J. 1947,1:161; Lancet 1947,1:198; JPW

Layard, Daniel Peter. A London physician of the 18th century, who seems to have devoted considerable attention to the eye. He wrote *An Extraordinary Case of Diseased Eye* (*Philos. Trans.*, 1758). Am Encyclopedia of Ophthalmology 7025

Lazerme, Jacques (1676-1756) An 18th century physician and surgeon of Montpellier, France, who devoted much attention to the eye. Born at Pouget, diocese of Béziers, in 1676, he received his medical degree at Montpellier in 1703, settled in Montpellier and there succeeded Bézac to the chair of surgery in 1720. He is said to have enjoyed an immense practice. He wrote four books, of which the only one of any ophthalmologic importance is entitled "*Curationes Morborum*" (2 vols., Montpellier, 1750; Paris, 1754). In Vol.1 of this work is a chapter devoted to ocular therapeutics, which is not without value. The literary style of the chapter is really remarkable for its day and time, being simple, clear, concise, and especially devoid of the useless repetitions so characteristic of many of the contemporaries of this writer. The complicated polypharmacy of the time is also conspicuous by its absence. Lazerme, however, had never appreciated the true nature and location of cataract, in spite of the early experiments of Brisseau and Maitre-Jean. American Encyclopedia of Ophthalmology, Vol.9, p.7026

Lazzattin Pietro (1814-1871) An Italian obstetrician, of a little ophthalmologic importance because of his graduation dissertation entitled "*Della Diagnosi della Cataratta e della Scelta del Metodo Operativo.*" He was born at Milan, received his medical degree at Pavia in 1836, and settled as obstetrician in Milan. In 1863 he was made physician-in-Chief to the Milan Lying-in Institution, as well m Professor at the Royal Obstetrical College, and later, the President of that institution.

Le Cat, Claude Nicolas (1700-1768) French surgeon. Le Cat was born at Blerancourt, France. He studied medicine in Paris and settled in Rouen, where he became chief surgeon at the Hôtel-Dieu in 1731. In 1736 he established a school for anatomy and surgery, and became in 1744 a founding member of the Rouen Académie des Sciences. Le Cat developed new methods for lithotomy and the treatment of lacrimal fistulae; he wrote

theoretical works on physiology in which he expounded a mechanistic notion of the organism as a hydraulic machine; and on embryology, he published on a wide range of non-medical topics, including geophysics, astronomy, electricity, and archeology. Among those : *Traité des sens*. Rouen 1740; *A physical essay on the senses*. London 1750.

Le Cat, Claude Nicolas *see* **Cat , Claude Nicolas le**

Le Clerc, Sébastien (1637-1714) French engraver, was born at Metz, France, and spent most of his life in Paris, where he won renown both as artist and teacher. Le Clerc made a special study of the science of perspective, and published several influential treatises on the subject: *Discours touchant le point de veue, dans lequel il est prouvé que les choses qu'on voit distinctement, ne sont veuës que d'un oeil*. Paris 1679.

Le Conte, Joseph (1823-1901). Geologist, naturalist, physiologist and philosopher, descendant of an old Huguenot family, was born in Liberty County, Georgia. He graduated at the University of Georgia in 1841 at the age of eighteen, and later at the College of Physicians and Surgeons in New York City. He settled in Macon, Ga., and there practised medicine for several years. In 1850 and 1851 he studied natural history under Agassiz at the Lawrence Scientific School of Harvard, and in the latter year went with Agassiz to Florida on an exploring expedition. Subsequently he held professorships in Oglethorpe College, in the University of Georgia and in the University of South Carolina. In 1862 and 1863, during the Civil War, he was chemist in the Confederate laboratory for the manufacture of medicines, and in 1864 and 1865 held a similar position in the nitre and mining bureau. In 1869 he and his brother, John Le Conte, were called to the University of California at Berkeley, Ca., where he occupied the chairs of geology and natural history for thirty-two years until his death. His first published work was not, as might be expected, one relating to pure science, but to religion; i. e., *Religion and Science: A series of Sunday Lectures on the Relation of Natural and Revealed Religion, or the Truths Revealed in Nature and Scripture*. It appeared in 1874, and was followed by *Elements of Geology*, and in 1881 by *Sight. An Exposition of the Principles of Monocular and Binocular Vision*. (N.Y. 1881) Later appeared *A Compend of Geology. Evolution and Its Relation to Religious Thought*, and a work on *Comparative Physiology and Morphology*. Besides these works he was the author of many papers on animals published in the *Philosophical Magazine*; *American Journal of Science and Arts*, etc., etc. To the ophthalmologist, physiologist and psychologist, Le Conte is best known through his volume entitled "*Sight: An Exposition of the Principles of Monocular and Binocular Vision*" New York 1881, a work widely known and quoted here and abroad as an original authority. *American Encyclopedia of Ophthalmology*, Vol.9, p.7032-7039.

Le Grand, Paul (1914-1966) Belgian ophthalmologist. Le Grand obtained his M.D. degree in Brussels. He wrote papers on surgical problems (as *hyphaema after cataract extraction* in 1953, *lacrymal intubation* in 1955 and 1956, *enzymatic zonulolysis* in 1958 and 1959) and presented in 1963 to the Belgian Ophthalmological Society a report on the *ocular symptoms of cerebral postcommotional syndrome*. (Verriest)

Lebas, Joseph (1895-1975) Belgian ophthalmologist. Lebas obtained his M.D. degree in Leuven in 1921 and specialized in ophthalmology in Leuven and in Paris. He wrote papers on *reconstruction of the orbit with implantation*, on *treatment of strabismus* (1935) and on *optic neuritis* (1936) (Verriest)

Lebas, Pierre (1927-) Belgian ophthalmologist. Lebas obtained his M.D. degree in Leuven in 1951. He wrote on *retinoblastoma*, *avitaminosis A*, *antimalaric keratopathy*, *oculocutaneous syndroms* (a thick report for the Belgian Ophthalmological Society in 1960), *ophthalmic herpes zoster* and *retinal reticulosarcoma*. (Verriest)

Lebensohn James Elzar (1893-1979) American ophthalmologist, a long-time member of the Department of Ophthalmology of Northwestern University. Lebensohn was born in Chicago and took his undergraduate training at the University of Chicago where he also received a Master's degree. In 1917 he received his medical degree from Rush Medical College after which he entered the United States Navy as a Lieutenant in the Medical

Corps. On his return to Chicago he began to practice ophthalmology. After a short hiatus at the Illinois Eye and Ear Infirmary he joined the staff at Northwestern University Medical School as an instructor. He immediately began to develop his major interests in physiology and biochemistry of the eye. In 1935, he was awarded a Ph.D. by Northwestern for his dissertation, *Studies in Biochemistry of the Lens*. (This actually represented about the 50th article that Lebensohn had published.) He continued to write prolifically; the estimate is that he published approximately 350 articles, biographies, clinical notes, and instrument modifications. His curiosity was insatiable, and he wrote about many areas in ophthalmology but most commonly about refraction, physiologic optics, and spectacles. As with many of his colleagues, his career was interrupted by World War II during which he returned to the Navy, this time with the rank of captain. He served with distinction in the South Pacific for six years. In 1946 he returned to Chicago and to Northwestern University where he continued to teach until his retirement as emeritus professor in 1962. Even after his retirement Lebensohn could be found many afternoons in the library as he researched a historical personage or the earliest recording of a particular phenomenon in ophthalmology. He continued to publish and to serve on the Editorial Board of the Journal of Ophthalmology. His range of interests was enormous, and although he published chiefly in the field of optics, his earliest paper, published in 1923, was entitled *The American student in Paris*. Among Lebensohn's many instrumental contributions was the development of a rational near vision chart. This chart, in wide use in this country, has visual acuity units both in the Jaeger system, in the point system, and in approximate equivalents to distant vision. For many years Lebensohn published a column in the *Survey of ophthalmology* entitled *Classics in Ophthalmology*. In 1969 these were collated and published by Williams and Wilkins as *An Anthology of ophthalmic Classics*. AJO 1979,88:792-793.

Leber, Theodor (1840-1917) German ophthalmologist born in Karlsruhe, Germany. Leber received his M.D. in 1862 in Heidelberg, and spent several years in postgraduate ophthalmologic research in various European cities. He worked as von Graefe's assistant from 1867 to 1870. During that time, when Graefe was unavailable because of sickness, he took over his lectures and along with others (W.Kühne, J. Rosenthal, J. Cohnheim) became a member of what was later called the circle of "Raisonneurs". Leber became professor of ophthalmology in Berlin (1871-1873), moving to Göttingen (1873-1890) and Heidelberg Universities (1890-1910). Leber's research focused on disorders of the ocular circulation, the degeneration of retinal pigment, color vision in diseases of the retina, pathologic changes in the ocular fluids, and diabetic disorders of the eye. He wrote: *Ueber den Einfluss der Leistung mechanischer Arbeit auf die Ermüdung der Muskeln* Leipzig 1863; *Anatomische Untersuchungen über die Blutgefäße des menschlichen Auges*, 1865; *Der Augenspiegel*. Berlin 1872; *Die Entstehung der Entzündung und die Wirkung der entzündung erregenden Schädlichkeiten nach vorzugsweise am Auge* etc. Leipzig 1891. He contributed two important volumes to Graefe-Saemisch's *Handbuch der gesamten Augeheilkunde: Die Cirkulations- und Ernährungsverhältnisse des Auges* (Graefe-Saemisch Vol.2, 2nd Section) 1903 and *Die Krankheiten der Netzhaut* (Graefe-Saemisch Vol.7A, Part 1 & 2) 1915-1916. After Hirschberg's historical contribution, this was the largest chapter in Graefe-Saemisch, with more than 2000 pages on the retina. Leber received in 1896 the Graefe Medal for his outstanding contributions to ophthalmology. JPW

Leblanc, Urbain (Ulysse) (1796-1871) French veterinarian surgeon, born near Bressuire, France, received his training at the Alfort veterinary school and practiced in Paris. He published extensively on animal pathology. He wrote: *Traité des maladies des yeux observées sur les principaux animaux domestiques* Paris 1824 (see cover of Hirschberg, History of ophthalmology, volume 6). Albert

Leboucq, Georges (1880-1951) Belgian anatomist and ophthalmologist. Leboucq was born in Ghent and died in the same city. He was the son of Hector Leboucq, also an anatomist. He obtained at the University of Ghent successively the Ph.D. degree (zoology) in 1901 and the M.D. degree in 1904. He specialized in ophthalmology in Ghent, Vienna, Berlin and Paris, but entered as assistant in his father's department of anatomy. He obtained the special doctorate in anatomy with a thesis on the *lymphatic circulation in the*

eye and in the orbit. Of special interest for ophthalmologists is his important papers on the *histogenesis of the mammalian cones and rods* (1908), on the *external limiting membrane of the avian retina* (1909), on the *circulation of the aqueous humour* (1920) and on a *rudimentary hyaloid organ in the eye of the primates* (1923). He was very interested in the history of medicine and wrote a book on the anatomist Andre Vésale. He was member of the (French) Belgian Academy of Medicine and member of honour of the Belgian Ophthalmological Society. (Verriest)

Lebrun, Pierre Desire(1836-1900) Belgian ophthalmologist, born at Renlies, he studied medicine at Leuven [not at Lyon/France as stated in the American Encyclopedia of Ophthalmology], then ophthalmology at Paris under →Sichel, de →Chassaignac and →Desmarres, in London under →Bowman and →Critchett. He practised at Brussels where he died. Lebrun was the *first* to describe the leucosarcome of the iris. Joseph De Lantsheere and Victor Tonglet were his pupils. American Encyclopedia of Ophthalmology, Vol.9, p. 7032; van Duyse: Histoire de l'ophtalmologie en Belgique,p.49.Verriest

Lederman, Manuel (1911-1984) Famous British radiologist with an interest in ophthalmology. Lederman received his medical training at the Westminster Hospital, where he won the *Sturges Prize* for Clinical Medicine and the *Hanbury Prize* for diseases of the children. He qualified in 1935. Early in his career Dr.Lederman developed an interest in the treatment of diseases of the eye and of the orbit by ionising radiation, and took charge of the x-ray department of Moorfields Eye Hospital in 1941, remaining in charge until 1948 when all radiotherapy was transferred from Moorfields to the Royal Cancer Hospital. He remained honorary consultant radiotherapist to Moorfields and established a flourishing joint Eye Tumour Clinic at both hospitals. Lederman pioneered many techniques of radiotherapy of eye conditions. He received the *Roentgen Award* in 1956, the *Barclay Medal* in 1972, the *Knox Medal* in 1974 and the *Harrison Prize* in 1976. BJO 1985; 69:316.

Lee, Charles George (1852-1913). British ophthalmologist educated at Wesley College, Sheffield and at Guy's Hospital. He settled in Liverpool in 1877, appointed assistant surgeon at Liverpool Eye and Ear Infirmary in 1878 and elected junior surgeon 1885. Few publications between 1886-1908 mostly in "*Liverpool, Med.-Chir.Journal*". The Ophthalmoscope, London 1913,p. 450.

Lee, Chin Piaw (1951-) Singaporean ophthalmologist, Consultant Singapore General Hospital (SGH) PL and Singapore National Eye Centre. He graduated in 1977 from University of Singapore with M.B., B.S. degree, and extended his studies in U.K. during 1977-1979 and 1980-1982: he received FRCS (Ophth) in Glasgow (1982) FRCOphth (UK) in 1989. He is also a recipient of A.M. (Singapore) in 1987. He worked as a clinical assistant at Moorfields Eye Hospital in 1981-1982, and on homecoming, he became Senior Registrar at the Department of Ophthalmology of SGH in 1985, and has served as a Consultant Ophthalmologist of SGH PL since 1989, and as a Visiting Consultant to the Singapore National Eye Centre. He specializes in cataract and refractive surgery and some examples of his publications are "*Scanning electron-microscopic evaluation of posterior chamber intraocular lenses*. Annales Acad. Med. 18: 178-85, 1989", "*Radial keratotomy-preliminary results in the Singapore General Hospital*. Annales Acad. Med. 18: 141-150, 1989" and "*Capsulorhexis- A 5-year experience*. Eur. J. Impl. Refr. Surg. 2: March, 1990". He demonstrated live-surgery on 5 occasions, presented 19 papers and 28 teaching courses at international Meetings. (Dr. C.P.Lee Suite #10-18 (level 10) Mount Elizabeth Medical Centre, 3 Mount Elizabeth, Singapore 0922. Phone: 65-7371117; Fax: 65-7372122) (SM)

Lee, Edwin (?- 1870) British physician. After receiving his diploma from the College of Surgeons in 1829, Lee spent much of his life on the Continent, practicing at various spas. He published comparative studies of medical practice at these European watering places, as well as works on animal magnetism, homeopathy, nervous disorders, lithotomy, and lithotripsy. He is amongst the early authors of books on strabismus: *On stammering and squinting and on the methods for their removal*. London 1841.

Lee, Jaeheung (1936-) Korean ophthalmologist, Professor and Chairman of the Department of Ophthalmology, College of Medicine, Seoul National University. He graduated from the Seoul National University, Faculty of Medicine 1961 and received his M.D. degree, and extended his study at the Postgraduate School of the University and received his Ph.D (thesis: *Experimental Ocular Siderosis*, J. Kor. Ophthalmol. Soc. 9 (2): 7, 1968). He worked as a Clinical Research Fellow at the University of California, San Francisco in 1970-1971. He worked further at many famous Institutes of the World, i.e., the Massachusetts Eye and Ear Infirmary (1976), Wilmer Eye Institute (1981), Moorfields Eye Hospital, London, University Eye Clinic of Köln, Doheny Eye Institute of the University of Southern California (1984), Wisconsin Medical College (1987), Duke University, Jules Stein Eye Institute (UCLA), Emory University Eye Center (1992), Bascolm Palmer Eye Institute of the University of Miami (1996) and Lions Eye Institute, Perth, Australia. He has served in the present position as above since 1988, and as the Executive Board of Trustees of the Korean Ophthalmological Society (1963-1968) and the President of the Society (1992-1994). His research interest is vitreoretinal disease and its treatment, and he has published 95 articles in this field, e.g. *Ultrastructure of vitreoretinal proliferating membranes*. J. Kr. Ophthalmol. Soc. 225: 14, 1984". He also wrote books *Retinal detachment*, Seoul National University Press, 1996 and *Differential diagnosis by Fundus findings*,. The Seoul National University Press, 1988". (Department of Ophthalmology, College of Medicine, Seoul National University, 28 Yeonkundang, Chongro-ku, Seoul 135-010, Korea, phone: 82-2-760-2430, Fax: 82-2-741-3187, e-mail: jaeheung@plaza.snu.ac.kr)(SM)

Lee, Pei-fei (1925-) Taiwanese-American ophthalmologist, a graduate of National Shanxi University in 1949. He received ophthalmology training with Professor Y.F. Yang of National Taiwan University Hospital (1950-1954) and Professor Callahan and Professor Paul of University Alabama Hospital and Hillman Clinics in USA during 1954-1956. He studied Glaucoma at Massachusetts Eye and Ear Infirmary and Howe Laboratory of Ophthalmology, Harvard Medical School with Drs. Trotter, Chandler and Grant (1956-1959). He was appointed Associate Professor of Ophthalmology of National Taiwan University in 1959-1963. During this tenure, he abolished unhealthy traditional "wash eye" custom and established the Glaucoma Service at National University Hospital. He assisted Professor Y.F. Yang and other colleagues in founding the Ophthalmological Society of the Republic of China in 1960. In 1963, he returned to the USA to study Retina and Glaucoma at the Retina Foundation in Boston with Professor C. Schepens, Dr. W.Mc Meel and Dr. R. Field. He was appointed to Assistant Clinical Professor of Ophthalmology and established the glaucoma consultation service at Boston University Hospital in 1967-1971. He was then appointed to Associate Clinical Professor in 1972 and promoted with tenure to Professor of Ophthalmology of Albany Medical College in 1980. He established the Glaucoma Service and the Experimental Ophthalmic Microsurgery Laboratory at Albany Medical College and Hospital. He served as President of New York State Capital District Chapter, Chinese-American Medical Society in 1976-1979 and Member of the New York State Board of Medicine from 1979-1989. He was elected the Vice-President and the President of the Eastern New York EENT Association in 1982-1984. He assisted and founded the Chinese American Ophthalmological Society in 1986, he was elected its first President from 1986-1988. Internationally, he was one of the founding members of the Asia-Pacific Academy of Ophthalmology in 1958 and the President of the First International Symposium of Glaucoma Laser Surgery in 1983. Socially he served as the President of the Greater Boston Chinese Cultural Association. He was also a board member of Chinese Community Center and the Visiting Nurse Foundation in Albany. He is a voluntary physician (ophthalmologist) of Albany County Civil Defense. He is a recipient of the Scientific Award of the Chinese American Society in 1986, the New York State Governor Award for Outstanding Asian-American in 1993 and the Pioneer in Ophthalmology Award, from the Chinese American Ophthalmological Society in 1997. He is an honorary member of the Asian-Oceanic Glaucoma Society and the New York State Ophthalmological Society. He has over one hundred publications related to the field of glaucoma and retina, notably transpupillary cyclophotocoagulation of the ciliary processes, aqueous-venous shunt procedures, refinement in glaucoma microsurgies and the development of the PF Lee Goniolens for goniotomy and pediatric

ophthalmology, diabetic retinopathy classification and experimental open-sky vitreoretina surgery. He is active in ophthalmology resident and post-resident fellow education both in glaucoma and retina. He lectured widely both in the States and aboard during his tenure. He established Glaucoma Services, P.C. in 1984 and retired from private practice and clinical teaching in 1998. (421 Lincoln Drive, Guilderland, N.Y. 12084-9545, USA. Phone/Fax: (518) 456-0052, e-mail: drpflee@Yahoo.com (SM)

Lee, Seong-Whan (1962-) Korean artificial vision scientist. Dr.Lee received his B.S. degree in Computer Science and Statistics from Seoul National University, Seoul, Korea, in 1984; a M.S. and Ph.D. degrees in Computer Science from the Korea Advanced Institute of Science and Technology in 1986 and 1989, respectively. From February 1989 to February 1995, he was an Assistant Professor in the Department of Computer Science at Chungbuk National University, Cheongju, Korea. In March 1995, he joined the faculty of the Department of Computer Science and Engineering at Korea University, Seoul, Korea, as an Associate Professor. Currently, Dr. Lee is the director of National Creative Research Initiative Center for Artificial Vision Research (CAVR) supported by the Korean Ministry of Science and Technology. Dr. Lee was the winner of the Annual Best Paper Award of the Korea Information Science Society in 1986. He obtained the Outstanding Young Researcher Paper Award at the 2nd International Conference on Document Analysis and Recognition in 1993, and the First Distinguished Research Professor Award from Chungbuk National University in 1994. He also obtained the Outstanding Research Award from the Korea Information Science Society in 1996. He has been the Co-Editor-in-Chief of the International Journal on Document Analysis and Recognition since 1998 and the Associate Editor of the Pattern Recognition Journal, the International Journal of Pattern Recognition and Artificial Intelligence, and the International Journal of Computer Processing of Oriental Languages since 1997. At present (1999), he is the Guest Co-Editor of the Special Issue on Document Analysis Systems of the International Journal on Document Analysis and Recognition. He was the Guest Editor of the Special Issue on Handwriting Recognition of the International Journal on Document Analysis and Recognition in 1998, the Guest Co-Editor of the Special Issue on Oriental Document Recognition of the International Journal of Pattern Recognition and Artificial Intelligence in 1997, and the Guest Editor of the Special Issue on Oriental Character Recognition of the Pattern Recognition Journal in 1996. He was the Program Co-Chair of the 6th International Workshop on Frontiers in Handwriting Recognition, the 2nd International Conference on Multimodal Interface and the 17th International Conference on Computer Processing of Oriental Languages, and the Workshop Co-Chair of the 3rd International Workshop on Document Analysis Systems. At present, he is the Program Co-Chair of the 5th International Conference on Document Analysis and Recognition in 1999 and the Workshop Co-Chair of the IEEE International Workshop on Biologically Motivated Computer Vision in 2000. He served on the program committees of several well-known international conferences. He is a fellow of the International Association for Pattern Recognition, a senior member of the IEEE Computer Society and a life member of the Korea Information Science Society, the International Neural Network Society, and the Oriental Languages Computer Society. His research interests include biologically-motivated computer vision, document image analysis and recognition, content-based image retrieval, and neural networks. He has more than 150 publications on pattern recognition and neural networks in international journals and conference proceedings, and authored two Korean books: *Theory and Practice of Character Recognition*, Hongneung Press(1993) and *Principles of Pattern Recognition*, Hongneung Press(1994). Lee co-authored: S.-W. Lee and Y. Nakano(Eds.), *Advances in Document Analysis Systems*, Lecture Notes in Computer Science, Springer Verlag, 1999(To appear). S.-W. Lee(Ed.), *Advances in Handwriting Recognition*, World Scientific Publishing Co., ISBN 981-02-3084-2, 1999. S.-W. Lee, Y.Y. Tang and P.S.P. Wang(Eds.), *Advances in Oriental Document Analysis and Recognition Techniques*, World Scientific Publishing Co., ISBN 981-02-3744-8, 1998. H.-S. Park, S.-Y. Kim and S.-W. Lee, *Gray-scale Handwritten Character Recognition Based on Principal Features*, *Document Recognition* (Eds. L. M. Vincent and J. J. Hull), SPIE Publisher, ISBN 0-8194-2438-2, 1997, pp. 40-49; H.-S. Park and S.-W. Lee, *A Truly 2-D Statistical Model for Off-line Handwritten Character Recognition*, *Progress in Handwriting Recognition* (Eds. A. C. Downton and S.

Impedovo), World Scientific Publishing Co., ISBN 981-02-3084-2, 1997, pp. 153-160; S.-W. Lee, *Principles of Pattern Recognition*, Vol. I, II, Hongneung Science Publisher, Seoul, April 1994(in Korean). S.-W. Lee, *Character Recognition: Theory and Practice*, Vol. I, II, Hongneung Science Publisher, Seoul, April 1994(in Korean). **Address:** Asan Science Building Room 204, Dept. of Computer Science and Engineering, Korea University, Anam-dong, Seongbuk-ku, Seoul 136-701, Korea, Phone : (+82) 2-3290-3197; Fax : (+82) 2-926-2168 @: swlee@image.korea.ac.kr ; Web : http://image.korea.ac.kr/swlee (AB)

Lee, Y.C., Dato (1942 -) Malaysian ophthalmologist, Chairman of Lee Eye Centre, Ipoh, Perak, Malaysia. He graduated from University of Singapore in 1967, carried out postgraduate studies in Royal College of Physicians, London (1972), Royal College of Surgeons, London (1972), Royal College of Surgeons England (1973) and Royal College of Ophthalmologists (1989): he received degrees including FRCS and FRCOphth. His domestic professional activities include Chairman, Malaysian Association of Small Incision Surgery (1997-1998), Medical Superintendent and Senior Consultant Ophthalmologist of Perak Chinese Maternity Hospital and Senior Consultant Ophthalmologist of Ipoh Specialist Centre. In international organizations, he is a Founder Member of the Asia-Pacific Implant Association (APIIA) and served as Honorary Secretary (1989-1992) and Honorary Treasurer (1993-1999) of the Association. He is a member of American Academy of Ophthalmology, International Intraocular Implant Club, American Society of Cataract and Refractive Surgery, and European Society of Cataract and Refractive Surgery. He gave many courses in Cataract surgery and Intraocular Implant both in domestic and international settings. He delivered the Alim Memorial Lecture *Phacoemulsification – A critical resume* at the 25th Congress of Bangladesh Ophthalmological Society in 1998. He is a recipient of Distinguished Service Award from the APAO and the APIIA. (SM)

Leelawongs, Nisit (1933-) Thai ophthalmologist, President of the Foundation for Prevention of Blindness, Thailand. He graduated from the Medical School, Chulalongkorn University of Medical Sciences, Bangkok, and received his M.D. degree in 1956. He studied Ophthalmology under Prof. PRACHAKVEJASITH, P. and Prof. PROMMINDAROJ K. and was appointed the Lecturer in 1958 and then Associate Professor in 1974. He went to the U.S.A. on a Fellowship of the China Medical Board and studied at Harvard Basic Science Course (1964), at New York Hospital of Cornell Medical Center (1964) and also as a Clinical Fellow of the Retina Foundation, Boston (1964-1965). On return to his home country, he started the Retina Service at the Chulalongkorn Hospital. He served the Ophthalmological and Otolaryngological Society of Thailand as Assistant-Secretary (1970-1971), as the Secretary-Treasurer (1972-1975) and also as the Secretary (1974-1975) and Vice-President (1976-1977) of Chulalongkorn Hospital Medical Alumni. He also served the Ophthalmological Society of Thailand as the Secretary (1981-1984) and the President (1985-1988). He has been the President of the Foundation for Prevention of Blindness, Thailand, since 1995 and practices Ophthalmology at Chaibadh Clinic in Bangkok. He is a recipient of the Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology in 1989 and the Golden Award for Prevention of Blindness from the Ministry of Public Health, Thailand, in 1996. (SM)

Leeuwen, Marie van see **Van Leeuwen, Marie**

Leeuwenhoek see **Leeuwenhoek**

Leeuwenhoek, Antony van (1632-1723) Dutch scientist of Delft, the pioneer in microscopy. Leeuwenhoek was first a shopkeeper and civil servant for whom the study of natural history started as a hobby. Beginning in 1671, he constructed microscopes of increasing quality, which enabled him to observe and describe microorganisms, spermatozoa, blood corpuscles, and the microscopic structure of plant and animal tissues, including the tissues of the eye. Leeuwenhoek discovered the layer of rods of the retina, the fibrous structure of the lens and the fibro-epithelial layers of the cornea. He communicated his findings mainly through letters to the Royal Society of London, which translated and published them in its Philosophical Transactions between 1673 and 1724. Published

letters are to be found in *Opera omnia* (5 parts) Leyden 1719 and 1732. He also wrote: *Epistolae physiologicae super compluribus naturae arcanis* Delphis 1719; *The select works of Antony van Leeuwenhoek* London 1800 (contains early descriptions of lens and optic nerve histology.). Albert

Lefébure, de Saint-Ildephont, Guillaume René (1744-1809) French physician, quack and man of letters, born at Sainte-Croix-sur-Ome, France. He served in the army before studying medicine. He practiced and taught in Versailles, becoming court physician; in 1790 he fled revolutionary France, and lived thereafter mainly in Germany. *Black Cataract* he professed to cure by means of a stream of hydrogen gas directed against the eyeball. In 1809 he was practising in Augsburg, Germany, where he had become physician-in-chief to the hospitals. He died of typhus fever the same year. Lefébure wrote a number of works on ophthalmology, which reveal him to have been a quack: *Ueber den schwarzen Staar, und die neu entdeckte Heilart desselben mittelst des Wasserstoffgas* Leipzig 1801; *Traité de la Paralysie du Nerf Optique..... Mémoire Theoretique et Pratique sur l'Ophthalmie* (Frankfort-on-the-Main, 1802 ; *Sichere und Kurze Heilart aller Augen-Entzündungen* (1802) ; *Histoire anatomique, physiologique et optique de l'oeil* Paris 1803. JPW

Lehmann, George Karl Henrich (1815-1890) Danish ophthalmologist of Copenhagen. Lehmann received his M.D. in Copenhagen in 1846 with the dissertation *De rationibus physiologicis et pathologicis humoris aquei oculi humani* , completed his ophthalmological studies abroad, under Sichel, Jaeger, Arlt, and von Graefe. He established the first ophthalmic hospital in Copenhagen and served for many years as physician to the Copenhagen Blind, Deaf, and Dumb Institution; his ophthalmologic articles appeared in Danish, English, and German journals. Albert

Leigh, Arthur George (1909-1968) British ophthalmologist. He received his medical education at the University of Liverpool, where he graduated M.B., Ch.B. in 1933. He held the posts of house surgeon and house physician at the Royal Infirmary at Liverpool and then joined the University anatomy department as a research assistant. He proceeded to the M.D. in 1937 and in 1938 became a Fellow of the Royal College of Surgeons of England. He was appointed a house surgeon at Moorfields Eye Hospital in 1938 and this was the appointment which led to his life's work. He joined the R.A.F. at the cessation of his Moorfields appointment and served at the R.A.F. Hospitals at Littleport, Brussels, and Uxbridge. He was demobilized with the rank of Squadron Leader and on his return to London was appointed ophthalmic surgeon to the National Temperance Hospital and to the King Edward Hospital at Windsor. In 1947 he was appointed surgeon to Moorfields Eye Hospital and ophthalmic surgeon to St. Mary's Hospital and at these two hospitals he undertook the routine surgery, the teaching, and the research which made him such a prominent figure in ophthalmology. He had a particular interest in operative ophthalmic surgery in which he was a perfectionist. He made a special study of corneal transplantation and in this subject he was one of the world authorities and received consultation from all parts of the world. He delighted in the training of the Moorfields house surgeons and of the registrars of St. Mary's and he instilled into them those fundamental principles of ophthalmic surgery in which he believed so strongly. He was an enthusiastic lecturer to the postgraduates and a clear teacher of undergraduates. He published "*Corneal Transplantation*" in 1966 and he was to have given the Pocklington Memorial Lecture at the Royal College of Surgeons in 1969. He was a member of the Examining Board for the Diploma of Ophthalmology and for several years had examined the Moorfields nurses in their Diploma examination. He had been Honorary Secretary of the Ophthalmological Society of the United Kingdom and a Vicepresident of the ophthalmic section of the Royal Society of Medicine. He was very proud to have been a foundation member of the Editorial Board of Ophthalmic Literature and his duties to that Board were always carried out with care and without delay. He was a member of various ophthalmic societies in Britain and overseas. He took his part in all the Committee work which comes to any consultant in the National Health Service. He had served as Chairman of the Medical Committee at St. Mary's and at his death was Chairman of the Medical Committees both of Moorfields and of the Western Ophthalmic Hospital. BJO1968,52:791-792

Leinfelder Placidus Joseph (1905-1988) American ophthalmologist, professor emeritus of ophthalmology at the University of Iowa, and known throughout his life as "P.J.". Leinfelder had been associated with the Department of Ophthalmology for many years. Born and raised in LaCrosse, Wisconsin, he earned his B.A. and M.D. degrees and completed his internship at the University of Wisconsin, then came to Iowa in 1930 to be one of C S.→O'Brien's ophthalmology residents. He joined the faculty as an instructor in 1934 and became full professor in 1946. When he retired in 1973, he had been seeing eye patients in the department and doing three to five cataract extractions most Friday mornings for longer than anyone else in the department could remember. Leinfelder didn't call himself a neuro-ophthalmologist, but that was clearly where his interests lay. This was acknowledged by O'Brien in 1938 when Leinfelder was named the head of a neuro-ophthalmology section in the department. Leinfelder's American Ophthalmological Society thesis, accepted in 1938, was on *Retrograde degeneration in the retina and optic nerves*. He gave courses at the Academy on neuro-ophthalmic topics from 1937 to 1969. During the same years his talks to various midwest state medical societies resulted in publications such as *Papilledema and optic neuritis*, *Misconceptions in neuro-ophthalmology*, *Why test visual fields?*, *The diagnosis and treatment of ocular neuroses*, and *The diagnostic significance of some ocular complaints*. Some of Leinfelder's earliest investigative work was in biochemistry (with Peter Salit) and on roentgen-ray cataracts (with H.D.Kerr), and these two subjects came together for him 20 years later in a series of papers on the metabolism of the crystalline lens and on experimentally produced radiation cataracts. This, in turn, led to a period of service on the Advisory Committee to the Atomic Bomb Casualty Commission. He retired at age 68, but he stayed in the department part-time for another five years, taking care of some of his old patients who had known no other ophthalmologist for 30 to 40 years, making himself available to the residents, and serving as the voice of experience at department faculty meetings. AJO 1989,107:198

Lemp, Michael A. (1937-) American ophthalmologist, Clinical Scientist, and Educator. Born in Washington, D.C., Lemp is a graduate of St. Anselm's Abbey School and received a B.S. from Georgetown College in 1958, an M.D. from Georgetown University in 1962 and an M.Sc.(Ophth.) from Georgetown in 1968. He was a medical officer in the U.S. Air Force from 1963 to 1965. He completed his residency in ophthalmology at Georgetown in 1968; from 1968-70 he was a fellow in corneal disease at the Massachusetts Eye and Ear Infirmary and the Retina Foundation under Professor Claes H.→Dohlman. In 1970 Lemp was appointed to the faculty at Georgetown initially as an Assistant Professor. In 1983 was appointed Professor and Chair of the Department of Ophthalmology, a post which he held until 1992. Since then he has been Clinical Professor of Ophthalmology at Georgetown and George Washington Universities and President of University Ophthalmic Consultants of Washington. He has authored 170 scientific papers and four books and served on the editorial boards of the A.M.A. Archives of Ophthalmology (1974-78), Cornea (1989-95), and as a scientific reviewer for Am.J.Ophthalmol., Archiv Ophthalmol., Invest. Ophthalmol. and Vis. Sci., Cornea, Ophthalmology, and the CLAO J. He is the past President of the Internat. Soc. Contact Lens Res.(1990-1993), Executive Secretary-Treasurer of the Castroviejo Soc.(1987-90), Director of the Internat. Soc. Refractive Surg (1996-98). and served as Chairman of the N.E.I./Industry Workshop on Dry Eyes (1993-95). He is a member of numerous state and national organizations. He has been Visiting Professor at 53 universities and has delivered 8 named lectures. Honors include: AOA (1984), American Ophthal.Soc. (1989), Lacrima Award (1984), AAO Honor Award (1982), AAO Senior Honor Award (1993), Berens Medal(1991), Castroviejo Medal(1998). His research interests include tear physiology, ocular surface disease and corneal wound healing. Lemp is active in professional, social and charitable organizations including the Cosmos Club and the Order of Malta. He enjoys golf, food and wine. Some examples of his many publications are Lemp MA, Holly FJ, Iwata S, Dohlman CH. *The precorneal tear film: Factors in spreading and maintaining a continuous tear film over the corneal surface*. Arch.Ophthalmol. 83:89-94,1970, Lemp MA, Dohlman CH, Kuwabara T, Carroll JM, Holly FJ. *Dry eye secondary to mucus deficiency*. Trans Am. Acad. Ophthalmol. Otolaryngol. 75:1223-1227,1971, Lemp MA and Szymanski ES. *Polymer absorption at the ocular surface*. Arch. Ophthalmol. 93:134-136,1975, Holly FJ,

Lemp MA. *Tear physiology and dry eyes*. Surv. Ophthalmol.22: 69-87,1977, Lemp MA, Weiler HH. *How do tears exit?* Invest. Ophthalmol. Vis. Sci. 24:619-622,1983, Lemp MA, Dilly Pn, Boyde A. *Tandem scanning (confocal) microscopy of the full thickness cornea*. Cornea 4:205-209,1985/86, LempMA. *The surface of the corneal graft: in vivo color specular microscopic study on the human*. Trans Am. Ophthalmol. Soc. LXXXVII: 619-657,1989 and Lemp MA. *New strategies in the treatment of dry eye states*. Cornea, in press (Castroviejo Lecture, 1998). (University Ophthalmic Consultants of Washington, 4910 Massachusetts Ave. N.W. Suite 210 Washington D.C. 20016-3208 ; Phone: (202) 686-6800 ; FAX: (202) 686-6668 , email: malemp@bellatlantic.net)(SM)

Lennox, Richmond (1861-1895). American ophthalmologist. Born in Brooklyn, N.Y. he received his education in the arts and sciences at the Brooklyn Polytechnic Institute, and his medical degree, at the College of Physicians and Surgeons in the City of New York. After a brief period of service in the Roosevelt Hospital, he studied ophthalmology and otology in Europe, and, on his return to America, settled as ophthalmologist and otologist in his native city. He died Nov. 14, 1895, aged thirty-four. American Encyclopedia of Ophthalmology, Vol.10, p.7191

Lenoir, Adolphe (1802-1860) French surgeon, born at Meaux, France. Lenoir received his M.D. in 1833 in Paris. He became a renowned professor of anatomy and surgery at the Ecole Pratique (1835). Lenoir wrote mainly on general surgery. On ophthalmology he left us: *Des opérations qui se pratiquent sur les muscles de l'oeil*. Paris 1850.

Lent, Isaac H. (1846-1918) American Middletown, N. Y., ophthalmologist, of considerable local reputation, born on a farm in the Mohawk Valley . He received in 1873 his degree in medicine at the Albany, N.Y., Medical College. For fifteen years he practiced general medicine at Valatie, N.Y. and then studied the eye, ear, nose and throat in New York and Philadelphia. Settling at Middletown, N.Y. he practiced there for the rest of his life. For a number of years he was consulting ophthalmologist to the Thrall Hospital, Middletown.AJO 1919,2:166

Leo, Leopold (1792-1868). Polish physician who paid considerable attention to diseases of the eye. Born at Königsberg, Prussia, he received his medical degree in 1815 at the University in that place. Settling in Warsaw, he practised there for more than 50 years. For a long time he edited at Warsaw (but in German) the "*Magazin für die Heilkunde und Naturwissenschaft in Polen*," and from 1838-41 he was physician-in-chief at the Warsaw Ophthalmic Institute. American Encyclopedia of Ophthalmology, Vol.10, p.7419

Leonardo da Vinci (1452-1519) Famous Italian painter, sculptor, architect, musician, mechanic, engineer, optician and physiologist, whose writings on the eye and light are of interest to every ophthalmologist ,even at the present day. He, in fact, it was who discovered that the essential organ of vision was not, as had been supposed until his time, the crystalline lens, but the retina. He was born in 1452, the illegitimate son of a Florentine lawyer, by one Catarina, who is said by some to have been a peasant, by others, a woman of gentle birth. Leonardo, who was brought up by his father, developed into a youth of great strength and beauty, charm of manner, and intellectual energy. His ability as an artist was discovered by Andrea del Verrochio, who became his first teacher. Unlike most artists of his day (the Renaissance) da Vinci did not content himself with a mere imitation, or interpretation, of classical models, but developed a high degree of originality. The most important of his pictures are: The Annunciation; The Last Supper; The Virgin of the Rocks; and Madonna Lisa. In his later years, he turned to science more and more, and then it was, apparently, that he wrote most of his works on geography, geology, cosmology, mathematics, astronomy, mechanics, and optics. So far the *American Encyclopedia of Ophthalmology*, Vol. 10, p.7419-7420. Meanwhile, since 1917, it has been "*discovered*" that da Vinci had the first idea for contact lenses. [See: most modern histories of optics]. We take the opportunity of the publication of this book to refute this erroneous theory: R.F.→Heitz and J.M.→Enoch showed that the drawings in MS "D" with immersed head in Folio 3 Verso and heads and eyes in water-mask or shells in Folio 7 Verso are illustrations designed to explain the perception of an upright image by an eye by reinversion of images inside the eye. In the first case, the eye of the head immersed in

a large glass globe, used as an artificial eye, looks into an crystalline lens sphere and suggest that the front of the optic nerve sees the rays. In the Folio 7 Verso, the water-mask and water-shells illustrate the formation of mirror images and propositions for mirroring experiments with curved glass surfaces, as is detailed in the texts, to explain a reinversion by mirroring and reflection from the surface of the uvea. (Advances in Diagnostic Visual Optics, 19-26, 1987) [JPW]

Leopold, Irving Henry (1915-1993) American ophthalmologist, pharmacologist, researcher, and teacher. He was emeritus professor and chairman of the Department of Ophthalmology at the University of California, Irvine, since 1985 and retired senior vice president in charge of Medical Affairs of Allergan, Inc., in Irvine, California, since 1988. Leopold was born in Philadelphia. He received the Bachelor of Science degree from Pennsylvania State College in 1934 and the Doctor of Medicine degree from the University of Pennsylvania in 1938. His internship was at the Hospital of the University of Pennsylvania from 1938 to 1940, and in 1943 he received the Doctor of Science degree in Medicine from its Graduate School of Medicine. Also in 1943 he became a diplomate of the American Board of Ophthalmology. He held a fellowship in ophthalmology at the University of Pennsylvania for the period 1940 to 1946 and faculty appointments beginning in 1941. In 1955, Dr. Leopold became professor of ophthalmology and head of the department in the University of Pennsylvania Graduate School of Medicine, where he continued until 1964. During the war years (1942 to 1945) he served as clinical investigator in chemical warfare for the United States Office of Scientific Research and Development and as a member of the Committee on Medical Research of the National Defense Research Council. From 1946 to 1964 Leopold held surgical and clinical appointments at Wills Eye Hospital, becoming director of the Research Department in 1949 and the first ophthalmologist-in-chief and medical director in 1961. In 1964 Leopold moved to New York as director of the Department of Ophthalmology at Mount Sinai Hospital and became the first professor and chairman of ophthalmology at the Mount Sinai School of Medicine in 1966. Between 1964 and 1967 he also held an appointment as clinical professor of ophthalmology at the College of Physicians & Surgeons, Columbia University. In 1974 Leopold spent his sabbatical leave from Mount Sinai at the Allergan Pharmaceutical Company in Irvine and accepted the position as chairman of their Scientific Advisory Committee. The following year he left New York to become professor and chairman of ophthalmology at the California College, University of California, Irvine, retiring from that post in 1985. Throughout his academic career Dr. Leopold held consultant appointments at several other institutions. They include Episcopal Hospital (1948-1950), the Albert Einstein Medical Center (1959-1964), and St. Joseph's Hospital (1959-1964) in Philadelphia, and Manhattan Eye, Ear, and Throat Hospital (1965-1975) and Beth Israel Medical Center (1967-1975) in New York. United States government agency consultantships included the Chemical Warfare Medical Research Division (1950-1953), Surgeon General, Public Health Service Training Grants (1952-1958), the National Institutes of Health (1959-1970), the Department of Health, Education, and Welfare (1963-1964, 1971-1973), and the joint National Institutes of Health-Health, Education, and Welfare Advisory Eye Council (1981-1985). Between 1981 and 1985 he served on the Advisory Committee to the director of the National Institutes of Health. Since 1981 he remained active as a consultant for the Army Medical Research and Development Command in Chemical Warfare. Leopold held membership in some 50 local, state, national, and international professional societies. His important offices included chairman of the Committee on Drugs of the American Association of Ophthalmology and Otolaryngology (1963-1975), chairman of the Association for Research in Vision and Ophthalmology (1965), and various committees of the American Medical Association including Interspecialty Committee (1976), Residency Review Committee for Ophthalmology (1960-1967; chair, 1967), and the Council on Drugs (1970-1973). He served on various committees of the National Academy of Science (1966-1968) and the National Society for the Prevention of Blindness (1974-1981). Service projects in which Leopold participated include the Pennsylvania Lions Club Sight Conservation and Eye Research Project (1958), the Seeing Eye, Inc., Grants Advisory Committee since 1967 (Board of Trustees, 1974), and ORBIS (1974). Leopold had been on the Editorial Board of the *American Journal of Ophthalmology* from 1965 to 1990. He

was an associate editor of the *Archives of Ophthalmology* from 1974 to 1981. Leopold was also editor-in-chief of the *Survey of Ophthalmology* in 1958 and subsequently served to 1962 as contributing editor. He was associate editor of *Ocular Inflammation and Therapeutics* in 1981. He served on numerous editorial boards including the *American Journal of Diabetes*, *Investigative Ophthalmology*, the *Journal of Ocular Pharmacology*, and *JAMA*. He served intermittently between 1950 and 1980 on committees involving revision of the United States Pharmacopeia. Additionally, he was author or coauthor of some 25 editorials, 75 book chapters and books, and nearly 400 journal articles. Leopold's distinguished career includes some 30 honorary lectures. International lectures include the Walter Wright Lecture, University of Toronto (1969); the Richardson Cross Lecture for the Royal Society of Medicine, Bristol, England (1970); the Doyne Memorial Lecture, Ophthalmological Society of the United Kingdom, Oxford (1971); the First Ticho Memorial Lecture, Hebrew University of Hadassah Medical Center, Jerusalem (1971); the First Walter S. Atkinson Lecture, International Eye Foundation, Athens (1973); and Distinguished Visitor at the University of Würzburg, Germany, Moorfields Hospital, London, and the University of Helsinki, Finland (all in 1980). Other honorary lectures include the Proctor, University of California (1962); Edward Jackson Memorial, American Academy of Ophthalmology and Otolaryngology (1965); Gifford Memorial, Chicago (1967); Edwin B. Dunphy, Harvard University (1968, 1975); Honored Guest, American Academy of Ophthalmology (1971, 1975); De Schweinitz Memorial, College of Physicians, Philadelphia (1972); Charles H. May, New York Academy of Medicine (1973); Verhoeff Memorial, American Ophthalmological Society (1973); Jules Stein, University of California, Los Angeles (1974); Bedell, Wills Eye Hospital (1975); C. S. O'Brien, Tulane University (1979); Francis Heed Adler, University of Pennsylvania (1980); Distinguished Visitor, Wills Eye Hospital and Jefferson Medical College (1980); Everett R. Veirs, Texas A & M University (1982); and the first lecture endowed in honor of Dr. Leopold at Wills Eye Hospital (1987). Other awards included the Friedenwald Medal, Association for Research in Ophthalmology (1960); the Lucien Howe Medal, American Ophthalmological Society (1974); the Physician's Recognition Award, American Medical Association (1980, 1981); and the Sir Stewart Duke-Elder Award and Lederle Medal, International Glaucoma Congress VI (1982). As an educator Irving Leopold participated in the development of the American Academy of Ophthalmology and Otolaryngology Home Study Course (1945-1959) and in numerous presentations as visiting professor to other universities. As a member of the American Board of Ophthalmology he was active on the Oral Examination Committee and chaired the Written Examination Committee (1969-1972), also serving on the Executive Committee and the Board of Trustees (vice chairman, 1971; chairman, 1972). *AJO* 1993,116:660-662.

Leplat, Georges (1890-1985) Belgian anatomist. Leplat was born in Liège as the son of Lucien →Leplat. He specialised in anatomy already during his student's years (from 1908) and obtained his M.D. degree in Liège in 1914, just in time for serving as battalion physician during the first World War. He was resident of the Department of Embryology of the Liège University from 1919 and obtained in 1925 the special doctorate in ophthalmology with a thesis devoted to *the effects on both eyes of an unilateral eye contusion*. In 1930 he became professor of splanchnology and of anatomy of the sense organs. He made a parallel career as ophthalmologist in the English public assistance hospital, where he entered in 1920 and became departmental head in 1928. He retired from the University in 1965. His papers concern anatomy and embryology of the vertebrates (1911-1914), iris circulation and intraocular pressure regulation (preparing his 1925 thesis). Thereafter he wrote on retinal vein pressure, on the structure of the vitreous body, on collagen and on the structure of tendon fibres and sheaths. Its principal achievement is his participation to the 1958 report on embryology and teratology of the eye for the French Ophthalmological Society: he wrote in this report the parts on the *first stages of ontogenesis*, on the *embryology of orbit ocular membranes and adnexa*, on *chronology* and a large part of the chapter of *teratology*. He was member of the (French) Belgian Academy of Medicine and was its president in 1966. He has been president of the Professional Association and was member of honour of the french-speaking section of the Belgian Ophthalmological Society. (Verriest)

Leplat, Lucien (1859-1946) Belgian ophthalmologist. Leplat was born in Huy (province of Liège) and died in Liège. He obtained the M.D. degree in Liège in 1882 but worked already before in the Department of Ophthalmology with Borlée. He was resident from 1883 to 1889 under Fuchs and under Nuel. He remained in contact with Fuchs and in 1894 he translated in french, with Camille Lacompte, the second edition of Fuchs' *Lehrbuch der Augenheilkunde*. Moreover he published many papers as on the *syphilitic nature of keratitis parenchymatosa* (1884), *preservation of the macular area in embolism of the central artery* (1885), *regeneration of the aqueous humor after experimental paracentesis* (1887) and *experimental contusion of the eye* (1890). He was one of the founders of the Belgian Ophthalmological Society. (Verriest)

Lerebours Noel Paymal (1807-1873) French inventor of optical instruments in Paris. He was the son of the inventor Noel Jean Lerebours, whom he assisted in devising astronomical telescopes for French government observatories. He wrote a number of treatises on microscopy and photography: *Description d'un microscope achromatique simplifié* [Paris]: Lerebours; Bachelier, 1839.

Leslie, Sir John (1766-1833), British natural philosopher, born at Largo[the place from where Daniel Defoe's Robinson Crusoe was supposed to have sailed -JPW], Fife, Scotland, was variously employed in scientific writing or traveling on the continent of Europe, with pupils, but all the while engaged in experimental research. The fruits of his labours during this period of his career were a translation of Buffon's *Natural History of Birds*, the invention of a differential thermometer, a hygrometer, and a photometer. He also published an important *Experimental Inquiry into the Nature and Propagation of Heat*. In 1805 he obtained the chair of mathematics at Edinburgh. In 1810 he invented the process of artificial refrigeration. In 1819 he was transferred to the chair of natural philosophy, where his peculiar talents found their proper sphere. American Encyclopedia of Ophthalmology, Vol.9, p. 7437

Lesshaft (1861-1909). German ophthalmologist of Görlitz, Germany. He was at one time assistant to Albrecht. v. →Graefe. American Encyclopedia of Ophthalmology, Vol.10, p. 7437

Letchworth, Thomas Wilfred (1874-1954) British ophthalmologist, born at Brighton and educated privately at Emmanuel College, Cambridge, he studied medicine at St. Bartholomew's Hospital and qualified in 1898. He was admitted F.R.C.S. in 1909, having begun to specialize in ophthalmic surgery soon after his graduation. He held appointments at the Royal Westminster Ophthalmic Hospital, where he worked under Brewerton, and at the Central London Ophthalmic, and Royal Eye Hospitals. From 1919 he was a surgeon at the Royal Eye Hospital; he retired on reaching the age limit in 1934, but with great humility and helpfulness he remained to act for some time as honorary clinical assistant. He continued in consulting practice until 1951, when he still kept on a small amount of work *to keep his hand in* -. He had a deep interest in mathematical matters, and this precision of thought he carried into his ordinary life. He was fond of refractive work, which he could execute with unrivalled accuracy at prodigious speed. He was a pioneer worker on muscle-balance, and invented a rotary prism of variable strength which he would demonstrate to admiring but not fully comprehending house-surgeons. He was interested in nystagmus, and it was characteristic that he trained himself to demonstrate voluntary nystagmus in an amazing fashion. To crown his academic career, at the age of 73, and after two cataract operations, he wrote an original thesis for his M.D., and took his degree on the same day that his son took his M.A. at Cambridge. He was particularly proud of this distinction and was seen only a fortnight before his death wearing his gown at a public function at the Royal Eye Hospital, to the delight of his old colleagues. BJO1954,38:640

Leuw, Friedrich Hermann de (1792-1861). German ophthalmologist, who wrote very little, but whose operative skill was very great. Born of Dutch ancestry at Dinslaken, near Wesel, he received but little early education. When seventeen years of age, however, he began to study in the Düsseldorf Military Hospital, and saw much service later in the battles of Leipsic and Hanau. Becoming sick, he was left in the house of a Dr. von den

Steinen, who dwelt in the village of Gräfrath, near Solingen. In this village he afterwards settled and practised for a number of years. In 1823, however, he received his medical degree at Giessen. Making a specialty of ophthalmology at Gräfrath, he became exceedingly successful, small as the hamlet was, because of his, extraordinary operative skill. He executed every year hundreds of cataract operations, together with numberless others, often twenty to twenty-five per day. His assistant was his son, Dr. Louis de Leuw, and, after the son's death, Dr. Meurer. De Leuw's personality exercised a truly great influence. He spoke fluently Dutch, French, Italian, English. To the needy he sacrificed himself devotedly. In his honour was founded, Aug. 1, 1854, an institution for the blind, known as the 'De Leuw Institute.' In 1820 he published a report on the contagious character of *the Egyptian ophthalmia* (trachoma) which he addressed to the Royal Prussian Administration in Düsseldorf. This was before his graduation, which, as stated, occurred in 1823. He recurred to the subject in his graduation dissertation, and in 1824, at Essen, and published a tiny work thereon-his only book. American Encyclopedia of Ophthalmology, Vol.10, p. 7443-7444

Levis, Richard J (1827-1890). American surgeon and ophthalmologist, inventor of the Levis wire-loop for the extraction of cataract. Born in Philadelphia, he received his medical degree in 1848 from Jefferson Medical College. Settling in Philadelphia, he soon acquired a high reputation both in the general and in the special field. He was surgeon to the Philadelphia Hospital and to the Pennsylvania Hospital, and an attending surgeon at, the Wills Eye Hospital. He was one of the founders of the Philadelphia Polyclinic, and for many years taught ophthalmology and Otolaryngology at the Jefferson Medical College. American Encyclopedia of Ophthalmology, Vol.10, p.7446

Lewis, Francis West (1825-1902). American general practitioner and ophthalmologist, founder of the Children's Hospital on Twenty Second St., Philadelphia. He received his medical degree at the University of Pennsylvania in 1846. Nine years later he became a Fellow of the College of Physicians. For about two years he studied ophthalmology in Dublin (under Sir William →Wilde) and in Paris. Returning to Philadelphia, he soon had an excellent practice, both in the general and in the special field. American Encyclopedia of Ophthalmology, Vol.10, p.7446-7447

Lewis, Frank Newell (1857-1910). American ophthalmologist of New York. Born at Burlington, Vermont, he received the degree of A.B. in 1879 at the University of Vermont, and the degree of A.M. and M. D. at the same institution in 1882. Serving for a number of years in the Mary Fletcher Hospital, Burlington, the Brooklyn Eye and Ear Hospital, and the New York Eye and Ear Infirmary, he studied ophthalmology and otology in London, Paris, Berlin and Vienna. Returning to New York City in 1888, he settled there as ophthalmologist and otologist, and soon was widely known as operator and as writer. At the Manhattan Eye and Ear Hospital he served successively as clinical assistant, assistant surgeon, surgeon, and director. He also became Professor of Diseases of the Eye in the New York Post-Graduate Medical School. He was a member of the American Ophthalmological Society from 1898 until his death. American Encyclopedia of Ophthalmology, Vol.10, p.7447 The Ophthalmoscope, 1911,p.228.

Li, Chen (1916-) Chinese ophthalmologist, Professor Emeritus of Jinan University. He graduated from Taipei University Medical School in 1940 and studied Ophthalmology at the University under Prof. Akira Motegi and received M.D. degree in 1945. He served as the Professor of Ophthalmology and Vice-President of Jinan University (1979-1988) and subsequently he works as the Professor and Advisor of the University. His many publications include *An Atlas of Ophthalmic Surgery*, 1977, *A Japanese-Chinese Medical Dictionary*, 1987 and *Eye Bank*, 1998. In the professional societies, he holds the positions such as Senior Membership of Chinese Medical Association, Honorary Editor-in-Chief of Chinese Ophthalmic Research, Representative of the 4-8th National People's Congress, Vice-President of 5-7th Canton Provincial Committee of Chinese People's Consult Conference. For the excellence of his work, he received First Class Prize issued by the Ministry of Education under the State Council for *Experimental studies on heterotransplantation of the Cornea* (1991) and *Experimental research on immune rejection of corneal transplantation* (1998). (Executive Office, Jinan University,

Guangzhou, China. Fax: +86-20-85221417)

Li, Feng-Ming (1915-) Chinese ophthalmologist, Professor Emeritus of Beijing Medical University. She graduated from West China Medical University in 1941 and studied at the *Eye and ENT Hospital*, Cheng-de under Prof. Eugene Chan and received her M.D. degree in 1941 from University of New York (thesis: *Eye symptoms and signs of vitamin A deficiency*). She further received DOMS in London in 1949. She has served as the Professor and Head of the Department of Ophthalmology of Beijing Medical University (1958-1987), and she is currently serving as Advisor to the Eye Center of the Beijing Medical University, Advisor of several Journals of Ophthalmology in China and Chief-Editor of the Chinese Edition of Archives of Ophthalmology. She has written more than 20 papers, e.g. *Analysis of Trachoma among Children in Beijing*, *Analysis of Injuries of the Eye*, *Xeroderma pigmentosa* and *Melanocytoma- case report*. She worked as the Chief Editor of *Chinese System of Ophthalmology*, 3 Volumes People's Health Publisher, Beijing 1996, Co-editor of *Practical Ophthalmology*, 2nd Edition and as Co-Editor of several Books on Ophthalmology. She is a recipient of many Honor Medals, e.g. Golden Apple Prize from the American Chinese Ophthalmology Society (1992), Peach-Plum Prize from Beijing Medical University (BMU)(1990), First Prize from Health Bureau (1998), Special Citation Prize from BMU (1999), Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology (1999) and Honorable Special Prize the Chinese Ophthalmology Association (1999). (Department of Ophthalmology, Third Hospital, Beijing Medical University, Beijing, P.R.China.) (SM)

Li, Mei Yu (1929-) Chinese ophthalmologist, Professor of Ophthalmology, at Beijing Medical University. She graduated from Beijing Medical University in 1954 and received her M.D. degree. She studied Ophthalmology under Prof. Bi Hua-de and extended her study as a visiting Scholar at the Eye and Ear Infirmary in Pittsburgh, U. S. A during 1982-1983. On home coming she has held the following positions: Attending doctor 1957, Associate Professor 1980, Professor 1985, Tutor of doctoral student 1990, and Vice chairman of Department of Ophthalmology, First Teaching Hospital, Beijing Medical University (1959-1982) and Chairman of Department of Ophthalmology, First Teaching Hospital, Beijing Medical University (1983-1994). In the professional societies, she has held the following positions: Committee member and Vice President of Beijing Society of Ophthalmology (1978-1995), Member of Standing Committee and Secretary of Chinese Society of Ophthalmology (1984-1988) and Vice President of Chinese Society of Ophthalmology (1988-), Editor-in-Chief of Chinese Journal of Ophthalmology(1988-), Vice President of Chinese Society of Glaucoma (1978-1992), President of Chinese Society of Glaucoma (1992-), Vice President of Chinese Society of Cataract and Intraocular Lens (1990-1997) and Committee member of Chinese Society of Cataract and Intraocular Lens (1997-). She is also an editor of the *International Glaucoma Review* since 1999. Her main interest is glaucoma and cataract. She has published many original papers and some examples are *Argon Laser Trabeculoplasty for Primary Open Angle Glaucoma*. Chin. J. Practical Ophthalmol. 1986; 12: 44, *Posterior Chamber Intraocular Lens Implantation*. Chin. J. Ophthalmol. 1987; 23: 257, *The Significance of Retinal Nerve Fiber Layer Examination in the Diagnosis of Glaucoma*. Chin. J. Ophthalmol. 1990; 26:340, *Goniotomy for Congenital Glaucoma*. Chin. J. Ophthalmol. 1990; 26: 340, *Neuroretinal Rim Area in Early Glaucoma*. Chin. J. Ophthalmol. 1992; 28: 199, *A Study on the Structure of Human Lamina Cribrosa Sclerae*. Chin. J. Ophthalmol. 1994; 30: 369, *The Structure of Connective Tissue Fiber in Normal Human Eye Lamina Cribrosa*. Chin. J. Ophthalmol. 1995; 31: 98, *Culture of Human Trabecular Meshwork Cells and the Cell Characteristics of Immunohistochemical Studies*. Chin. J. Ophthalmol. 1998; 34: 280, *The Regulating Effects of Dopamine Receptor on the Level of Adenosine 3,5-cyclic Monophosphate in Bovine Trabecular Cells in Vitro*. Chin. J. Ophthalmol. 1998; 34: 379, *Influence of Transforming Growth Factor- β 1 on Actin in Cultured Human Trabecular Cells*. Chin. J. Ophthalmol. 1999; 35:186, *Influence of Growth Factors on Transferrin Gene Expression of Human Lens Epithelial Cells in Culture*. Chin. J. Ophthalmol. 1999; 35: 287 and *Transforming Growth factor- β 1 Induced Cultured Human Trabecular Cells to Produce Elastin*. Chin. J. Ophthalmol. 1999; 35: 383. She also wrote many books, e.g. *System of Ophthalmology*: Editor in Chief of Vol. 6, *Glaucoma and Hypotension*, People's

Medical Publishing House, 1996, *Practical Ophthalmology*: Vice Editor in Chief People's Medical Publishing House, 1st ed.1984, 2nd ed.1999, *Modern Ophthalmology*: Vice Editor in Chief People's Medical Publishing House, 1st ed.1993, 2nd ed.1997, *Progress of Glaucoma Research*: Editor in Chief Qingdao Ocean University Publishing House, 1994, *Diagnosis and Treatment of Emergency Ophthalmology*: Editor in Chief Chinese Science and Technology Publishing House, 1996, *Modern Ophthalmology*: Editor Beijing Science and Technology Publishing House, 1996, *Intraocular Lens Implantation*: Editor People's Medical Publishing House, 1st ed.1994, 2nd ed.1997 and *Textbook of Ophthalmology*: Editor People's Medical Publishing House, 4th ed.1996. For her scientific achievements, the Government of China conferred on her the Award of Achievements in Scientific Research. (Department of Ophthalmology, First Teaching Hospital, Beijing Medical University, mailing address:8 Xi Shi Ku Street,Beijing,China 100034 telephone number: 008610 - 66171122 ext.3396 and fax number: 008610 - 66176450, e-mail: leecai@public2.east.cn.net) (SM)

Li, Shaozhen (1932-) Chinese ophthalmologist, Professor of Ophthalmology, Zhongshan Ophthalmic Center (ZOC), Sun Yat-sen University of Medical Sciences (SUMS), Member of Chinese Academy of Engineering. She graduated from Huanan Medical College (now SUMS) in 1954 and extended her study at Zhongshan Medical College (present SUMS) as a postgraduate of Ophthalmology (1959-1962). She took a research fellowship at Proctor Foundation of the University of California, San Francisco (1980-1981) and at the Department of Ophthalmology, Baylor University, U.S.A. (June 1981-Sept. 1981). She has been Professor of Ophthalmology as above since 1985, after having served as Associate Professor (1979-1985) and Deputy Director of the ZOC (1982-1983). Her joint appointments are Director, Eye Hospital and ZOC (1991-1996), Deputy Chief Editor (1984-1994), Chief Editor (1994-), Country Advisor of Helen Keller International (1998-), Vice-President, Chinese Ophthalmological Society, Vice Editor of *Chinese Journal of Ophthalmology* and Advisor *Hong Kong Journal of Ophthalmology* (1997-). She served as the Chief Editor of *Ophthalmic Surgery* (1997), and *Uveitis* (1998) and contributed chapters to 5 other books and published more than 150 original papers, which include *Cataract extraction by phacoemulsification using in situ nuclear fracture technique*. Chin. J. Ophthalmol. 1996, 32:92 and *A Survey of Blindness and Cataract Surgery in Doumen County, China*. Chin. J. Ophthalmol. 1999, 106:1602. In recognition of her contributions, she received many honor awards from many organizations, e.g., National Distinguished Teaching Award (1993), The 2nd Degree Prize on progress in Science and Technology by National Education Commission (1995), (1997-1998), 3rd degree prize on National Progress in Science and Technology (1996 and 1998) (Study of Prevention and Treatment of Cataract and Series of Experimental Study in Pathogenesis of Uveoretinitis), 2nd Degree prize on progress in Science and Technology from the Public Health Ministry (Chief-Editorship of *Ophthalmic Surgery*, 1999) and Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology (1999). She is a member of the American Academy of Ophthalmology, Association for Research in Vision and Ophthalmology and World Eye Surgeons. (Zhongshan Ophthalmic Center, 54 S. Xianlie Road, Guangzhou 510060, P. R. China, phone: +86-20-87333209; fax: +86-20-87333271, e-mail: zoc@gzsums.edu.cn)

Li, Zi-liang (1935-) Chinese ophthalmologist, Director and Senior Researcher, Eye Institute of Xuzhou, Vice President, First Hospital of Xuzhou, Professor of Ophthalmology, Xuzhou Medical College. He graduated from Shanghai Medical University in 1956 and studied Ophthalmology as a Clinical Fellow at the First Hospital of the Shanghai Medical University. He extended his study as a Researcher Associate and Post-Doctoral Fellow at the Eye Center, University of Illinois at Chicago, U.S.A.(1985-1987) and he completed the Course of Community Ophthalmology, Institute of Community Ophthalmology, Moorfields Eye Hospital, London, England (1996). He has had the following professional activities: Council Member, 19th, 20th., 21st and 22nd Sessions of Chinese Medical Association, (1984-2003), Vice President, Chinese Ophthalmological Society (CMA), (1988-2000), Member, Advisor Committee, International Council of Ophthalmology (1996-2000), Vice Editor-in-Chief, Chinese Journal of Ophthalmology, (1996-2000), Deputy Editor, Chinese Language Edition of

AMA Archives of Ophthalmology, Member, International Advisory Board, Hong Kong Journal of Ophthalmology, Member, Advisory Committee, The Optometry Research Centre of Ministry of Health, P.R. China, Member, Academic Committee, Ophthalmologic Lab of Ministry of Health, P.R. China and Member, National Committee of Appraising Scientific and Technical Achievement, P.R. China. Some examples of his many original articles are *A stereoscopic localization method for intraocular foreign body*. Chinese Journal of Medicine 49:193-195, 1963. *Contusional cleavage of ciliary body*. Chinese Journal of Ophthalmology 13:316-318, 1966, *Laser Slit-lamp Biomicroscope. Its design, trial manufacture and clinical application*. Chin. J Ophthalmol 14:92-95, 1978. *Clinical Observation of bulbar conjunctival vasculature*. Chinese J Medicine (English Edition) 96:355-360, 1983, *Retinal injury induced by near-ultraviolet radiation in aphakic and pseudophakic monkey eyes*. Retina 10:301314, 1990, *Dominantly inherited cystoid macular edema*. Ophthalmology 99:1385-1392, 1992, *The changing of procedures in cataract extraction in our hospital during past two years, a review of 870 operations*. Jiangsu Medicine 19:85-86, 1993 and *A research of Lycium Barbarum L.; In rescue of retina from photic injury in rats*. Chin J Fundus Diseases. 11:31-33, 1995, *Slit-lamp Biomicroscopy A teaching VCD*. Video-audio Publisher, Chin Med Association. He has also written many books, e.g. *Textbook of Ophthalmology*. 3891 pp, People's Hygiene Publisher, 1997 and *Chinese Translation of BCSC*, American Academy of Ophthalmology, 1995-2000. (Eye Institute, First Hospital, 15 N. Zhong-shan Road Xuzhou, Jiangsu 221002, People's Republic of China. phone: +86 516 5745053; fax: 86 516 5747452; e-mail: ziliang@public.xz.js.cn) (SM)

Liang, Shu-Jin (1916-) Chinese ophthalmologist, Former Professor and Chairman of the Department of Ophthalmology, Second Affiliated Hospital of Hebei Medical University. She graduated from National Kueiyang Medical College of Western China Medical University and received her M.D. degree in 1944. She studied Ophthalmology at the University Hospital and the Chengdu E.N.T. Hospital. She served as the Lecturer and Physician in charge at the Department of Ophthalmology of the National Zhejiang University School of Medicine during 1947-1951 and then she was invited to Hebei Medical University where she served as Professor and Chairperson of the Department of Ophthalmology of the Second affiliated Hospital from 1951 to 1988. Her professional activities include Member of Ophthalmology Society of the Chinese Medical Association (1956-1986), Chairman of Hebei Ophthalmological Society (1954-1986), Editor of *Chinese Journal of Ophthalmology* (1953-1994) and Editor of *Chinese Ophthalmic Research* (1983-present). Some examples of her many publications are *Proliferative membrane formation and its ultrastructure in experimental proliferative vitreoretinopathy*. Chin. Ophthalmic Research, 1993, 11: 213, *The study on improved cryopreservation technique of the ultrastructure of corneal endothelial cells*. Eye Science 1994, 10: 13, *Interpretations of fundus fluorescein angiography*, Hebei People Publishing House, 1980 and the *Chinese Medical encyclopedia* (Ophthalmology), co-editor, Shanghai Scientific and Technological Publishing House, 1982. Department of Ophthalmology, the Second Affiliated Hospital, Hebei Medical University, 203# Hepingxi Street, 050000 Shijiazhuang, Hebei, P.R. China. (SM)

Libert, Jacques (1946-) Belgian ophthalmologist. Libert was born in Mons. He obtained at the University of Brussels his M.D. degree in 1970 and the special doctorate in ophthalmology in 1979. He works in the Department of Ophthalmology of the Brussels University (St Pierre and Brugmann hospitals) since 1971, he became adjunct departmental head in 1981 and departmental head in 1985. Meanwhile he has been in 1977 research fellow at the Laboratory of ocular pathology of the Wilmer Institute in Baltimore. Libert is a well-known specialist of the metabolic diseases, more particularly of the lysosomal diseases and of their diagnosis by means of the assay of tear enzymes and the ultrastructural analysis of conjunctival biopsy. He has written also on surgery of the vitreous body and on laser trabeculoplasty. He was a reporter at the 1984 meeting of the European Society of Ophthalmology in Helsinki. (Verriest)

Lichter, Paul (1939-) American ophthalmologist, F. Bruce Fralick Professor of Ophthalmology and Visual Sciences; Chair, Department of Ophthalmology and Visual Sciences, University of Michigan; and Director of the University's W. K. Kellogg Eye

Centre. He is a native of Detroit and completed his undergraduate degree (1960), medical school degree (1964), ophthalmology residency education (1968), and Master of Science degree (1968) at the University of Michigan. He obtained his glaucoma fellowship training (1969) at the University of California, San Francisco, under Robert N. Shaffer, MD. From 1969-71 he was Staff Ophthalmologist at Bethesda Naval Hospital, and in 1971 he returned to positions at the University of Michigan as Assistant Professor of Ophthalmology (1971-75), Associate Professor of Ophthalmology (1975-78) and Professor and Chair of Ophthalmology (1978-present). His first priority as Chair was to develop a first-rate eye center, to bring the department together into one complex and to expand its role in clinical care, teaching, and research. This concept was realized in 1985 at the dedication of the W.K. Kellogg Eye Center, at which time Dr. Lichter was named Director. In 1990, the Paul R. Lichter Endowed Professorship in Ophthalmic Genetics at the University of Michigan was established by an anonymous donor. Dr. Lichter's research and clinical interests involve glaucoma, genetics, and clinical applications of ultrafast laser technology. In particular, he is Chair of the Collaborative Initial Glaucoma Treatment Study (CIGTS), a National Eye Institute (NEI)-sponsored 14-center clinical trial. CIGTS is comparing in newly diagnosed patients with open-angle glaucoma the effect of initial medication versus initial filtering surgery on visual function and quality of life. Dr. Lichter is a co-investigator on two NEI-sponsored grants involving the genetics of glaucoma. In addition to serving as the 100th President of the American Academy of Ophthalmology in 1996, Dr. Lichter is also a Past President of the Association of University Professors of Ophthalmology and a Past Chair of the American Board of Ophthalmology. He currently is President of the Pan American Association of Ophthalmology and President of the American Ophthalmological Society. He is also a member of the International Council of Ophthalmology. Dr. Lichter is immediate past Editor-in-Chief of the *Journal Ophthalmology* and has delivered more than 20 named lectures. The named lectureships include the 50th de Schweinitz Lecture (1987); the Gifford Lecture (1992); the 50th Edward Jackson Memorial Lecture (1993); the Dunphey Lecture (1993); the Melvin Rubin Lecture (1998); and the H. Saul Sugar Lecture (1999). He has to his credit over 170 publications including scientific articles, editorials, and book chapters. Representative publications include Lichter PR and Anderson DR, eds. *Discussions on Glaucoma*. New York: Grune & Stratton, 1977; *Honoring the history of the Edward Jackson Memorial Lecture*. The L Edward Jackson Memorial Lecture. Part 1. *Am J Ophthalmol* 1994;117:699; *Genetic clues to glaucoma's secrets*. The L Edward Jackson Memorial Lecture. Part 2. *Am J Ophthalmol* 1994;117:706; "Genetic heterogeneity of open-angle glaucoma." *Ophthalmology* 1994;101:63; "Confusing licensure with education: medicine's slippery slope" [editorial]. *Ophthalmology* 1994;101:1767; "Juvenile glaucoma linked to GLC1A in a Panamanian family." *Trans Am Ophth Soc* 1996;335; "Cosegregation of open-angle glaucoma and the Nail-Patella Syndrome." *Am J Ophthalmol* 1997;124:506; "Centennial President's Address: Putting Patients First-A 100-Year Tradition." *Ophthalmology* 1997;104:347; "The Collaborative Initial Glaucoma Treatment Study - Study design, methods, and baseline characteristics of enrolled patients." *Ophthalmology* 1999;106:653; "Pitfalls in mutation screening for TIGR/MYOC." *Glaucoma Update VI*, 2000:57. (Chairman, Department of Ophthalmology and Visual Sciences, University of Michigan, 1000 Wall Street, Ann Arbor, MI 48105-1912; and Director of the W. K. Kellogg Eye Center, 1000 Wall Street, Ann Arbor, MI 48105-1912, U.S.A.; phone: 734-764-6468; fax 734-647-0247; email: plichter@umich.edu) (SM)

Lieberkuehn, Nathanael (1822-1887). German chemist, physiologist, and veterinarian, of a slight ophthalmologic importance because of his "*Ueber die Entwicklungsgeschichte des Wirbelthierauges*" (Cassel 1872). Born at Barby on the Elbe, he studied at Berlin, where in 1857 he was made Prosector, and in 1862 Extraordinarius in Anatomy. In 1867 he was called as Professor of Anatomy to Marburg. There he became Privy Medical Councillor. *American Encyclopedia of Ophthalmology*, Vol.10, p.7462

Liebermann, Charles H. (1813-1886). American surgeon and ophthalmologist, the first to perform the strabismus operation in the United States. Born at Riga, Russia, the son of a military surgeon, he lost his father in very early childhood. He received, the degree of

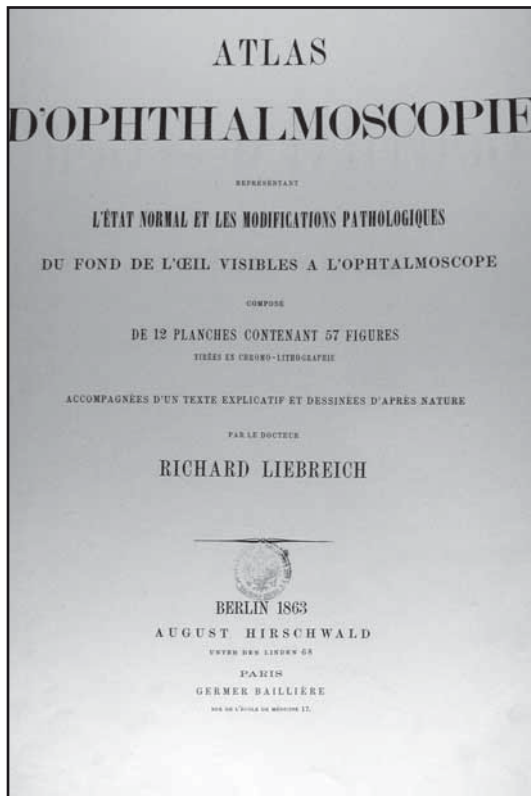
M.A. at Dorpat in 1836, and that of M.D. at Berlin about 1839. He was for a time a pupil both of →Dieffenbach and von →Graefe.. He moved to the United States in 1840, landing in Boston, but settling very shortly afterwards in Washington. Here he repeated the Dieffenbach operation for strabismus in 1840. He was for many years surgeon, afterwards consulting surgeon, to the Providence Hospital, and was one of the founders of the Medical Department of the University of Georgetown. American Encyclopedia of Ophthalmology, Vol.10, p.7462

Liebermann, Leo (1882-1938). Hungarian ophthalmologist. Leo Liebermann was born in Budapest. He was the son of the professor of hygiene of the same name. He studied medicine in Budapest and after his graduation, joined the staff of Professor→Grosz's eye clinic in Budapest. In 1914 he was appointed Privatdocent, and Associate Professor in 1916. In the same year he was appointed Head of the Eye Department in the St. Rochus' Hospital, where he continued to work for 22 years, until his death in 1938. His scientific work covered a very wide range. He showed marked interest in operation techniques and was himself a skilled surgeon, especially in glaucoma, cataract and strabismus operations. He was the first in Hungary to introduce Heine's cyclodialysis. Liebermann was deeply interested in therapeutic problems as well, and contributed many articles on trachoma. He was also the first in Hungary to introduce Sweet's X-ray localisation of foreign bodies which method he had learnt during a study trip in the United States in 1910. Beside articles on ophthalmology, he also wrote on hygiene and medico-social problems. He was an active member of the Hungarian Ophthalmological Society and its Chairman between 1930 and 1934. Magda Radnot: *Famous Hungarian Ophthalmologists* (Budapest, 1970)

Liebig, Justus, Freiherr von (1803-73). German chemist born at Darmstadt. Humboldt secured for Liebig the appointment of professor of chemistry at the University of Giessen. This chair he exchanged in 1852 for the corresponding one at Munich. Liebig was one of the most illustrious and fruitful chemists of his age, not less renowned for his investigations and discoveries in pure chemistry than for his researches in applied chemistry. As the inventor of the extract of beef and the prepared infant food, his name is known almost everywhere throughout the civilized world. He was the founder of agricultural chemistry. Among the practical discoveries and applications of Liebig may be mentioned the invention of silver-coated mirrors, an easy method for the preparation of potassic cyanide, now so largely used in electroplating, his plan for making unfermented bread, and his methods for analysing mineral waters. American Encyclopedia of Ophthalmology, Vol.10, p. 7462-7463

Liebold, Carl Theodor (1831-1885) American of German origin. From 1868 to 1885 one of the leading ophthalmic surgeons of the homeopathic school and profession in the New York Ophthalmic Hospital. He was born in Neu Dietendorf, Thüringen, and came as a young man to the United States of America, finally studying medicine four years with Dr. Otto Füllgraf in New York. In 1858 he entered the University of Berlin, receiving in due course its degree and a certificate of attendance upon von Graefe's clinics. Returning to America about 1861 he served as resident army surgeon at Point Lookout Hospital, where he showed marked ability. After returning to New York, at the close of the war, he devoted himself to his speciality and became the chief surgeon of the New York Ophthalmic Hospital in 1868, when its administration was transferred to the homeopaths a position he held until his death. For years he lectured in the New York Homeopathic Medical College, but this teaching was transferred to the New York Ophthalmic Hospital in 1880, when, in accordance with a charter amendments the latter was empowered to confer the degree *O. et A. Chir.* and a graded course, clinical and didactic, was instituted for graduates in medicine. Dr. Liebold was a member of the American Institute of Homeopathy and the Homeopathic Medical Society of the State of New York, whose *Transactions* were enriched by his contributions. American Encyclopedia of Ophthalmology, Vol.10, p. 7463

Liebreich, Richard (1830-1917) German ophthalmologist in Paris and later in London. Liebreich was born in Königsberg and received his medical degree in Halle in 1853 with the thesis *De Ichthyosi Intrauterina*. He was von Graefe's assistant in Berlin from 1854 to 1862. After this he practiced in Paris and after the outbreak of the war in London where



he became oculist to St. Thomas' Hospital. Liebreich modified Helmholtz's ophthalmoscope into a handy apparatus and learned to recognize and interpret the appearances till then entirely unknown, of the normal and diseased fundus. He presented to the world, in French and German text the very *first* atlas of ophthalmoscopy. Before that he published "*Handleiding tot het onderzoek van het oog met den oogspiegel*" Utrecht 1859; "*Atlas der Ophthalmoscopie*" Berlin & Paris 1863. He wrote among others: "*Eine neue Methode der Cataract-Extraction*" Berlin 1872 and "*School life in its influence on sight and figure...*" London 1878. AJO, 1:295-296, Archiv. d'Opht. vol.38, p.508. Albert: Source Book of Ophthalmology, p.201. He also invented a stand microscope which he described 1855 in Archiv für Ophthalmologie, Vol.1, Abth.II, p.348-349 (Schett/Keeler: *The Ophthalmoscope*, vol.1, p.45.

Lim, Arthur S. M. (1934 -) Singaporean ophthalmologist, Clinical Professor and Head of the Department of Ophthalmology, National University of Singapore (NTJS). He graduated from University of Malaya at Singapore in 1956, studied Ophthalmology at the Institute of Ophthalmology, Moorfields Eye Hospital, University of London, England where he received the Diploma of Ophthalmology and became Fellow of the Royal College of Surgeons of England in Ophthalmology by examination in 1962. In 1962, he was appointed Senior Registrar Eye Department, Ministry of Health, Singapore. From 1963 - 1965, he was the Acting Consultant in Ophthalmology, Ministry of Health, Singapore. Meanwhile, he was also the President of Government Medical and Dental

Association. From 1965 to present, he has been managing various roles as Ophthalmic Surgeon at Gleneagles Hospital in Singapore; Chief, Department of Ophthalmology, National University Hospital; Chief Examiner, Conjoint M Med (Ophthalmology) FRCS (Edinburgh) Examination, Graduate School of Medical Studies, NUS; Course Director, Advanced Two-Week Course in Ophthalmology, Graduate School of Medical Studies, NUS; Director and Chairman, Singapore Eye Research Institute, Emeritus Senior Consultant, Singapore National Eye Centre. His research interests are extensive: Microsurgery; Cataract Extraction; Intraocular Lens Implant Surgery; Laser and Public Health Ophthalmology. Over the years, he has been elected to various prestigious international bodies. In 1971, he was elected Fellow of the Royal Australian College of Surgeons; in 1980, Fellow of the American Academy of Ophthalmology; in 1984, Member of the Academia Ophthalmologica Internationalis for outstanding contributions to world ophthalmology, in 1986, Member of the International Council of Ophthalmology; in 1990, Fellow of Royal College of Surgeons in Edinburgh, in 1991, Honorary Member, Honorary Committee, Centro de Oftalmologia Barraquer, Barcelona, Spain; in 1992, Honorary Fellow, International College of Surgeons. He has chaired various committees and organisations: Singapore Society of Ophthalmology (1979 -1985); Committee for Signboards and Nameplates, Singapore Medical Council, Ministry of Health (1982); Singapore Eye Foundation (1981- present); Committee for Ophthalmology, Graduate School of Medical Studies, National University of Singapore (1988- present); Fund Raising Committee, Universities Endowment Fund (1991-1996) & National University of Singapore Endowment Fund (1996 - present); President, Medical Alumni Association (1995-1996 and 1998-1999); Regional Chairman, South East Asia International Agency for the Prevention of Blindness (1977- 1986); President, Asia-Pacific Academy of Ophthalmology (1985-1987), Founding President, Asia-Pacific Intraocular Implant Association (1987 -1998); Secretary-General, Asia-Pacific Academy of Ophthalmology (1993- present); Founding President, World Eye Surgeons Society (1994- present) and Honorary Life President, Asia-Pacific Intraocular Implant Association (1998). Key meetings that he has chaired include: General Scientific Meeting, Royal Australian College of Surgeons (1973); Symposium on Recent Advances of Ophthalmology, International Agency for the Prevention of Blindness (1979) and XXVI International Congress of Ophthalmology (1990). He sits on various editorial boards, locally and overseas, and some of these include Editor-In-Chief, Asia-Pacific Journal of

Ophthalmology, Singapore; American Journal of Ophthalmology, USA (he has contributed 2 editorials), Ophthalmology Times, USA; Ocular Surgery News (International Edition) USA, Guest Editor, Eye Science, People's Republic of China; Hong Kong Journal of Ophthalmology; Ophthalmologica, Switzerland. He is also the recipient of several International Awards: Royal Australian College of Surgeons Medal (1979); Distinguished Service Award Asia-Pacific Academy of Ophthalmology (1981); the prestigious Jose Rizal Medal, Asia-Pacific Academy of Ophthalmology for excellence in ophthalmology in the countries of Asia and the Pacific (1983); Chu-Hsin Yi medal, Tianjin Medical College, Tianjin People's Republic of China (1987); Javal Gold Medal, International Contact Lens Council of Ophthalmology (1990); Friendship Medal, State Bureau of Foreign Experts, Beijing (1996); International Science and Cooperation Award (State Science and Technology Commission), China (1997). Ernest T. Stewart Award for Alumni Volunteer Involvement, The Council for Advancement and Support for Education (CASE), USA (1999); On the home front, he received the Public Service Star (1990) in recognition of his special contributions to the development of Ophthalmology in Singapore. In 1999, he was made Honorary Doctor of Medicine, National University of Singapore. Of the named lectures he has delivered, the following stand out: Alim Chowdury Memorial Lecture, Bangladesh (1979); Foundation Lecture, Ceylon (1985); Holmes Lecture (1987), Keynote Speaker, American College of Eye Surgeons Annual Meeting (1991); Ninth Lions Eye Bank Lecture, Australia (1992); Malik Oration, India (1992), Steve Charles Gold Medal Oration, Sri Lanka (1992), First Susruta Lecture, Bangladesh (1993); First Keshmahinider Singh Oration, Malaysia (1997); Barraquer Gold Medal Lecture, Spain (1997) and Eugene Chan Memorial Lecture, Hong Kong (1999). More than 350 scientific papers and 20 books have been written in the past 40 years. "*The Colour Atlas of Ophthalmology*" has a print run of 43,000 copies in 9 languages - English, Malay, Spanish, Italian, Chinese, French, Finnish, German and Portuguese. It is now used as a highly recommended textbook for undergraduates in many countries. Indefatigable in his efforts to impact his skills, both locally and overseas, his latest 'live' surgery on implants was transmitted in Milan, Europe on 23 October 1998. In addition to these live demonstrations, he has also convened various teaching and live surgery courses in Pakistan, Malaysia, Thailand, Hong Kong, Beijing and Tianjin, Xiamen, People's Republic of China, Myanmar, France, India, Indonesia and Sri Lanka. Currently, he devotes his time between his private practice, Eye Clinic Singapura, Gleneagles Hospital, Singapore, Chief of the Department of Ophthalmology, National University Hospital; Director and Chairman, Singapore Eye Research Institute and his role as Honorary Director of the International Intraocular Implant Centre, Tianjin, People's Republic of China and his various other teaching, professorship and international appointments. (Arthur SM Lim, Clinical Professor and Head, Department of Ophthalmology, National University of Singapore: Eye Clinic Singapura, #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)

Lim, Li (1963-) Singapore ophthalmologist, Consultant Ophthalmologist in the Singapore National Eye Centre, Clinical teacher in ophthalmology, National University of Singapore. She completed her undergraduate medical school (MBBS) at the National University of Singapore in 1987 and obtained her Master of Medicine in Ophthalmology from the same university in 1993. Also received the Fellowship of the Royal College of Surgeons of Edinburgh in 1993. Trained in the field of corneal and external eye diseases in the Singapore National Eye Centre from 1995 to 1997 and at Flinders Medical Centre, Adelaide, South Australia in 1997. Member of Editorial Board, Asia-Pacific Journal of Ophthalmology. Publications include "Comparison of Argon Laser Iridotomy and Sequential Argon-YAG Laser Iridotomy in Dark Irides. Lim Li / Steve KL Seah/ Arthur SM Lim. Ophthalmic Surgery and Lasers 1996 27(4),285-288"; "*Accurate intraocular pressure measurements in contact lens wearers.* Lim Li /Tze Pin Ng / Donald TH Tan. The CLAO Journal 1997, vol 23 (2): 130-133"; "*The surgical management of an advanced pterygium involving the entire cornea.* CCYip / Lim Li / Donald Tan. Cornea 1997, vol 16 (3): 365-368"; "*Changing Indications for penetrating keratoplasty: A newly developed country's experience.* TY Wong / C Chan / Lim Li / TH Lim / Donald TH Tan. Australian and New Zealand Journal of Ophthalmology 1997,25: 145-150"; "*Conjunctival*

Rotation Autograft for Pterygium, an alternative to conjunctival autografting. A Jap, C Chan, Li Lim, DTH Tan. *Ophthalmology* 1999,106:67-71". Her clinical and research interests are in corneal and external eye disease, contact lenses and refractive surgery. (Dr Lim Li, Singapore National Eye Centre, 11, Third Hospital Avenue, Singapore 168751, Singapore. Phone: 65-2277255; Fax: 65-2277290; e-mail: snecll@pacific.net.sg) (SM)

Lincke, Karl Gustav (1804-1849). German otologist, of some importance in ophthalmology. Born at Kosmin, in the province of Posen, he received his medical degree at Leipsic in 1828, presenting as dissertation "*De Fungo Medullari Oculi*," Part 1. In 1834, he published at Leipsic a remarkably excellent amplification of his graduation thesis under the title "*Tractatus de Fungo Med.Oculi*," which Hirschberg calls "*das erste in Deutschland erschienene Werk, welches die krankhaften Geschwülste des Sehorgans einigermassen befriedigend dargestellt hat.*" (The first book published in Germany, which describes more or less correctly, the malign tumors[JPW] *American Encyclopedia of Ophthalmology*, Vol.10, p. 7487

Lindberg, John Gustaf (1884-1973) Finnish ophthalmologist, Helsinki, Finland. He graduated from the University of Helsinki in 1914, but he had already before graduation started his research work in Ophthalmology. His project was based on →Axenfeld's hypothesis that there is a decrease of anterior segment pigmentation of the eye with cataract formation. As no slit lamp biomicroscopes were available, Lindberg constructed his own and learned to use it without any teaching. While working on his project his attention was drawn to greyish-white flakes on the pupillary border and the anterior surface of the lens. He became very interested in this phenomenon and in his thesis he pointed out that the phenomenon was age-dependent, becoming more prevalent with increasing age. He saw it on patients with cataract and also on controls as well as on 50% of patients with chronic glaucoma. This was the *first* description of *Exfoliation Syndrome* and even his conclusion of this phenomenon proved to be correct. He presented his thesis in 1917 at the University of Helsinki (*Kliniska undersökningar över depigmentering av pupillarranden och genomlysbarhet av iris vid fall av åldersstar samt i normala ögon hos gamla personer*). This work was later translated into English (*Clinical Investigations on Depigmentation of the Pupillary Border and Translucency of the Iris in Cases of Senile Cataract and in the Normal Eye of Elderly Persons*. *Acta Ophthalmol* 66: Suppl. 190, 1989). Lindberg distributed his thesis in 1917 in a regular way to his colleagues and gave also a personal copy to Prof. A→Vogt from Zürich, Switzerland, while Lindberg was working at Axenfeld's Clinic in Freiburg, Germany 1920-1921. Both Malling from Norway and Vogt published papers on exfoliation in 1923 without referring to Lindberg's work at all, but Lindberg undoubtedly was the *first* in the world to discover exfoliation. After specialization Lindberg served at the Helsinki University Eye Department, but his main clinical appointment was the director of the Helsinki City Eye Department 1935-1951. Lindberg was known as a skilled clinician, surgeon, teacher and administrator. He also carried on with his large private practice. Throughout his career he attended regularly international congresses and travelled in all Scandinavian countries, Germany, Switzerland and the United States of America. [by Ahti→Tarkkanen]

Lindner, Karl (1883-1961) Austrian ophthalmologist. Lindner was Professor and Director of the Vienna ophthalmic Clinic. He inspired, in 1929, Deutsch's work about the use of contact lenses for keratoconus to correct strong myopia. In a reply to Proksch, he claims the priority of the use, since 1924, of contact lenses blown by Müller for the correction of the keratoconus. During a presentation by Hartinger, he intervened claiming that the contact of contact lenses is sometime so strong that it becomes impossible to take them off! On contact lenses, Lindner published the following papers: *Bemerkungen zu der Arbeit von Frau Dr.Deutsch "Ueber Verwendung von Kontaktgläsern usw."* und zu der "*Berichtigung*" von Frau Dr Proksch. - *Offene Korespondenz*, *Klinische Monatsblätter für Augenheilkunde*, 1929, 82:830-831; Discussion in Aust, *Ueber einige weitere Arten der Verwendung der Kontaktgläser* (*Ophthalmologische Gesellschaft in Wien*, 18.03.1929), *Klinische Monatsblätter für Augenheilkunde*, 1929, 82: 535; *Ueber das Einlegen von Kontaktgläsern*, (*Ophthalmologische Gesellschaft in Wien*, 18.03.1929), *Klinische Monatsblätter für Augenheilkunde* 1929,82:534; Discussion p.198 in: Hartinger Hans, *Zur Berichtigung der Fehlsichtigkeiten mittels der geschliffenen Zeißischen Haftgläser*,

Bericht der 48. deutschen ophthalmologischen Gesellschaft (13.06.1930), 1930, 189-201. He wrote following monograph: *Lehrbuch der Augenheilkunde*. Wien und Innsbruck, 1952. *Annales d'oculistique*, 1962,195:382. *BJO* 1961,45:638. JPW

Ling, Yvonne Li-Fang (1956-) Singapore ophthalmologist. She graduated from University of Singapore in 1979 and was awarded Fellow of the Royal College of Surgeons of Edinburgh, 1986, and Fellow of the Royal College of Ophthalmologists, United Kingdom, 1989. She was trained in ophthalmology at the Department of Ophthalmology, Singapore General Hospital, 1983-1985, and Moorfields Eye Hospital, London, United Kingdom, 1985-1986. She received advanced surgical training in paediatric ophthalmology between 1990-1991 under Prof John Pratt-Johnson at the British Columbia's Children's Hospital, Vancouver, Canada, and under Prof J. Bronwyn Bateman, Dr Sherwin Isenberg and Dr Arthur Rosenbaum at the Jules Stein Eye Institute, Los Angeles, U.S.A. Her current professional appointments: Senior Consultant and Head, Paediatric Ophthalmology and Strabismus Service, Singapore National Eye Centre; Fellow of the Academy of Medicine, Singapore; Part-time Clinical Teacher, Faculty of Medicine, National University of Singapore. She sits on committees in the Singapore Association of the Visually Handicapped and Singapore School for the Visually Handicapped. One of her recent publications is "A Review of 5 Years' Experience in the Use of Botulinum Toxin A in the Treatment of Sixth Cranial Nerve Palsy at the Singapore National Eye Centre", *Singapore Medical Journal*, 1999 Jun; 40(6):405-9. (Dr. Ling Yvonne Li-Fang. Singapore National Eye Centre, 11, Third Hospital Avenue, Singapore 168751, Singapore. Phone: (65) 2277255, Fax: (65)2277290, e-mail: snecyl@pacific.net.sg)(SM)

Linhart, Wenzel von (1821-1877). German surgeon of some importance in ophthalmology. Born in Seelowitz, in Moravia, the son of a surgeon of much local reputation, he received his medical degree in 1844 at Vienna, and then proceeded to study operative surgery with von Wattmann. For a time he taught surgical anatomy and operative surgery in Vienna, and in 1852 qualified as privatdocent in the University. In 1856 he moved to Würzburg, in order to accept the chair of clinical surgery in the University at that place. While here it was that he lectured on the eye, and also gave a number of practical courses in ophthalmic surgery. None of his writings, however, fall within the special field of ophthalmology. His masterpiece was "*Compendium der Chirurg.Operations-Lehre*" (1856, 4th ed.,1874).*American Encyclopedia of Ophthalmology*, Vol.10, p.7488

Linksz, Arthur (1900-1988), American ophthalmic biochemist of Czech origins. Linksz was born in a part of Hungary that is now Czechoslovakia. In his younger years he wanted to be a poet. Political conditions after the First World War forced him to leave Hungary. He studied medicine in Prague, received his medical degree in Kiel, worked in Munich, and wanted to embark on a scientific university career. He moved back to Budapest and became a successful practitioner. He emigrated to the United States in 1939 and served as an instructor at Dartmouth Medical School with Prof. Alfred→Bielschowsky and Prof. Hermann→Burian.. He became an American citizen in 1944. He published the "*Physiology of the Eye, Volume I, Optics*" in 1950, and "*Physiology of the Eye, Volume II, Vision*" in 1951. His book, "*An Essay on Color Vision and Clinical Color Vision Tests*," published in 1964, is a classic. "*On Writing, Reading, and Dyslexia*," published in 1973, is the story of his profound love affair with the English language. His Hungarian autobiography, "*Visszanezek*," was published in 1977, and its English translation, "*Fighting the Third Death*," in 1986. He delivered the Edward Jackson Memorial Lecture in 1958. He was a member of the American Ophthalmological Society and of the Academy of Ophthalmology. He lectured and wrote extensively on topics of color vision, aniseikonia, vision screening, vision in the newborn, aphakia, and ophthalmodynamometry. "*An Ophthalmologist Looks at Art*" was published in 1980, a unique and marvelous book of a scientist who, at the same time, has profound understanding of artistic techniques and of the artists themselves. His thesis for the admission to the American Ophthalmological Society concerned the horopter. He also published a number of papers in German and in Hungarian concerning ophthalmic biochemical and clinical problems. *AJO* 1988,106:114-115

Lint, Auguste van (1877-1959) *see* Van Lint

Lipp, Eduard (1831-1891). Austrian dermatologist, and, to a certain extent, ophthalmologist. Born in Wundschuh, near Leibnitz, Steiermark, the son of a surgeon, he received the degree of M.D. at the University of Vienna. After a brief period of service as assistant physician in the Wiedener hospital at Vienna, he became, in 1861, chief physician to the General Hospital in Graz. Four years later he was privatdocent for dermatology and syphilis at Graz. Though ill at the time, he was president of the German Dermatologic Society, at its third assembly, in Leipsic, 1891. His chief ophthalmologic article was entitled, "*Ueber Pemphigus Vegetans und Pemphigus Conjunctivae*" (1891). American Encyclopedia of Ophthalmology, Vol.10, p.7496

Lisch, Karl (1907-1999) Austrian ophthalmologist, father of Walter Lisch, professor of ophthalmology in Hanau, Germany. Karl Lisch was born as son of a general practitioner in Kirchbichl, a village in North Tyrol, Austria. After completing his schooling in Kufstein, he visited the universities of Vienna, Zurich, and Innsbruck to study medicine. Lisch graduated from the University of Innsbruck in 1931. He began his residency in ophthalmology at the First University Eye Clinic in Vienna (chairman: J.→Meller) in 1931 and continued at the University Eye Clinic Innsbruck (Chairman: R. Seefelder). From 1935 to 1945, Lisch worked as an assistant and later as senior physician at the University Eye Clinic in Munich, Germany (Chairmen: K.→Wessely and W.→Meisner). He there became in 1941 lecturer in ophthalmology with the thesis "*Die Veränderungen der peripheren Sehbahn bei multipler Sklerose*". Karl Lisch revered above all the memory of his two teachers, Joseph Meller and Karl Wessely, with whom he carried on an intensive correspondence up to the time of their death. In 1947, he became Chief Physician of the Eye Department of the hospital of Wörgl, a small town near his birth place. He remained in this position until his retirement in 1980. Besides general ophthalmology, Lisch was interested in ophthalmic research. Lisch published more than 120 papers, mostly in German ophthalmic literature. He is remembered for the description of the iris nodules of neurofibromatosis type I, now termed '*Lisch nodules*'. In 1937, in the Zeitschrift für Augenheilkunde (from 1938 *Ophthalmologica*, Basle), vol.93, he published *Ueber Beteiligung der Augen, insbesondere das Vorkommen von Irisknötchen bei der Neurofibromatose (Recklinghausen)*. In his article, Karl Lisch acknowledged prior observations of Gabrielides and the use of the term 'Warzenirris', meaning multiple nodules or warts of the iris, by Waardenburg. Van der Hoeve in his Doyne Memorial Lecture in 1932 presented a family observed by Waardenburg to have neurofibromatosis and iris tumors. Fuchs, Goldstein, Snell, Treacher Collins, Wexler and particularly Tsuya→Sakurai (Kitagawa) (1911-1995) in 1935 had also reported pigmented nodules on the iris surface in patients with neurofibromatosis before publication of Lisch's paper in 1937. In his work on four types of phakomatoses in 1942, Lisch described changes in the eye in neurofibromatosis. Once again, he pointed out that iris nodules might in fact be a constant sign of neurofibromatosis and that a diagnosis of neurofibromatosis can be presumed from the mere presence of the nodules. His observations seem all the more remarkable today when we realize that the usefulness and prevalence of nodules in neurofibromatosis type I was first investigated in 1981 in a prospective study by Lewis and Riccardi. They found *Lisch nodules* in 92% of 77 patients aged six or older. Interestingly, the suggestion to designate iris nodules in neurofibromatosis as '*Lisch nodules*' was probably made by the late Frederick C.→Blodi (according to W. Lisch, Hanau, Germany). Karl Lisch received many awards, most notably the title of Senior Advisor in Medical Affairs (Obermedizinalrat) from the President of Austria in 1989 in recognition of his outstanding work as a physician. In 1992, he received the Medal of Honor of the American Neurofibromatosis Society and the First Class Cross Honor for Science and the Arts of the Austrian Ministry for Science and the Arts. JPW

Lisch, Walter (1941-) German-Austrian ophthalmologist, son of Karl Lisch. Walter Lisch was born in Munich, Germany. After completing his schooling in Kufstein, Austria, he visited the universities of Vienna and Innsbruck to study medicine. Lisch received the degree of M.D. at the University of Innsbruck in 1969. He began his residency in ophthalmology at the Eye Department of the Hospital of Wörgl, Austria (Head: K. Lisch) in 1971. From 1975 to 1982, Lisch worked as an assistant and later as senior physician at

the Department of Ophthalmology, City Hospital of Dortmund, Germany (Chairman: K. Ullerich). From 1982 to 1991 Lisch was leading senior physician at the University eye clinic in Tübingen, Germany (chairman: H.J. Thiel). In 1983 he became lecturer in ophthalmology with the thesis *Hereditäre vitreoretinale Degenerationen*. In the same year this work was published as a monograph under the title: *Hereditary vitreoretinal degenerations in Developments in Ophthalmology* (Vol. 8, Karger, Basel – New York), translated from German into English by the late Frederick C. Blodi, Iowa. In 1989 Lisch became Professor of Ophthalmology from the University of Tübingen. From 1991 until now, he is chief physician of the Department of Ophthalmology, City Hospital of Hanau, Germany. Besides general ophthalmology, Lisch is interested in ophthalmic research. Until now he published about 160 scientific papers and contributions in handbooks concerning genetical, clinical and surgical problems in ophthalmology. In 1981 Lisch published together with Albert Franceschetti, Geneva and Klaus Ullerich, Dortmund a chapter in the handbook *Der Augenarzt*, Vol. II, Thieme, Leipzig, titled *Augenveränderungen bei Schädeldysostosen*. In 1984 he organized together with Wolfgang Hammerstein, Düsseldorf, a symposium of the German ophthalmological society; *Ophthalmological Genetics*. In 1985 Hammerstein and Lisch edited the monograph *Ophthalmologische Genetik* (Bücherei des Augenarztes, Vol. 105, Enke, Stuttgart). In 1992 he presented a new dystrophy of the corneal epithelium which is now known as *Lisch corneal dystrophy* (American Journal of Ophthalmology 2000; 130:461-468). Corneal metabolic disorders are of Lisch's special clinical and scientific interest.(AB) JPW

Lister, A.E.J. (?- 1943) British ophthalmologist. Lister studied medicine at St.Bartholomew's Hospital and in Vienna, and passed the M.B., B.S. London and conjoint examinations in 1900, held the Brackenbury Scholarship in Surgery in 1901, and at the Netley Army Medical School gained prizes in hygiene, clinical medicine and surgery. Lister was on active (army) service in East Africa and Somaliland and also served during the 1914-18 war. Before the first World War he was Ophthalmic Surgeon to the King George's College at Lucknow, and also Hon. Surgeon to H.E. the Viceroy. Lister was the author of the Ophthalmic Section of the Medical Annual, 1922-1929; appendix in Smith's extraction of cataract; two papers in „Archives of Ophthalmology“ 1908 and in *Indian Med. Gaz.* 1920; etc. Due to his poor health he left the Service in 1920 and settled in Bristol where he was appointed Hon. Consulting Surgeon to the Bristol Eye Dispensary. *BJO* 1944; 27:153-154.

Listing, Johann Benedict (1808-1882). German ophthalmologist, of Hungarian descent, inventor of the expression, "entoptic phenomena" (*entoptische Erscheinungen*), well known for his researches in physiological optics. Born at Frankfurt a. M., he was doubly orphaned at an early age. From 1829-1834 he studied at Göttingen, making a specialty of mathematics and graduating in the last named year. After a number of "wanderjahre"(years of travelling-JPW), he began teaching mathematics and mechanics at the higher tradeschools in Hanover. In 1839 he was made extraordinary professor, in 1842 full professor of mathematical physics and optics at Göttingen. Most of Listing's writings relate to mathematics. He wrote, however, an article on "The Path of The Light Rays in the Eye" for Vol. IV of Wagner's famous "*Handwörterbuch der Physiologie*" and a very useful "*Beitrag zur Physiologischen Optik*" (in *Göttinger Studien*, 1845). He also contributed several articles to the "*Göttinger Nachrichten*," and to Poggendorff's "*Annalen der Physik u. Chemie*." American Encyclopedia of Ophthalmology, Vol.10, p.7498

Liston, Robert (1794-1847) English surgeon of little importance ophthalmologically except for the fact that he assisted in introducing into England the strabismus operation of →Stromeyer and →Dieffenbach (*Brit. and For. Med. Review*, May 6, 1840, Report by W. R. Ancram; and Liston, *Lancet*, I, 433, 1844). Liston was born in Linlithgow, West Lothian, Scotland, studied at Edinburgh and London, and settled first at Edinburgh, where he was widely known both as author and as operator. In 1833 he was called to London as Professor of Clinical Surgery at the University College. Here he laboured with very distinguished success until his death. American Encyclopedia of Ophthalmology, Vol.10, p.7499

Littell, Squier (1803-1886). American ophthalmologist, author of the once well known "*Manual of Diseases of the Eye*. (Philadelphia 1837)" Born at Burlington, N. J., he lost both parents while still a small child. He was, however, adopted by his uncle, Dr. Squier Littell, of Butler Co., Ohio, and, in this county, received his early education at the public schools. Turning his attention to medicine, he studied at first with his uncle, then with Dr. Joseph Parrish, of Philadelphia, and finally, at the University of Pennsylvania, at which institution he received his degree in 1824. For a time he attempted to practise in Buenos Ayres, but soon returned to Philadelphia. He practised there for very many years both as general physician and as ophthalmologist. In addition to the above-mentioned volume he wrote a considerable number of journal articles, and edited "*The Monthly Journal of Foreign Medicine*." Littell edited Walton's *Manual of the Diseases of the Eye*. Late in life he suffered from choroiditis, and soon was nearly blind. American Encyclopedia of Ophthalmology, Vol.10, p.7500

Little, David (1810-1902). British ophthalmologist. Born in Lockerbie, Dumfriesshire, Scotland, he studied at Edinburgh, and, in 1863, became house physician at the Ophthalmic Institute, Manchester. In 1878 he was made instructor in ophthalmology at Owen's College, a position which he held for 21 years In 1901 he was president of the Ophthalmological Society of the United Kingdom. He wrote little, but was widely known as an operator. Little's ophthalmic writings are as follows. 1. *On the Operation for Lamellar Cataract*. 2. *On the Extraction of Senile Cataract, with the Results of 1248 Extractions*. (*Br.Med.J.*, 1889.) 3. *Sarcoma of the Iris*. (*Trans.Oph.Soc.* III, 215.) 4. *Intoxication Amblyopia*. (*Trans.Oph.Soc.U. K.*, VII, 73.) 5. *Clinical Experience with Chronic Primary Glaucoma, and the Value of Iridectomy*. (*Trans.Oph.Soc.U. K.*, XXII, 1, 1902.) American Encyclopedia of Ophthalmology, Vol.10, p.7500-7501

Littmann, Hans (1908-1991) German scientist, employed by Carl Zeiss, Oberkochen, Germany. Littmann was born in Hamburg and studied physics in Stuttgart, Göttingen and Jena. After having received his degree in physics he became employed by Carl Zeiss in Jena. At the end of the second war, he was brought to Heidenheim (American occupation zone, south Germany) by the American troops, along with other leading personalities of the Zeiss company, where he helped to rebuild the company in Oberkochen. He was from 1946 to 1973 technical director of the medical optical division of Zeiss and for a while also directing the section of spectacles glasses. Later on he became, for a time, lecturer at the Tübingen University. Littmann developed very successful instruments which marked an epoch in medical optics, such as the slit lamp microscope with moving slit lamp (1950), the ophthalmometer (1950), the fundus camera with flash light. With his operation microscope (OPMI I) 1953, he opened the door to a worldwide development of micro-surgery. This instrument can be seen as the "father" of many operation-microscopes for ophthalmology, otology and other medical fields. His light coagulator [Xenon], based on an idea from Meyer-Schwickerath, became a corner stone in medical history. Littmann wrote about 58 papers in international journals of ophthalmology and on optics. This is a selection: Littmann: *Die Reflexion an absorbierenden Medien*. *Ann.Physik* (5) 38: 139,1940; *Die Grundlagen der Skiaskopie, eine quantitative Theorie*. *Graefes Arch.ophthalm.* 148: 658, 1948; *Foveale Präzisionsskiasopie* *Graefes Arch.Ophthal.* 149:520, 1949; *A new slitlamp apparatus*. *Am. J. Ophthalmol.* 33:1863-1870, 1950; *Die Zeiss Funduskamera*. *Ber. deutsch. Ophthalmol. Ges., Heidelberg* 59: 318-321, 1955; *Ein neues Operations-Mikroskop*. *Klin. Monatbl. Augenheilkd.* 124:473-476, 1954; *Das Zeiss-Ophthalmometer* *Zeiss-Werkzeitschrift* 25: 80, 1957; *Der Zeiss Lichtkoagulator nach Meyer-Schwickerath mit Xenon-Hochdrucklampe*. *Ber. deutsch. Ophthalmol. Ges. Heidelberg* 61:311-314,1957. Littmann received a MD Honoris Causa from Bochum University and was a Corresponding Member of the Sociedad Mexicana de Otorrinologia and, 1990, he received an Award from the American Otolaryngological Society for his outstanding contributions to the development of medicine. Hans Littmann was a member of Deutsche Gesellschaft für angewandte Optik, Deutsche Ophthalmologische Gesellschaft (DOG), Société Française d'Ophtalmologie, Jules Gonin Society, Honorary Member of the Panamerican Ophthalmological Society and Member of the Barraquer Institute, Barcelona, Spain. (Zeiss Company, SM)

Liu, Jiaqi (1909-) Chinese ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Beijing Medical University. He graduated from the Peking Union Medical College (now Beijing Medical University) in 1937 and received his M.D. degree from the University of the State of New York. He studied Ophthalmology under Prof. P.C.→Kronfeld at the University of Chicago and under Prof. Bi Hua-de and Prof. Luo Zongxian at the Peking Union Medical College. He served at the Beijing Medical University as the Assistant Professor (1945-1950) and has been Professor and Chairman since 1950. He is the founder of Pediatric Ophthalmology in China and established the first Department of Pediatric Ophthalmology at Beijing Medical University. In the professional society, he has served as Vice-President of the Chinese Ophthalmological Society, Vice-Editor-in-Chief of the *Chinese Journal of Ophthalmology*, Vice-Editor of the *Chinese Medical Encyclopedia-Ophthalmology Section*, Vice-Editor of the *Foreign Medical Abstract-Ophthalmology Section* and a member of the Advisory Council of the International Biographical Centre, Cambridge, England. Some examples of his many publications are "*Causes of blindness - a study of 2087 cases*", "*Investigation on the clinical and developmental mechanism of amblyopia and strabismus*", "*Textbook of practical Ophthalmology*, 2nd ed. People's Medical Publishing House 1998" and "*System of Ophthalmology*, Vol. IX, *Strabismus and Amblyopia*. People's Medical Publishing House 1997". He received many Awards, e.g. from University of California, Berkeley (Lecture: Present status of amblyopia therapy in China. 1982), National Education Bureau (1984), National Public Health Ministry (1985), State Department (1990) and Chinese Medical Association (1995). (SM)

Liu, Jorn-Hon (1938-) Taiwanese ophthalmologist, Clinical Professor and Chairman of the Department of Ophthalmology, National Yang-Ming University School of Medicine. He graduated from Kaohsiung Medical College in 1965, studied Ophthalmology under Prof. Chen Chen Wu and then received residency training at Taipei Veterans General Hospital under Dr. Lin Ho-Ming, the Chairman of the Department of Ophthalmology. He extended his higher studies, as a Fellow in the subspecialty of retina and vitreoretina, at the Wilmer Institute of the Johns Hopkins University in 1971 and also at the Massachusetts Eye and Ear Infirmary of Harvard University in 1975. He served as the Chairman of the Department of Ophthalmology, Taipei Veterans General Hospital (1982-1998), and as Associate Professor of Ophthalmology of the National Yang-Ming University School of Medicine (1982-1991). He has been in the present position as above since 1991. He has a joint appointment as the Deputy Director of Taipei Veterans General Hospital since 1998. He served as the President of the Ophthalmological Society of the Republic of China (ROC) (1993-1996). His special interest in clinical research is in the field of vitreo-retinal diseases and published many scientific papers, e.g. "*Laser photocoagulation for proliferative diabetic retinopathy*. Trans. Ophthalmol. Soc. of ROC 21: 40, 1982" and "*Surgical treatment for macular hole retinal detachment – Comparison of simple drainage, macular buckling and vitrectomy techniques*. Chin. Med. J. 40: 275, 1987". He is a recipient of the Distinguished Contribution Award, Executive Yuan of ROC (1982) and Honor Award for distinguished service from the American Academy of Ophthalmology (1998).(Veteran General Hospital – Taipei, fax: 886-2-28735875) (SM)

Lloyd, Eusebius Arthur (1795-1862) British ophthalmologist of London. Lloyd was educated at St. Bartholomew's Hospital, chiefly under John Abernethy. He became M.R.C.S. in 1817, established a successful London practice, and from 1824 to 1861 was on the staff of St. Bartholomew's. Lloyd introduced several surgical innovations and contributed frequently to medical journals. He wrote: *A treatise on the nature and treatment of scrophula describing its connection with the diseases of the spine, joints, eyes ... to which is added, a brief account of the ophthalmia so long prevalent in Christ's Hospital*. London 1821, for which he received the Jackson Prize.

Lloyd, Humphrey (1800-1881) Irish physicist of Dublin, writer on optics and terrestrial magnetism. Lloyd was educated at Trinity College (M.A., 1827), where he became professor of natural and experimental science (1831), senior fellow (1843), and provost (1867). Lloyd's optical discoveries gave new support to the wave theory of light and expanded knowledge of the properties of reflection and refraction. At least as productive was his research on the earth's magnetic field: he helped establish a system for simultaneous

measurements at observation posts worldwide, demonstrated the existence of electrical currents in the earth's crust, and calculated their effect on the daily variation in the magnetic field. Lloyd wrote: *A treatise on light and vision*. London 1831; *Lectures on the wave-theory of light* Dublin 1841; *Elements of optics*. Dublin 1849.

Lloyd, Ralph I. (1875-1969) American ophthalmologist, born in Poughkeepsie, New York. He graduated from the Poughkeepsie High School in 1892 and from the New York Homeopathic Medical College in 1896. He was house physician at the Brooklyn Homeopathic Hospital for 18 months and received an additional year of training at the Pittsburgh Homeopathic Hospital. He returned to the New York Ophthalmic College where he studied for eight months and then began the practice of ophthalmology in Brooklyn in 1899. He was lecturer in anatomy at New York Homeopathic College in 1900 and was later assistant professor and professor of ophthalmology at his alma mater. Lloyd was surgeon at the New York Ophthalmic Hospital from 1915-1929 and assistant in ophthalmology at Cumberland Hospital from 1900-1930 and later consultant there. He was ophthalmologist at the Brooklyn Nursery and Infants Hospital from 1901-1941 and was consultant ophthalmologist at Peck Memorial Hospital, Prospects Height Hospital, Brooklyn Cancer Institute, Long Island College Hospital and Brooklyn Eye and Ear Hospital. Dr. Lloyd was an excellent lecturer and served in that capacity at the New York University Medical School, postgraduate division, from 1937-1942. He was honored with a Gold Medal by the Long Island College Hospital in March, 1959, for his service and devotion to medicine. He had a strong desire to foster scientific advances in ophthalmology and was one of the founders of the Brooklyn Ophthalmological Society. He later served as president of the society and in 1967 its members established the Ralph I. Lloyd lectureship in his honor. In 1942 he served as president of the American Academy of Ophthalmology and Otolaryngology. He was a member of the Kings County Medical Society, New York State Medical Society, American Medical Association, American Ophthalmological Society and American College of Surgeons. Lloyd was interested in many areas of study, although his writings related particularly to embryologic anomalies and macular degenerations. He presented a course at the Academy for many years on diseases of the cornea. He devised the Lloyd stereo campimeter. He served as a member of the editorial board of the American Journal of Ophthalmology during its early years. AJO 1969,68:953-954

Löbenstein-Löbel, Eduard Leopold (1779-1819) German physician, born at Lübben, Germany. He received his M.D. in 1802 at Jena, settling in that city as general practitioner and becoming professor of medicine at the university in 1811. Löbenstein-Löbel wrote: *Grundriss der Semiologie des Auges für Aerzte*. Jena 1817.

Lobstein, Johann Friedrich Daniel (1777-1840). A Strassburg (now in France) ophthalmologist of the early 19th century. Born at Strassburg, the son of Johann Friedrich Lobstein, he was deprived of his father by death when only seven years of age. He studied at Strassburg and Paris, was for many years a military surgeon, and at length, in 1815, settled in Strassburg. He seems to have given much attention to Ophthalmology, but never to the total exclusion of other forms of practice. According to Gurlt (German surgeon and historian-JPW), he led, at least in Strassburg, a dissolute life, became bankrupt, fled to New York, where he lived in wretched circumstances till his death. His only ophthalmologic writing was: *Tableau de la séméiotique de l'Oeil d l'Usage des Medecins* (1818).[in fact only a translation of →Loebenstein-Loebel's work-JPW] American Encyclopedia of Ophthalmology, Vol.10, p.7502-7503. JPW

Lobstein, Johann Friedrich (1736-1784). The father of Johann Friedrich Daniel →Lobstein, and an ophthalmologist of some repute. Born at Lampertsheim, Alsace, the son of a German surgeon, he received his medical degree at the University of Strassburg in 1760, travelled in many lands, and began to practise general medicine at Strassburg in 1762. Gradually he turned his attention more and more to ophthalmology, but never to the total abandonment of other practice. He became especially famous for cataract extraction, and was often called in consultation to distant lands. In 1764 he became prosector at the University of Strassburg, and in 1778 professor of anatomy and surgery. His chief ophthalmologic writing was "*Suffusiones Secundariae*," etc. (1779).American Encyclopedia of Ophthalmology, Vol.10, p.7502

Loche (fl. 1750-1791) Nothing is known yet about the author of :*Précis sur le nouveau traitement des maladies des yeux*. Londres 1783 and *Précis sur le nouveau traitement des maladies des yeux Nouvelle édition, suivie des nouvelles observations de l'auteur sur les mêmes maladies, & des certificats des cures opérées par son eau ophthalmique*. Londres 1785. He probably was a quack.

Locke, John (1792-1856). American, born at Fryeburg, Me., graduated in medicine from Yale in 1819, and became geologist on the United States survey of the North-West territories and Ohio. From 1836 onwards he was professor of chemistry in the medical college of Ohio, and was a pioneer in scientific research. He invented and improved many instruments for use in optics, physics, electricity, and magnetism, notably the gravity escapement for regulator-clocks (1844), and his electro-chronograph, purchased for the United States naval observatory for \$10,000. He contributed largely to the proceedings of various scientific societies and to the *American Journal of Science*, besides publishing text-books on botany and English grammar. American Encyclopedia of Ophthalmology, Vol.10, p.7533

Loe, Fred (1884-1965) American physician. Fred Loe was born on a farm in Mercer County, Missouri, and the story of his becoming a physician is surely "the American story." As a boy he had to help make ends meet in a large family that had fallen on hard times in the depression of 1890. To do so he helped on the farm, worked for the neighbors, and held down a job in the local doctor's office. Here he read the doctor's medical books, went with him on his house calls, and determined that come what might he himself would one day be a doctor. His education and medical training had to be acquired the hard way and with interruptions. Quite literally he worked his way through medicine, much of the time as a shoe salesman on a night shift while going to school, and for two years as a professional baseball player. He worked, scrimped, saved and studied, and, finally, in 1908, the St. Louis College of Physicians and Surgeons, later to become part of Washington University, awarded him his M.D. degree. His first venture in medicine was as a private Practitioner in Oklahoma. Soon, however, he began his long, useful career as a general physician in the Bureau of Indian Affairs. Specialists were unheard of in the Indian Service at that time, and like many a modern medical missionary, the physician serving the Indian was called upon for a wide variety of skills. On occasion he might even have to extract teeth! Not afraid of work, however, and with good training behind him, a lively curiosity and an ingenious turn of mind, Dr. Loe proved to be an extraordinarily adept self-teacher. He mastered the techniques of many major surgical procedures and, in the ophthalmological field, attained a high degree of skill in the surgical management of such problems as trichiasis and entropion, cataract and glaucoma, and ocular muscle dysfunction. He acquired particular skill in making plastic repairs of the numerous injuries around the eyes that were sustained by the Indians in the course of their traumatic lives. Loe *first* demonstrated the efficacy of the sulfonamides in the treatment of trachoma and thus opened the way at last to the possibility of controlling this very old and crippling eye disease. He made this therapeutic breakthrough in the winter and spring of 1937-1938 while stationed on the Sioux Reservation at Rosebud, South Dakota, where he was serving as a medical officer in the Bureau of Indian Affairs. The results of these first therapeutic trials were reported at the June, 1938, meeting of the Section on Ophthalmology of the American Medical Association and were soon confirmed. A sulfanilamide campaign against trachoma was promptly instituted by Dr. Harry S. →Gradle, then consultant on trachoma for the Bureau, Dr. J. G. Townsend, the Bureau's Director of Health, and Dr. Polk Richards, the Bureau's trachoma control officer. This campaign was waged from 1938 to 1942 and was remarkably successful. AJO 1966,61:1555-1558

Loebenstein-Loebel, Eduard Leopold (1779-1819). German physician of Jena, Saxe-Weimar, who seems to have devoted considerable attention to diseases of the eye. Born at Lübben, lower Lausitz, he received his degree in medicine at Jena in 1802, and settled at once as general practitioner in that city. In 1811 he became extraordinarius, and, in 1814, medical councillor. His only ophthalmologic writing was "*Grundriss der Semiologie des Auges für Aerzte*". (Jena, 1817; Fr.Transl.by →Lobstein, Strassburg, 1818.) American Encyclopedia of Ophthalmology, Vol.10, p.7534

Loeser, Leo (1869-1909) German ophthalmologist born at Meiningen. He worked with →Schweigger and →Silex and was for a long time correspondent to J.→Hirschberg's *Centralblatt für praktische Augenheilkunde*. American Encyclopedia of Ophthalmology, Vol.10, p.7534;The Ophthalmoscope 1909,p.518.

Loewenstein, Arnold (1882-1952) British ophthalmologist of Austrian birth. Loewenstein was born in 1882 at Carlsbad, at that time a part of the Austro-Hungarian Empire, and died in Glasgow. He was educated in Prague where he graduated M.D. in 1906; as a young student he was drawn to the biological sciences and he received part of his training at the world famous marine biological station in Naples. His early papers were upon botanical and anatomical subjects, but after qualifying in medicine he was attracted to the study of ophthalmology, and in this he was influenced by an uncle who was a practising ophthalmologist in Prague. He wrote extensively and widely upon many aspects of his chosen specialty, his early papers being written while he was assistant to Professor Fick in the Department of Anatomy in the German University in Prague. In 1908 he became clinical assistant to Professor Elschning in Prague and he continued to work there for 30 years. In due course he became a senior assistant privat-docent, and he received the title of Professor-Extraordinarius in 1924. By that time he had made over sixty contributions to the literature, including his well-known monograph on tuberculosis of the eye, and he had also collaborated with Professor Kahn of the Department of Physiology in work on electroretinography, which is still referred to in the literature of electrophysiology. The many years which he spent upon laboratory work stood him in good stead when circumstances compelled him to seek refuge in Great Britain. He became a whole-time research assistant in the department of Ophthalmology in the University of Glasgow, where he worked for over 12 years. Shortly after the war he became a British citizen. He continued to devote all his energies to study and research and many contributions by him have appeared in the BJO and in the Transactions of the Ophthalmological Society of the United Kingdom. The joint work which he carried out with Ballantyne and Michaelson is amongst his most interesting and important. BJO 1952,36:707-708

Logetschnikoff, S. (? – 1911) Russian ophthalmologist, president of the Moscow Ophthalmological Society. The Ophthalmoscope, 1911,p. 390.

Logger, Johannes.(? – 1841) A Dutch surgeon who devoted considerable attention to the eye. Born in Dordrecht, he studied at Leyden, where he practised until his death in 1841. He wrote "*Over de Zwarte Staar*" (Amsterdam, 1812).American Encyclopedia of Ophthalmology, Vol.10, p.7535

Loh, Robert Choo Kiat (? -) Singaporean ophthalmologist. He graduated in 1949 from Bombay University, and extended his studies at Institute of Ophthalmology in London (1952-1954) and also at Moorfields Eye Hospital (1952-1954). On returning home, he was appointed the Senior Registrar of the Department of Ophthalmology of Singapore General Hospital (SGH) (1954-1959) and Senior Ophthalmic Surgeon and Head of the Department of Ophthalmology (1959-1969) and then Honorary Consultant of the Department of Ophthalmology, Ministry of Health (1970-1995). He also has served as Senior Visiting Consultant to the Singapore National Eye Centre since 1990 to the present and Lecturer in Ophthalmology of the University of Singapore (1958-1969). He is the Founder and President (1963-1976) of the Singapore Society of Ophthalmology. He served the Asia-Pacific Academy of Ophthalmology (APAO) as the Vice-President (1964-1972) and 3rd Congress President of APAO (1968). He is a Master Member of Academy of Medicine (1976-1979). He has written numerous articles on glaucoma, retinal detachment, corneal grafting, cataract surgery and the use of laser. He edited the Transactions of the 3rd Congress of APAO 1968. For his excellence, he was awarded by the Government of Singapore, BBM for Contribution to medicine and Ophthalmology in Singapore, and BBM(L) for contribution to social services in Singapore. (Dr. Robert C. K. Loh: Eye Centre and Surgery, 6 Napier Road #05-05, Gleneagles Medical Centre, Singapore 258499. Phone: 65-2354224; Fax: 65-7337941) (SM)

Löhlein, Walther (1882-1954) German ophthalmologist. Löhlein was born in Giessen the son of a gynaecologist. He studied medicine like his father and his brother, the

pathologist Max Löhlein. He went first to Bonn, then to Giessen and received his medical degree in 1905. He became now assistant at the institute for pathology in Leipsic, clinic for internal medicine in Giessen, institute for Bacteriology in Giessen and in Greifswald. He worked for a few years at the ophthalmic institute of Greifswald under professor Römer and became 1909 lecturer, and 1914 professor of ophthalmology. He was a voluntary physician at the front during the first World War. After the war, in 1918 Löhlein received the directorship of the eye clinic in Dorpat. He became 1921 full professor, and, the same year he became successor of Professor Römer in Greifswald. He followed a call to the Jena University in 1924 and, in 1932, succeeded Axenfeld in Freiburg. Finally he accepted the chair of ophthalmology in Berlin and remained there until 1949. From 1950 to 1953 he was honorary professor for ophthalmology at the new West Berlin "Freie Universität". Löhlein published many papers and contributed chapters to: Axenfeld/Hertel *Lehrbuch und Atlas der Augenheilkunde* 8th edition, Jena 1935; Henke, F. & O.Lubarsch *Handbuch der spez.pathol.Anatomie und Histologie* Vol.11: *Das Auge* edited by K.Wessely, Berlin 1928-1937; Hans Auler and Heinrich Martius *Diagnostik der bösartigen Geschwülste. Leitfaden für den praktischen Arzt* München 1941. He also edited: (with W. Wegner) *Zeitfragen der Augenheilkunde. Vorträge vom augenärztlichen Fortbildungskurs Freiburg 1934* Stuttgart 1938; (with E.Engelking, O.Marchesani and A.Pillat) the series: *Augenheilkunde der Gegenwart*. Löhlein, further wrote: *Die Entwicklung des Sehens*. Jena 1931 (*Jenaer akademische Reden*, number 13). *Rede gehalten bei der Feier des 50jährigen Bestehens des Ärztevereins zu Gera* Jena 1928. JPW

Lohnstein, Th. (?-?) German physician who practiced in Berlin. Lohnstein was himself suffering from a bilateral keratoconus that he corrected, in 1896, with water spectacles of his invention that he named hydrodiacope. He published the following papers regarding contact lenses and his hydrodiacope: *Zur Gläserbehandlung des unregelmässigen Hornhaut-Astigmatismus*, *Klinische Monatsblätter für Augenheilkunde*, 1896, 34:405-420; *Nachtrag: Zur Gläserbehandlung des unregelmässigen Hornhaut-Astigmatismus*, *Klinische Monatsblätter für Augenheilkunde*, 1896,34: 420-423; *Kritische Bemerkungen zu den hyperbolischen Gläsern*. *Klinische Monatsblätter für Augenheilkunde*, 1897,35:97-108; *Erwiderung auf die vorstehende Bemerkung des Herrn Dr. E.A. Fick in Zürich zu meinem Hydrodiaskop*, *Klinische Monatsblätter für Augenheilkunde*, 1897,35:132-134; *Die Berechnung der Planconvexlinse des Hydrodiaskops*, *Klinische Monatsblätter für Augenheilkunde*, 1897,35:266-271. see Robert Heitz *History of Contact Lenses* in Hirschberg *The History of Ophthalmology*, vol.11/3b, Ostend, Wayenborgh 2002. JPW

Loiseau Jr., Constant (1838-1890) Belgian ophthalmologist, son of Constant Loiseau Sr. (founder of the Namur Institut Ophtalmique). Loiseau was born in Namur. He was part of the military health corps, when he turned his interests to ophthalmology. Loiseau published from 1877 to 1879 important papers on the *measurement of ametropias by mean of his optometer derived from the discoveries of Donders and Giraud-Teulon*. Loiseau brought the government to discard conscripts with more than 6 diopters hypermetropia or myopia, but to tolerate otherwise the use of spectacles. Loiseau's main interest was the construction of an optometer. He contributed many papers on this topic to the *Annales d'Oculistique* (1877-1881). In 1882 he was named corresponding member of the *Académie Royale de médecine de Belgique*. (Verriest). *Annales d'oculistique* 1891,105:71-80. JPW

Lolley, Richard M. (1933-2000) American vision scientist, professor at the Keck School of Medicine at the University of Southern California and the Doheny Eye Institute (Los Angeles, California), and whose early research helped to found the field of neurochemistry. Lolley was born in Blaine, Kan, on May 25,1933, earned a bachelor's degree in pharmacy from the University of Kansas, Lawrence, in 1955, and set out to be a drugstore pharmacist. He switched fields and went on to earn a PhD in physiology and biochemistry from the University of Kansas in 1961, and soon chose to focus on cyclic GMP. The discovery by Lolley and his colleagues, in the early seventies of the twentieth century, that cyclic guanosine monophosphate (GMP) was of crucial importance in vision formed a basis for understanding the mechanisms that result in diminished vision and blindness. He served as trustee and president of the Association for Research in Vision and Ophthalmology (ARVO) from 1991 to 1992. He was awarded ARVO's Proctor Medal

in 1994, the Jules Stein Living Tribute Award from Retinitis Pigmentosa International in 1985, the Alcon Institute Award for Excellence in Vision Research in 1991, and the R. S. Dow Neurological Sciences Award in 1992. Before joining the University of Southern California 1994 as a professor of cell and neurobiology and ophthalmology, and as the associate Dean for Scientific Affairs, Lolley had served for 30 years on the faculty at the University of California at Los Angeles, where he was chair of the Department of Anatomy and Cell Biology. His laboratory was in the Sepulveda Veterans Affairs Hospital in Los Angeles, where he pioneered a research career track followed by hundreds of PhD scientists. Lolley intended to develop vision as a model for the study of neurochemistry. Some dismissed his early findings, but he persisted and developed microassays in a model system to track the biochemical signalling pathway in the retina of mice. He was the first to identify the defect in cyclic GMP that leads to inherited blindness. This led ultimately to the cloning of the gene responsible for inherited retinal degeneration in mice and dogs, and provided insights into the mechanisms responsible for human retinitis pigmentosa. Throughout his scientific career, he was funded by the National Institutes of Health and held one of the first grants, "*Maturation and Metabolism of Dystrophic Retina*," reissued by the National Eye Institute when it was founded in 1970. Besides his initial insights into vision at the molecular level, he discovered genes important in the functioning of the photoreceptors in the retina, naming "phosducin," which regulates phototransduction. Throughout the years, he has published more than 60 scientific papers and dozens of book chapters. Arch Ophthal 2000,118:1471

Lombard. French ophthalmologist of the early nineteenth century, who seems to have been a charlatan. Neither the places nor the dates of his life or of his death are now known. He practised first at Antibes, then at Montpellier, finally (perhaps) at Paris. He published a little book which was filled with ignorance, superstition and quackery, and which bore the title, "*Considerations et Observations sur la Guérison des Cataractes et des Affections de la Cornée par une Méthode Résolutive et de Fistules sans Opérations*" (Paris 1839). American Encyclopedia of Ophthalmology, Vol.10, p.7535.

Longino, Roy Richard (1888-1918) American Texas specialist on the eye, ear, nose and throat who received the medical degree at Tulane University, New Orleans, in 1911. AJO 1919,2:166

Longmore, Thomas (Sir Thomas) (1816-1895), of London, military surgeon, received his medical training at Guy's Hospital and joined the army, serving as surgeon in various posts and campaigns, which took him to North America, the Crimea, India, and elsewhere. He was made Surgeon General in 1872 and was knighted in 1886. Longmore was one of the founders of the Geneva Convention (1864), and afterward represented the British government at a number of international conferences on aid to the sick and wounded in wartime. Of several treatises he published on military medicine, there were two addresses on ophthalmology: *The Army Medical Officers' Ophthalmic Manual* London 1863 (2nd edition 1875) and *The illustrated optical manual or handbook of instructions for the guidance of surgeons in testing quality and range of vision* of which the 4th edition was published in London 1888. American Encyclopedia of Ophthalmology, Vol.10, p.7536

Lopacki, Stanislaus Anton (? – 1738). Polish physician, botanist and pharmacologist, who devoted considerable attention to the eye. He studied at Cracow and Padua, settled in Cracow, and there, in 1691, became Professor of Botany and Pharmacology. His only writing, ophthalmologic or general, is entitled "*Questio de Ophthalmia*" (Cracow, 1691). American Encyclopedia of Ophthalmology 10,p.7536

Lopez, Fernando (?-1924) Mexican ophthalmologist of Mexico City. Lopez was a well known operator and had an extensive practice in Mexico City for many years. He was one of the founders of the Mexican Ophthalmological Society and contributed several important papers to the literature of ophthalmology. He was one of the first to use fat transplantations after enucleation and evisceration, with very gratifying results. In 1901, he advocated the use of local anesthesia for all ocular operations. For many years, Dr. Lopez was Director of the Military General Hospital in Mexico City where a school of medicine was established for the training of military surgeons. AJO,7:487-488

Lorch, Leo Hugo (1808-1835). German ophthalmologist. Born at Mayence, he received there his medical degree in 1830. After a year of further study in France, he settled as ophthalmologist at Mayence. Here, in 1834, he founded an ophthalmic institute, which, however, in the following year, burned down. Before he could re-erect the structure, he died, Nov. 12, 1835, only 28 years of age. Lorch's only writing was "*Makrobiotic der Augen*," which was published posthumously in Mayence, 1837. American Encyclopedia of Ophthalmology, Vol.10, p.7536-7537

Lordat, Jacques (1773-1870). French anatomist and physiologist, who devoted considerable attention to the eye, especially the theory of vision. Born at Tournay (Hautes-Pyrénées) he received the medical degree at Montpellier in 1796, and, for the next three years, was physician in the military hospitals at that place. In 1799 he began to give instruction in anatomy and physiology, and in 1802 was elected prosector at the medical school. Two years later he was chief of the anatomical department. In 1811 he obtained by competition the chair of operative medicine, and, two years later, that of physiology, which he held for nearly fifty years. He resigned in 1860. His writings are mostly in the general field. One article he wrote, however, within the limits of our specialty: "*Réflexions sur quelques Points de la Théorie de la Vision*" (*Ephémérides Méd. de Montp.*, 1828, Vol. VI, pp. 340-376.) American Encyclopedia of Ophthalmology, Vol.10, p.7537

Loring, Edward Greely (1837-1888). American ophthalmologist, inventor of the *Loring ophthalmoscope* [see *Schett & Keeler/The Ophthalmoscope, Vol.1:p.328ff & Vol.2:p.6-9*] and author of the well-known "*Textbook on Ophthalmoscopy*." Born in Boston, he began to study medicine at Florence, Italy, in 1859. Later he studied at Pisa, and, returning to Boston in 1862, he entered the Harvard Medical School in that city, and received the degree of M. D. in 1864. Deciding to become an ophthalmologist, he secured an appointment as externe to the Ophthalmic Clinic of the Boston City Hospital, and, later, at the Massachusetts Charitable Eye and Ear Infirmary. In 1865 he settled in Baltimore, Md., but, next year, moved to New York, where he formed a partnership with Dr. Cornelius Rea → Agnew. He was surgeon to the Brooklyn Eye and Ear Hospital, the Manhattan Eye and Ear Hospital, and to the New York Eye and Ear Infirmary. He also wrote: *Determination of the refraction of the eye by means of the ophthalmoscope*. New York 1876. He was a member of numerous medical societies. American Encyclopedia of Ophthalmology, Vol.10, p.7537-7538

Louis, Antoine (1723-1792) French physician, writer on medical jurisprudence, born at Metz, France, where he studied under his father, a military surgeon, before completing his training in Paris. Louis settled in Paris and was appointed professor of physiology of the Académie de Chirurgie in 1749 becoming permanent secretary of the Académie in 1764 editing and contributing substantially to its Mémoires. Louis wrote valuable reports on the treatment of lacrimal fistulae (1753) and on enucleation (1774)-he devised special scissors for the latter procedure-but is best known for his works on the differential signs of murder and suicide (1763) and other aspects of forensic medicine. He wrote: *Lettres sur la certitude des signes de la mort* Paris 1788.

Lovibond, Joseph Williams (1833-1918) author of numerous works on color and the inventor of the tintometer, was born and died in England. He joined the rush of gold seekers to California in 1849 but soon returned to England and became manager of a brewery. He wrote books on "*Light and Color Measurements*," "*Color Phenomenon*," and "*Color Theories*," and many papers with regard to color. The tintometer, a color scale for comparison, has been widely used in the arts and for blood testing. AJO 1919,2:166

Low, Cze-Hong: (? -) Singaporean Senior Consultant Ophthalmologist, Visiting Professor, Tianjin Medical University. Medical Director, AM Eye Centre, Medical Director and Chairman, C H Low Specialist Eye Surgical Centre, Director, Singapore National Eye Centre (SNEC) Board of Directors, Senior Advisor SNEC Department A, Chairman, Excimer Laser Committee, SNEC and Mt Elizabeth Hospital, Singapore. He graduated from the University of Singapore in 1971 and received the Bachelor of Medicine and Bachelor of Surgery (MB,BS) in 1971 and studied ophthalmology in the Singapore General Hospitals Eye Department under Drs Robert Loh, K H Lim, C Y Khoo,

Prof. A S M Lim ,S K Leong, H N Tong, Victor Yong, B C Mg. His further studies in subspecialties in ophthalmology was in Britain under the Commonwealth Scholarship from the British Council, 1975 - 1977. His training was at the Moorfields Eye Hospital, Institute of Ophthalmology, Guys and St George's Hospitals, London and at the Royal Victoria Eye Infirmary, Newcastle upon Tyne, England where he served as clinical assistant, registrar and senior registrar. His mentors included Prof. John Gloster, Prof. Alan Bird, Rolph Blach, Redmond Smith, James Hudson, Stephen Miller (Oculist to Her Majesty the Queen), Gordon Catford, Patrick Holmes-Sellors (Oculist to Her Majesty's Household and subsequently Her Majesty the Queen), Prof. E S Perkins and Barry Jay while his contemporaries at Moorfields included Roger Hitchings. In 1976, he received the FRCS England, FRCSE and FRCSG Ophthalmology from the Royal Colleges of Surgeons of England, Edinburgh and Glasgow by examination becoming the first and only Singaporean to do so. He was also awarded the FICS without examination by the International College of Surgeons in 1977. Founding and incumbent Chairman, Excimer Laser committee, SNEC 1991 - to 1999. Senior Consultant Ophthalmologist and Chairman, C H Low Eye Surgical Centre, 1983- 1999. Medical Director, AM Eye Centre, AsiaMedic Specialist Medical Centre, 1998- 1999. Member, National Committee for Ophthalmology, Singapore 1998-1999. Member, Medical Advisory Committee on Ophthalmology to the Ministry of Health, Singapore 1999 - 2001. Member, New York Academy of Sciences, 1997-98 ISRS International Council Member, International Society of Refractive Surgery, 1997-2000. He is also Fellow of the American Academy of Ophthalmology, Fellow of the American Society of Cataract and Refractive Surgeons and Fellow of the American College of Surgeons, 1998. Alternate Specialist Member, Civil Aviation Medical Board, Singapore, 1981-1983. He fulfills many hospital duties and they are Medical Director and Senior Consultant Ophthalmologist, AM Eye Centre, AsiaMedic Specialist Centre ,1998-2000. Chairman and Medical Director, C H Low Specialist Eye Surgical Centre, 1983 - 2000. Director, Board of Directors, Singapore National Eye Centre, 1991-2000. Chairman, Excimer Laser Committee, SNEC and Mt Elizabeth Hospital, 1991 - 2000. Visiting Professor, Tianjin Medical University ,1996 - 2000.Senior Consultant Ophthalmic Surgeon, Mt Elizabeth Hospital, Gleneagles Hospital, Eastshore Hospital, Mt Alvernia Hospital, HMI Balestier Hospital and Thomson Medical Centre 1983-2000. Member, Medical Advisory Board, Singapore National Eye Centre, 1991-2001 Ophthalmology Specialty Group Representative, Mt Elizabeth Hospital, 1994-1996, 1999 - 2001. Founding member, Medical Advisory Board, Mt Elizabeth Hospital, 1983-1987 and Member, 1999—2001. Member, Medical Advisory Board, Eastshore Hospital, 1984 - 1986. Member, Finance committee, SNEC, 1991 —2000. Senior Advisor, SNEC 1996 — 2000. Member, Quality Assurance Committee, Mt Elizabeth Hospital, 1999-2001. Chairman, Credentials Committee, Mt Elizabeth Hospital, 1996 -1997, Exco member 1998 -1999, Member 1999-2001. Honorary Consultant, St Andrew's Mission Hospital, 1994-2000. Academic Roles he has played are Member, Committee on Ophthalmology, National University of Singapore, 1992-1998. Internal Examiner in Ophthalmology, Master of Medicine in Ophthalmology Postgraduate Medical School, National University of Singapore (NUS), 1992-1999. External Examiner, Royal College of Surgeons of Edinburgh, UK 1991-1999. Member, Specialist Training Committee in Ophthalmology, Graduate School of Medical Studies, NUS and Specialist Accreditation Board of the Ministry of Health and the Academy of Medicine, 1998 -1999. Part-time teacher, NUS 1977- 1999. He also has served as President, Singapore Society of Ophthalmology, 1985 - 1987, Honorary Secretary cum Treasurer 1984, Member 1972 to 1999, and he is a member of many National and International organizations. He is a recipient of many Honor Awards including President, Singapore Society of Ophthalmology, 1985 -1987, Honorary Secretary cum Treasurer 1984, Member 1972 to 1999. Member of Merit, Instituto Barraquer, Barcelona, Spain, 1999 and Visiting Professor, Tianjin Medical University, China, 1996-1999. He is a pioneer of many Ophthalmological and Medical undertaking in Singapore. His role as a leader embraces Founding Member, Medical Board, SNEC 1991-1999, Founding member, National University of Singapore Eye Department, from inception till 1996, Founding Member and Director, Board of Directors, Singapore National Eye Centre 1991- 1999, Consultant in charge, Corneal Service, National University Hospital Eye Department, inception till 1996, Consultant in charge, National Eye Bank, Singapore. 1991- 1995. Founding and incumbent Chairman, Excimer

Laser committee, SNEC 1991-1999, Senior Consultant Ophthalmologist and Chairman, C H Low Eye Surgical Centre, 1983-1999, Medical Director, AM Eye Centre, AsiaMedic Specialist Medical Centre, 1998-1999, Member, National Committee for Ophthalmology, Singapore 1998-1999, Member, Medical Advisory Committee on Ophthalmology to the Ministry of Health, Singapore 1999-2001, Member, New York Academy of Sciences, 1997-98, ISRS International Council Member, International Society of Refractive Surgery, 1997-2000 and Alternate Specialist Member, Civil Aviation Medical Board, Singapore, 1981-1983. His selected publications are "Low, C H, Ho, S H, Chong, J *The Impact of affluence on the major causes of blindness in Singapore over four decades*, Asia Pacific J. Ophthalmol. 2: 7-9, 1990", "Low, C H., Lim, AT H et al. *Subjective Visual Experience during phacoemulsification under topical anaesthesia versus retrobulbar anaesthesia*. Merit Research Prize in Ophthalmology and Visual Sciences, 1998" and "Chan TK, Low, C H: *The role of pediatric lasik in the treatment of amblyopia*, Ophthalmology Times 1997". (Dr. Cze-Hong Low: Specialist Eye Centre, 3 Mt Elizabeth #16-01/02, Mt Elizabeth Hospital, Singapore 228510 Telephone: 65-7346684 ; Fax 65-734 3189; e-mail: chlow@newspage.com.sg)(Address 2: AsiaMedic Eye Centre, 350 Shaw Centre #08-00, Singapore, Telephone 65-789-8888; e-mail lasik@magix.com.sg)

Lowe, Ronald Francis Hinde (1913 - 1998) Australian ophthalmologist. Lowe was Dean of the Clinical School of the Royal Victorian Eye and Ear Hospital 1962-68, and published widely in the field of ophthalmology but with particular emphasis on glaucoma. Educated Melbourne College of Pharmacy (PhC 1934) and University of Melbourne (MB, BS 1939, DO 1945, MD 1966). Australian Army Medical Corps 1941-46; Honorary Ophthalmic Surgeon, Royal Victorian Eye and Ear Hospital 1955-73, member, Board of Management since 1955, Dean Clinical School 1962-70, Officer in Charge, Glaucoma Unit since 1963; private ophthalmological practice. President, Australian College of Ophthalmologists 1972-73; president, Asia-Pacific Academy of Ophthalmology 1968-72, chairman, Ophthalmic Research Institute of Australia 1980-86. Royal Australian College of Ophthalmologists' medal 1996. Victorian Eye and Ear Hospital Medical Library named the Ronald Lowe Library in 1982.

Lowenstein, Otto (1889-1965) American Neurologist with important contributions to neuro-ophthalmology. Creator of pupillography. Lowenstein was born in Osnabrück, Germany and studied philosophy and mathematics at the University of Göttingen and went on to procure his medical degree at the University of Bonn in the fateful month of August, 1914. In the early year of his career he fell under the influence of A. Westphal (1863-1941), who was interested in the "catatonic pupillary immobility" of the schizophrenic. Lowenstein found the explanation of this phenomenon in a hyper-reaction to sensory stimuli. Having his attention attracted to pupillary action, he soon noted pupillary abnormalities to be among the earliest and most constant signs of neurosyphilis, preceding by years the appearance of subjective symptoms. His mathematical background made him conscious of the value of graphic representation of observable facts, and he pondered on how he could have such records of his observations so that, at a later date, he could analyze his findings at his leisure and determine their significance. Thus was born his brain-child, pupillography. First through motion pictures of the reaction of the pupil to light and various stimuli with X15 magnification and later, in 1957, through electronic control utilizing scanning and other modalities, he brought order out of chaos and finally concluded that, of the thousands of references to the pupil by other observers, only 10% were wholly correct. It is only in recent years that pupillography has been recognized as a method of unusual delicacy and accuracy for the localization of functional or organic change within the upper brainstem and the afferent and efferent pupillary pathways. Working on patients with glaucoma, he soon found curves that were characteristic of this disease and by localization studies in monkeys and cats pinpointed the pathologic process that gives rise to the pupillographic curve. From here he went on to study thyroid disease and found a characteristic pattern which aided differential diagnosis of exophthalmos of local cause and central sympathetic disturbances. This was of much aid to the ophthalmologist. He published over 100 articles on varied topics, at least 50% dealing with the pupil. In 1931 he was named professor of neurology and psychiatry at the University of Bonn. As director and founder of the Rheinische Landeslinik für

Jugendpsychiatrie" he found an urge to do more for the young psychiatric patient. The Rhinish Psychiatric Children's Clinic, which he also founded in Bonn, became the first clinical-diagnostic center of its kind in Europe. Forced to leave his country by the political developments of 1933, he continued his studies abroad. In spite of the loss of his instruments, his manuscripts and all the scientific materials assembled over many years, he rebuilt his laboratory twice, unaided, each time in a new country. He was made consultant in psychiatry at La Metairie in Nyon, Switzerland (1933-1938) and came to America in 1939. He served as clinical professor of neurology at New York University Medical School until 1947 and then at Columbia University and later as research associate in ophthalmology until retirement in 1962. In 1964 he received from his former University in Bonn an Ph.D. *honoris causa*. A bust of Lowenstein was unveiled during his visit in the Rhinish Clinic. He was a diplomate of the *American Board of Neurology* and a member of the *American Academy of Neurology* and the *Academy of Sciences*. AJO 1965, 60:155-156

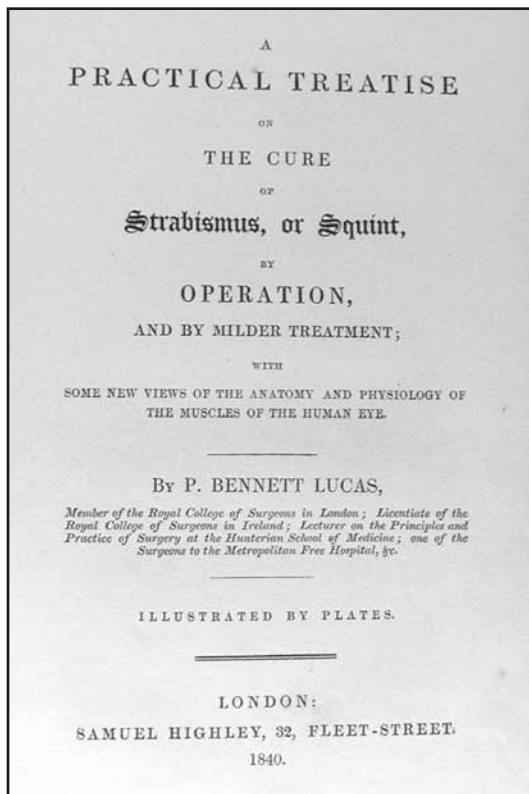
Lowne, Benjamin Thompson (1839-1925) British surgeon and naturalist. Lowne was educated at St. Bartholomew's Hospital (M.R.C.S.in 1861). He lectured on anatomy and physiology at the Middlesex Hospital Medical School (1871-1895) and at the Royal College of Surgeons (1876-1880, 1890-1893), and in 1876 became ophthalmic surgeon to the Great Northern Hospital. Lowne was interested less in clinical medicine than in research on comparative anatomy, physiology, and embryology. He wrote extensively on the development and physiology of the sensory organs in insects and vertebrates. He published the following books: *Teratological Catalogue of the Museum of the Royal College of Surgeons* (1872) and *A manual of ophthalmic surgery* London 1876.

Lowry, William Herbert (1880-1942) Canadian ophthalmologist. Born in 1880, the son of a doctor, he graduated M.D. at Toronto in 1901. Almost immediately he decided to practice ophthalmology, and after post-graduate study in London and Birmingham he was appointed to the staff of the Hospital for Sick Children, where, in 1919, he became chief ophthalmic surgeon. Ten years later he succeeded MacCallum as Professor of Ophthalmology at the University of Toronto. Resigning the post in 1941 through ill-health he was elected Emeritus-Professor. He served in the last Great War in England and Salonika and rose to the rank of Lieutenant- Colonel. He was an earnest and painstaking teacher, particularly interested in undergraduate training. BJO 27,96,1943

Lubarsch, Otto (1860-1933) German pathologist born in Berlin. He received his M.D. in 1883 in Strasbourg and after postgraduate study in pathologic anatomy in various European cities, became director of the pathology research facilities at Posen (1899-1905) and Zwickau (1905-1907), and professor at the medical academy at Düsseldorf (1907-1913), the University of Kiel (1913-1917), and the University of Berlin (1917-1929). Lubarsch published major works on infection and inflammation. He edited with R. Ostertag the *Ergebnisse der allgemeinen Pathologie und pathologischen Anatomie des Menschen und der Tiere*. (36 vols.) München 1894-1943 and with F. Henke the famous 12-volumes treatise *Handbuch der speziellen pathologischen Anatomie und Histologie*. Berlin 1924-1952.

Luca, Domenico di (1820-1887). Italian ophthalmologist. He became assistant to →Castorani and afterwards extraordinary professor of ophthalmology at Naples. He wrote a few articles and a small handbook on diseases of the eye: *Elementi di Ottalmiatri* (2nd.edition 1873).American Encyclopedia of Ophthalmology, Vol.10, p.7541

Lucas, Philip Bennett (1804(?) -1856) British surgeon who wrote the first treatise on the strabismus operation in Great Britain. He practiced surgery in London, lectured on surgery at the Hunterian School of Medicine, and was president of the Harveian Society (1843-1844), before losses in a disastrous financial speculation forced him to flee to Boulogne, France, where he built up a highly successful practice. He published articles and monographs on infectious diseases, vascular anatomy, and strabismus. He



wrote: *A practical treatise on the cure of strabismus, or squint, by operation, and by milder treatment* London 1840 being the first treatise on strabismus published in England. JPW

Ludwig, Christian Gottlieb (1709-1773). German surgeon of some importance in ophthalmology. Born in Brieg, Silesia, he received his medical degree at Leipsic in 1737. In 1740, he became extraordinary professor of medicine at his *alma mater*, then, successively at the same institution, professor of anatomy and surgery in 1747, professor of pathology in 1755, and of therapeutics in 1758. In the last named year he was also made dean of the faculty. Among his most important writings may be mentioned six successive volumes of "*Institutiones*," which appeared from 1752 to 1765, and all of which became well known authorities. These were the Institutiones "*Physiologicce..... Medicinae, Clinica,*" "*Chirurgicae,*" "*Pathologicae..... Therapiae Generatis*" and "*Medicinae Forensis.*" The "*Institutiones Chirurgicae*" (Leipsic, 1764) contains some sixty or seventy pages on diseases of the eye, the matter contained in which was, for many years of high authority among specialists as well as among general practitioners. American Encyclopedia of Ophthalmology, Vol.10, p.7542-7543.

Lund, Andreas (1772-1832). Danish physician who devoted considerable attention to ophthalmology. Born in Copenhagen he there received his medical degree in 1797. In 1812 he was made Professor at the University, and in 1813 Fellow of the Sanitary College. In 1832 he became chief court physician. His only ophthalmologic writing was "*Exophthalmus utriusque oculi*" American Encyclopedia of Ophthalmology, Vol.10, p.7547

Lundsgaard, Konrad Kristian Karl (1867-1931) Danish ophthalmologist, born in Silkeborg (Jutland) . At the conclusion of his medical study at the university Prof. Oscar Wanscher, at the time surgeon and oculist at Copenhagen, advised young Lundsgaard to take up ophthalmology. After a short stay as a volunteer assistant with Hansen Grut and Bjerrum he became a clinical assistant with Christensen (1897-1902) and after this, from 1902 to 1904, he served as a reserve-surgeon to the surgical-ophthalmological department of the Frederiks Hospital under Professor Wanscher. Having concluded this specialized training he started in practice and at the same time became head of the Frederiks Hospital Clinic and oculist to the Finsen Institute. Both positions he kept until he was appointed professor in 1925. In about seventy scientific publications Lundsgaard proved his interest in all branches of ophthalmology. Apart from this professional study, public life never ceased to attract him. His membership in many professional associations and scientific societies is a striking corroboration of this inclination. The gold medal of the Copenhagen University awarded to him for his treatise on "*The inflammation of the eye of new-born infants both from a pathogenic and a therapeutic point of view*" proves that his scientific work was highly appreciated. This was followed in 1900 by his thesis "*Bacteriological studies on conjunctivitis.*" Bacteriology henceforth captivated his attention. His publications on the flora of the conjunctiva give evidence of this, and it was on this account that he was invited, in 1927, to deliver the "Doyle Memorial Lecture" at Oxford. He published clinical papers on "*Hemeralopia in alcoholics*". "*Refraction anomalies in case of diabetes*". "*Paralysis of eye muscles in infants*", and others. He also worked in the field of surgical ophthalmology and among other things constructed a trephine for sclerectomy and a keratome. As regards therapeutics, he specially occupied himself with optochin treatment and with the effects of parenteral milk injections. He did epoch-making work with light treatment in ophthalmology, having been the first to apply the Finsen method in diseases of the eye and he constructed the necessary set of instruments for this treatment. The history of ophthalmology also attracted his attention. He was a collector of old spectacles and wrote a monograph on the history of these useful instruments. In the year 1929 a Scandinavian *Manual of Ophthalmology* published his study on the affections of conjunctiva and orbit. His collaboration with others resulted in the foundation of the journal "*Dansk Klinik*" and from 1919 to 1925 he was co-editor of "*Nyt Medicinsk Aarskrift*" and of "*Hospitals Tidende*". He deserves much credit for starting the "*Acta Ophthalmologica*", which periodical has since attained great popularity in Scandinavian countries and abroad. As a professor he succeeded Tscherning, who however, on Lundsgaard's request continued his labors in the laboratory for physico-ophthalmologic

research. Traveling was among his hobbies and during his trips he came in touch with many of his colleagues abroad. So he became a co-editor of the journal "*Klinische Monatsblätter f. Augenheilkunde*" edited by Axenfeld. Apart from his work, art and especially plastic art, attracted him and more than one of his articles sets forth the relation between the eye and artistic perception. The great confidence his colleagues put in him became apparent when, at the first international conference of ophthalmologists after the great war (1927) he was appointed vice-president of the International Council, founded on that occasion, and was elected president in 1929. During the XIIIth International Congress of Ophthalmology 1929, in Amsterdam, as a collector of old spectacles, he was invited, with C. Greef and others to organize a display of old spectacles and edited with Greef, Hallauer and others: *Katalog einer Bilderausstellung zur Geschichte der Brille* (Amsterdam 1929) AJO 1931,14:1272-1274. JPW.

Lundy, Charles J (?-1892). American ophthalmologist of Detroit, Mich. The date and place of his birth are not procurable. He received, however, the degree of M.D. at the University of Michigan in 1872, and the same degree *ad eundem* at Bellevue Medical College in 1875. For the next three years he studied ophthalmology. Returning to Detroit in 1878, he was soon recognized as an expert operator. He became professor of ophthalmology at the Detroit College of Medicine, President of the Michigan State Medical Society and a collaborator on the American "*Journal of Ophthalmology*." American Encyclopedia of Ophthalmology, Vol.10, p.7547-7548.

Luntz, Maurice Harold (1930-) American ophthalmologist (formerly South African ophthalmologist), Clinical Professor of Ophthalmology, Mount Sinai School of Medicine, New York, NY; Director of Glaucoma Services, Manhattan Eye, Ear & Throat Hospital, New York, NY. He studied ophthalmology at St. Mary's Hospital, London, U.K., under Drs. Redmond Smith, Alex Cross and George Leigh from 1958 to 1960. Between 1960 and February, 1961, he was in private practice as an ophthalmologist in Cape Town, South Africa. In February, 1961, he was appointed Lecturer in Ophthalmology at the University of Oxford, England, attached to Baylor College. He remained in Oxford until the end of 1963, when he returned to private practice in Cape Town, but, in July, 1964, he was appointed Professor of Ophthalmology and Chairman of the Department of Ophthalmology at the University of the Witwatersrand in Johannesburg, South Africa. He remained in this position until the latter half of 1978, when he emigrated to the U.S.A. and took up the post of Director of Ophthalmology at Beth Israel Medical Center, New York, NY, and Professor of Ophthalmology at Mount Sinai School of Medicine, New York, NY. In 1989, he left Beth Israel Medical Center and entered private practice but continued in the position of Chief of Glaucoma Services at Manhattan Eye, Ear & Throat Hospital and Clinical Professor of Ophthalmology at Mount Sinai. From 1990 to 1995, he was a Surgeon Director of MEETH. From 1992 to 1995, he was President of the Board of Surgeon Directors of MEETH. He obtained his medical degree (M.B., Ch.B.) at the University of Cape Town, South Africa, in 1952. In 1957, he became a Fellow of the Royal College of Surgeons of Edinburgh. In 1974, he was awarded the M.D. (Doctorate of Medicine) degree — the highest academic degree in medicine offered by the University — of the University of the Witwatersrand. His thesis was entitled, "*Studies in Uveitis and Glaucoma*" and described his research in these two areas. In 1999 he was awarded an Honorary Fellowship of the College of Medicine of South Africa. His research interests have centered around glaucoma and, in particular, its surgical management, introducing many modifications to improve surgical techniques. His research in this area led to the publication of his book "*Glaucoma Surgery*", written jointly with Dr. R. Harrison, the first edition published by Williams & Wilkins, Baltimore, MD, U.S.A., in 1984, and the second edition published by Scientific Publishing Co. & P.G. Publishing in 1994. His research interests have also included uveitis. While in private practice in Cape Town, he collaborated with the Pathology Department at the University of Cape Town and published some of the earliest work in the detection of immune complexes in patients with uveitis. In 1982, Williams and Wilkins, Baltimore, MD, published his book in joint authorship with Alan H. Friedman and Walter L. Henley entitled, "*Diagnosis and Management of Uveitis*". He has published nine books, 44 chapters in books and 105 journal articles in peer review journals. He has received a number of academic awards — e.g., the Sam and Dora Cohen

Medal from the University of the Witwatersrand, Johannesburg; the Gold Medal from the University of Rome; and the Honor Award of the American Academy of Ophthalmology. He was Guest of Honor at the IV International Symposium on Immunology & Immunopathology of the Eye in Padua, Italy; Guest of Honor at the XXI Alumni Meeting in Venezuela Symposium on Glaucoma in Caracas; Guest of Honor at the Beijing Ophthalmological Branch of the Chinese Medical Association and the Beijing Institute of Ophthalmology; and Guest of Honor of the University of Rome. In 1974, he established the National Eye Bank Foundation of South Africa and remained a Trustee of the Eye Bank until 1978. In 1964, he established the South African National Ocular Tumor Registry and was Chairman of the Registry from 1964 to 1976. He has been active in regional ophthalmological activities in New York as Chairman of the Ophthalmology Section of the New York Academy of Medicine from 1989 to 1990; Chairman of the Medical Advisory Board of the New York Eye Bank for Sight Restoration from 1989 to 1991; and President of the New York Intra-ocular Lens Society from 1995 to 1997. In international ophthalmology, he was Chairman of the First and Second South African International Ophthalmological Symposia in Johannesburg (1968, 1973), and Chairman of Glaucoma International, New York, NY, in 1986. He served as a Member of the International Council of Ophthalmology from 1972 to 1980, and as Chairman of the International Committee on Teaching and Education in Ophthalmology from 1980 to 1991. He is a Founding Member of the Academia Ophthalmologica Internationalis and served as First Vice—President from 1994 to 1998. He is a Serving Officer of the Order of St. John of Jerusalem. He has been designated Visiting Professor by invitation in 16 ophthalmology departments world-wide and has been a Guest Lecturer at 150 ophthalmology departments world-wide. He received an Honor Award from the Helen Keller Services for the Blind, Manhattan League, and is a Member of Honor of the Barraquer Institute in Barcelona, Spain. (The Mount Sinai School of Medicine and Director of Glaucoma Services at Manhattan Eye, Ear & Throat Hospital, New York, NY.U.S.A.: phone: +1-212-751-3301; fax: +1-212-223-2881)(SM)

Luo, Chengren (1923-) Chinese ophthalmologist, Professor at West China University of Medical Sciences, Chengdu. He graduated from West China Union University, School of Medicine in 1950, studied Ophthalmology under Eugene Chan at the University and received his M.D. degree in 1950 from New York University. He served at Sichuan Medical College as an Instructor (1954-1979) and Associated Professor (1980-1982) and then was appointed the Professor of Ophthalmology at the West China University of Medical Sciences in 1983 and works in this position to the present. In the professional societies, he worked as the President, Academy of Ophthalmology of Sichuan (1990-1994), President of the Academy of Ophthalmology of Chengdu (1990-1994) and Director of Academy of the Ocular Fundus Diseases (1983-1995) in Chinese Association of Ophthalmology. He serves as the editor to ten professional journals, e.g. *Recent Advances in Ophthalmology* (1979-), Editor-in-Chief of the *Ocular Fundus* (1985-1993) and of *Chinese Journal of Ocular Fundus Diseases* (1993-1998), *Chinese Journal of Medical Genetics* (1984-), *Chinese Journal of Ophthalmology* (1989-1998), *Ophthalmology in China* (1990-), *Chinese Ophthalmic Research* (1990-) and *Chinese Journal of Practical Ophthalmology* (1990-). Among many of his original papers, some examples of his recent publications are “*Influence of aldose reductase inhibitor of myo-inositol on contents of glucose, sorbitol and myo-inositol of diabetic retinal tissue in rat.* Chin J Ocular Fundus Dis, 1997, 13:75”, “*Heterotransplantation of retinoblastoma cell line into the vitreous cavity of nude mice.* Chin J Ocular Fundus Dis 1998, 14:144” and “*Experimental research on in vivo gene therapy of retinoblastoma.* Chin J Med Genet, 1999,16:211”. He has written 6 books, e.g. “*Clinical and basic research in retinal diseases.* Shanxi Science and technology Publishing House, 1995” and “*Diseases of Uvea, Retina and Vitreous in System of Ophthalmology.* Vol. 7, The People’s Medical Publication House, 1996”. He is a recipient of the Golden Key Award 1996 from American-Chinese Academy of Ophthalmology (Award Lecture: The advances in researches of ocular fundus diseases in China). (Department of Ophthalmology, West China University of Medical Sciences, Chengdu 610041, Sichuan, People’s Republic of China. fax: +86-28-5577707; e-mail: luochren@mcwcums.com) (SM)



Tsung-Hsien Luo

Luo, Tsung-Hsien (1905-1974) Chinese ophthalmologist, Former Professor of Ophthalmology of Peking Union Medical College and Former Director of the Institute of Ophthalmology, Beijing. He graduated from Shanghai University in 1927 with BS in biology and then from Peking Union Medical College in 1932 with MD degree granted. He studied in the U. S. A. during 1940-1941. On his return home, he served at the Peking Medical College as the Assistant Professor of Ophthalmology (1940-1942), Acting Chairman of the Department of Ophthalmology (1941-1942) and Professor and Chairman of the Department of the College (1948-1974). Conjointly, he served as Clinical Professor of Ophthalmology at Peking University School of Medicine (1942-1947), Consulting Ophthalmologist, Hopkins (Tongren) Hospital, Beijing (1947-1974), Chief, Department of Ophthalmology, Chung Ho Hospital, Beijing (1942-1952) and the Director, Institute of Ophthalmology, Beijing (1958-1975). His professional activities included Editor of the *Chinese Medical Journal*, *Chinese Journal of Ophthalmology*, Vice-President of the Chinese Ophthalmological Society and Editor of the *American Journal of Ophthalmology* (1946-1949). He is the author of "*Diseases of the Fundus*, People's Publishing House, 1979". (SM)

Luo, Wen-Bin (1916-) Chinese ophthalmologist, Former Chief of Sichuan Provincial People's Hospital, Chengdu, Sichuan. He graduated from the Medical College of West China Union University in 1943 and was granted the M. D. degree from New York State University. He studied Ophthalmology at the Eye and ENT Hospital of West China Union University under Prof. Eugene Chan. He served as the Chief Ophthalmologist of Sichuan Provincial People's Hospital from 1949 to 1996. In academic societies, he has been on the Committee of the Chinese National Ophthalmological Society (1952-1984), on the Editorial Board of the Chinese Journal of Ophthalmology (1956-1996), and on the Chinese National Committee for Prevention of Blindness (1984-). He is an expert on diseases of lacrimal apparatus, and he is the author of the chapter of lacrimal apparatus of *The System of Ophthalmology*, The People Press of Health, Beijing, 1996. His many papers embrace "*Etiology and therapy of acute retrobulbar neuritis*, Am. J. Ophthalmol. 3: 1309, 1948", "*Dacryocystorhinostomy*. Chin. J. Ophthalmol. 9: 16, 1959" and "*The epidemiological survey of blindness and low vision in Sichuan Province*. Eye Science 3: 223, 1987" (Sichuan Provincial People's Hospital, Chengdu, 610072, Sichuan, P. R. China)

Lusardi, Christophe Mathieu (1778- ?) Italian ophthalmologist(?) probably born in Italy, received medical degrees at Duisburg and Montpellier, and settled in Paris about 1820, as a specialist in ophthalmology and particularly cataract surgery. He moved later to Lille (Northern France) where he became honorary oculist to the Arch Duchess Marie-Louise, Duchess of Parma. He published numerous articles and treatises, which reveal him to have been a skilled operator but also, a quack: *Traité de l'altération du cristallin et de ses annexes ... sur la pupille artificielle*. Paris 1819 (2nd ed.1821) ; *Mémoire sur la cataracte congéniale*. Paris 1823, 3rd ed.1827 (translation into Dutch by P.J. van Wageninge, Rotterdam 1828) ; *Essai physiologique sur l'iris, la rétine et les nerfs de l'oeil*. Paris 1831 ; *De l'Ophthalmie Contagieuse* Paris 1831 ; *Hygiène oculaire* Paris 1831 ; *Nouvelles recherches sur l'ophthalmie contagieuse qui règne dans les armées* Bruxelles 1838 ; *Préjugés sur l'opération de la cataracte* Paris 1839 ; *Mémoire sur les fungus hématode et médullaire de l'oeil et sur les tumeurs dans la cavité orbitaire*. Paris 1846. Lusardi also wrote a book about deafness: *Opuscules, ou Essais sur la Surdité etc.* Paris 1831. He translated, with P. Bernard, Turnbulls' *Treatment of the Diseases of the eye* (1843) with the altered title: *Traitement de la Cataracte, et de quelques autres maladies des yeux, sans opérations Chirurgicales* Paris 1844. American Encyclopedia of Ophthalmology, Vol.10, p.7554-7555

Luy, Hoang Thi (1929 -) Vietnamese ophthalmologist. She graduated from Hanoi Medical College in 1960, and received the specialization of second degree in 1981. She has been Associate Professor since 1991. She worked at National Institute of Ophthalmology from 1954 to 1965 and she also was vice head of Trauma, Retinal Department. She was director of Dong da General Hospital, as Head of Hanoi Eye Station from 1967 to 1975, Director of Dien Bien Phu Hospital and Ho Chi Minh City Eye Centre from 1978 to 1994. Now, she is the Head of Eye Department of Ho Chi Minh City

Medical Training Centre. She is Vice-President of Vietnamese Ophthalmological Society, President of Ho Chi Minh City Ophthalmological Society. She was very active on Prevention of Blindness. She wrote articles on plastic surgery of Eye lid and Orbit, xerophthalmia, survey on blindness. (SM)

Lyle, Herbert Willoughby (1870-1956) British ophthalmologist. He commenced the study of ophthalmology in 1893, attracted by the work of another great teacher, Professor McHardy. He was appointed to the Royal Eye Hospital in 1903, where he became Dean; he started ophthalmic teaching there, and had considerably developed the school until his work was unfortunately interrupted by the 1914-18 war. He was appointed as assistant ophthalmic surgeon to King's College Hospital in 1910 becoming full ophthalmic surgeon in 1917. His appointment as Dean of King's in 1911 soon took up more and more of his time so that he had little chance after the war to resume postgraduate ophthalmic teaching. He did, however, examine for the first part of the D.O.M.S. when this diploma was first started in 1921. His early interests were in anatomy and in physiology with zoology and biology as a sideline. He developed an intensely individual teaching technique which quickly made him famous as a coach. His classes for the Primary Fellowship examination were very widely known and attracted the keenest personalities of his day. Later he examined for 10 years in physiology for the Primary Fellowship of the Royal College of Surgeons. His *Manual of Physiology* (written with Dr. David de Souza) was a most popular text-book, helpful to students by reason of its concise arrangement and easy didactic style. A later edition, titled *Applied Physiology of the Eye*, was edited by his son T. Keith Lyle in London 1958. As an ophthalmologist he was careful and precise. He had a real love of refractive work and managed to instil interest in this subject into his students. He was a good operator, particularly successful in his treatment of chronic glaucoma for which he employed a filtration operation of his own which anticipated the principles of iridencleisis. He had a deft touch and his main operative interests lay in intra-ocular work. King's students were fortunate in his amusing and colourful ophthalmic teaching. He had the rare art of concocting catchwords which would make his pupils remember the salient features of such a disease as glaucoma. It was largely due to his work that so many King's men have become ophthalmologists. These include among others his two sons Keith and Eric, G. T. W. Cashell, T. H. Whittington, and J. M. Bickerton. He developed a large consulting ophthalmic practice of his own. His main life work was undoubtedly the building up of the King's College Hospital medical school, where he worked for so many years with incredible energy and assiduity. After his retirement he received the unique recognition of being made Dean Emeritus and Emeritus Lecturer in Ophthalmology to the Medical School. In the midst of his crowded and active life he found unlimited time to attend to the affairs of the students. AJO 1956,40:255-256. JPW

Lynn, Beatrice Helena (1899-1966) Irish ophthalmologist. Born in Londonderry she qualified in medicine in the Queen's University of Belfast in 1923. After qualification she decided to follow her interest, and to specialize in ophthalmology. With this end in view she studied in Vienna and later took a post as clinical assistant in Edinburgh Royal Infirmary, here she became a Fellow of the Royal College of Surgeons of Edinburgh. She then returned to Belfast where she joined the staff of the Belfast Ophthalmic Hospital, the Ulster Hospital for Women and Children and the Ards Hospital, Newtownards. Until her retirement in 1964 she served these hospitals devotedly. Mrs. Lynn was a Past-president of the Irish Ophthalmological Society. Her presidential address on retrobulbar neuritis reflected her long-continued interest in neuro-ophthalmology and her other particular interest was in strabismus and orthoptics. Brit.J.Ophthal. 1966, 50:504

Lythgoe, R. J. (?-1940) British scientist who made extensive research of vision under different conditions of illumination. Lythgoe took up these problems at the outset of his work as a Beit Research Fellow. That he was able to devote himself unremittingly to them to the end of his life is due to the encouragement he received from the Medical Research Council, and the permanency of tenure of his post under their aegis. His paper on "The adaptation of the eye: its relation to the critical frequency of flicker" in 1929, embodying the results of experiments conducted with the help of his future wife, Miss K. Tansley, revealed new facts in a domain already thoroughly exploited by physicists. Facts heartily,

accepted by them owing to the care and accuracy of his physical measurements. The same accuracy and originality were displayed in his paper on "*The measurement of visual acuity*," also published in the Special Report Series of the Medical Research Council, in 1932. Both these papers mark new stages in the history of the scientific investigation of visual capacity. During the last few years Lythgoe was engaged in collaboration with Goodeve and others in an exhaustive investigation of the physical and chemical properties of visual purple and its decomposition products under the influence of light. These researches have been published in the Proceedings of the Royal Society and the Journal of Physiology. They too reveal a stride forward in ophthalmic knowledge. BJO 24, 199-200, 1940

M

Ma, Jingxue (1960-) Chinese ophthalmologist, Professor and Director of the Department of Ophthalmology, the Second Affiliated Hospital Hebei Medical University. He graduated from Hebei Medical University, P.R.China, and then from the University of Hamburg, Germany in 1995 and received D. med. in 1995 (Thesis: *Histopathologic analysis on 701 choroidal malignant melanomas and correlation of a/b and g/d -receptor positive T-cell infiltrations in 113 necrotic choroidal melanomas with patients' life span.*). On his home coming, he learned Ophthalmology from Prof. Shu-Jin Liang at the Hebei Medical University. He has held the following positions: Lecturer and Physician in charge at the Teaching Hospital, Chengde Medical College (1983-1988), Associate Professor in Qinhuangdao Hospital, Hebei, China (1989 - 1992) and he has been in the present position as above since 1996. Conjointly, he also serves as the Director, Hebei Eye Research Center. His editorial assignments include Editorial member of Journal of Hebei Medical University (1996-), Editorial member of the *Chinese Journal of Ophthalmology* (1997-), Editorial member of *Chinese Journal of Ocular Fundus Diseases* (1997-) and Editorial member of *The Practice Journal of Ophthalmology* (Chinese) (1998-). His research interest has been glaucoma, vitreo-retinal diseases, vascular changes etc. and he has published more than 22 original papers in international journals, and some examples are "*a/b and g/d-T-cell-receptor positive lymphocytes in healthy and inflamed conjunctiva*. Graefe's Arch Clin Exp Ophthalmol 1996; 234: 467-470", "*Clinical observations of idiopathic senile macular hole*. Chin. J. Ophthalmol. 1998; 14: 222~225", "*Pre- papillary and retinal vascular loops*. Chin. J. Ocular Fundus Diseases 1999; 15: 9~11", "*Ocular histopathologic changes following intravitreal silicone oil injection*. Chin. J Ophthalmol. 1999; 15: 169-172" and "*a/b and g/d TCR+ lymphocyte infiltration in necrotising choroidal melanomas*. Br. J. Ophthalmol. 1999; 83: 1069-1073". (Department of Ophthalmology, The Second Affiliated Hospital, Hebei Medical University, 203# Hepingxi Street, 050000, Shijiazhuang, China, phone: +86-311-7046901-2025, fax:+86-311-7821022; e-mail: jxma@sj-user.he.cninfo.net) (SM)

MacCallan, Arthur Ferguson (1873-1955) British ophthalmologist. MacCallan was born in 1873, the son of the Reverend J. Ferguson MacCallan, M.A., who had left Northern Ireland to settle in Nottinghamshire. He was educated at Charterhouse, Christ's College, Cambridge, where he secured the Darwin Prize, and St. Mary's Hospital, London, which he entered as a University Exhibitioner. He was for some years a keen soccer player, but his athletic career was cut short by a serious accident to his knee while at Cambridge. In 1899 he obtained the Cambridge M.B. and F.R.C.S. (England), and he proceeded M.D. in 1913. Early in his career MacCallan decided to specialize in ophthalmology. As a student he had been taken to Moorfields by Silcock, and shortly after qualification he was appointed house surgeon to that hospital, and later worked there as chief clinical assistant. The scourge of eye disease in Egypt was an age-old problem, which had received particular recognition in Europe since the return of troops from the Napoleonic Wars. At the turn of the century Sir Ernest Cassel, who had been interested in the construction of the Nile dam at Asswan, was moved by the prevalence of blindness in Egypt to donate a sum to further the education of Egyptian medical men in ophthalmic diseases. As a first step it was decided to establish a mobile hospital, and to the charge of this MacCallan was appointed in July, 1903. From this beginning he evolved, by prodigious work and the help of Government and private funds, a vast organization, ultimately comprising base ophthalmic hospitals in each of the capital towns of the fourteen Egyptian provinces, six travelling hospitals and numerous subsidiary clinics. The

training of Egyptian ophthalmic surgeons received prior consideration, and regular courses of lectures and clinical instruction were provided. Research facilities were at first established in small centres, but these were superseded some years later by the magnificent Ophthalmic Laboratory at Giza, near Cairo, built as a memorial to the men of the Egyptian Camel Corps and Labour Corps, who had been killed in the war. No less important was the provision of ophthalmic treatment in all Government primary schools throughout Egypt, an innovation which was at first received with some hostility.

Lord→Kitchener was particularly interested in these activities, and at his suggestion MacCallan undertook a programme of clinical research in ankylostomiasis and bilharziosis, for which four large tented hospitals were established. MacCallan was in England at the outbreak of the 1914 war, but at once returned to Egypt where he concentrated the travelling and tented hospitals at Alexandria as a general hospital for British and Australian sick and wounded. The static eye hospitals throughout the country were used for convalescent cases, though their out-patient departments were maintained as ophthalmic centres. Later in the war MacCallan served as surgeon at a base hospital in Mersa Matruh, with the rank of Major, R.A.M.C. In 1920 he was made a C.B.E. His work in Egypt provided MacCallan with unparalleled experience in the study of tropical diseases of the eye, and in particular of trachoma, on which he became a recognized world authority. In addition to many articles in the medical press, covering a wide field, he wrote a standard text-book on trachoma (*Trachoma and Its Complications in Egypt. Cambridge. 1913.*) and it was a fitting tribute to his work and to all that he had done to meet the ravages of this disease, that he was elected President of the International Trachoma Organization. From this position he only retired in September, 1954, after presiding over its activities during the XVII International Congress. In 1923 MacCallan resigned from the service of the Egyptian Government. His great contributions to medicine in that country were recognized by two Egyptian decorations, and by the unique distinction of a bust of himself, presented by the ophthalmic surgeons of Egypt, which was unveiled by the High Commissioner in 1931. Returning to England MacCallan proceeded to shape for himself a career as an ophthalmic surgeon in London. It was a striking tribute to his status, which he was proud to acknowledge, that in middle-age he was welcomed to the consulting staff of the Westminster Hospital and of the Royal Eye Hospital, to both of which, and to his private practice, he applied himself with customary zeal and enthusiasm. On reaching the age of retirement he continued research work at Westminster Hospital, and he resumed full clinical responsibility there during the war years. BJO 1955,39:319-320

MacGillivray of MacGillivray, Angus (1865-1947) Scottish ophthalmic surgeon from Dundee. He was ophthalmic surgeon to the Dundee Royal Infirmary for over 30 years, and surgeon to the Dundee Eye Institution for 45 years. On his retirement from the latter post in 1937 he was presented with a portrait bust by Benno Schotz, R.S.A., in appreciation of his eminent services. In 1935 he retired from the post of Reader in Ophthalmology at the University of St. Andrews and later received the honorary degree of LL.D. He was for many years eye specialist to the education authorities of Dundee, Angus and Fife. During the 1914-18 war, after long service in the Territorial Army, he acted as consulting ophthalmic surgeon with the rank of major, being awarded the T.D. Angus MacGillivray after taken an honours medical degree at Aberdeen University, worked under Priestley Smith in Birmingham and was English Secretary at the IXth International Ophthalmological Congress in Utrecht. In Dundee his work quickly gained for him an outstanding reputation throughout the East of Scotland as well as further afield. He developed unusual skill as an operator, and was a pioneer in cataract extraction under a conjunctival bridge and in the use of retrobulbar anesthesia. As a teacher of his subject his clarity of mind and enthusiasm inspired many of his students to take up the study of ophthalmology, and several of them have attained distinction in the specialty. Born at Abriachan, he was the 28th Chief of the clan MacGillivray, and an enthusiastic of things Celtic and archaeological, having published several books and articles on these subjects. He was Chief of the Dundee Highland Society in 1912. He also took a leading part in many other activities. In 1898 he was Secretary of the Section of Ophthalmology at the Annual Meeting of the B.M.A., and in 1902 Vicepresident. In 1924 he was elected President of the Dundee Branch. For 13 years he acted as county controller and director of

the Dundee Branch of the British Red Cross Society. Latterly he gave several years of useful service as a member of the Court of St. Andrews University. BJO 32,61-62,1947

Machemer, Robert (1933-) American ophthalmologist of German origin, Prof. Emeritus of Duke University, North Carolina. Born in Germany, he graduated as Dr. med. from the University of Freiburg in 1959. He then took the Fellowship in general pathology under Prof. F. Büchner in Freiburg and residency in Ophthalmology under Prof. W. Hallermann at the University of Göttingen. His interest in research and retina let him accept in 1966 Fellowship in the United States at the Bascom Palmer Eye Institute of the University of Miami, Florida under the tutorship of Prof. E. W. D. → Norton. He was offered a faculty position and stayed at the Institute until 1978 when he was recruited as Chairman for the Department of Ophthalmology at Duke University, North Carolina. After 13 years he relinquished this position and retired in 1998. During his professional career Dr. Machemer has pursued three major interests: 1) The study and treatment of retinal detachment and proliferative vitreoretinal diseases, 2) the development and refinement of vitreous surgery, and 3) the development of surgical instrumentation. Dr. Machemer is the first to establish an experimental model of retinal detachment. He was thus able to study in detail the developing pathology of retinal detachment and the reversal of this pathology with retinal reattachment. He used this model to analyze a major complication of retinal detachment called proliferative vitreoretinopathy (PVR). PVR is an excessive proliferation with membrane formation of mostly pigment epithelium and retinal glia derived cells. He has developed surgical therapies for the removal of these membranes. In animal experiments he has shown that steroid therapy is a successful means of suppressing this proliferation. His work is the basis of today's understanding of this disease. Dr. Machemer is best known for his development of pars plana vitrectomy. There are many eye diseases which afflict the posterior part of the eye. One of the best examples is diabetic retinopathy with intraocular hemorrhages and scar tissue formation. By developing a host of instruments and surgical techniques, which allowed surgery inside the closed eye, it became possible to remove the diseased vitreous and the intraocular scar tissue. Patients that so far were considered untreatable suddenly had a chance for rehabilitation. Vitreous surgery is now a technique, which is established all over the world. The most commonly treated diseases are: diabetic retinopathy, complicated retinal detachments with and without PVR, severe ocular injuries. Recently he has made a proposal for the treatment of age-related maculopathy. By surgically translocating the fovea and moving it into a new position the area of best vision is placed on healthy pigment epithelium. This operation allows recovery or maintenance of visual acuity. First successes are reported. He was a member of the following organizations: Bascom Palmer Eye Institute, Alumni Association, Miami, FL., 1968; German Ophthalmological Society, 1970; American Medical Association, 1970; Club Jules Gonin, 1972; Dade County Medical Association, 1973 - 1978; Florida Medical Association, 1973 - 1978; American Academy of Ophthalmology and Otolaryngology, 1976; Pan American Society of Ophthalmic Microsurgery, 1977; Pan American Association of Ophthalmology, 1977; American Ophthalmological Society, 1977 - 1992; Retina Society, 1977; Association for Research in Vision and Ophthalmology, 1978; North Carolina Medical Society, 1978; North Carolina Society of Ophthalmology, 1978; Durham-Orange County Medical Society, 1978; Alpha Omega Alpha, 1988; Peruvian Ophthalmological Society, Corresponding Member, 1988; Duke Eye Center Alumni Association, Durham, NC, 1989; Academia Ophthalmologica Internationalis. His editorial assignments are for Ophthalmology; *American Journal of Ophthalmology*; *Albrecht von Graefe's Archive; International Ophthalmology* and *German Journal of Ophthalmology*. He is on the following Councils and Committees: Policy Advisory Group, Diabetic Retinopathy Vitrectomy Study NEI; Diabetic Retinopathy Vitrectomy Study: Executive Committee, NEI; Early Treatment Diabetic Retinopathy Study: Data Monitoring Committee, NEI; Member of Study Section, NEI; Retina Society: Committee for Classification of PVR; Association for Research in Vision and Ophthalmology (ARVO): Awards Committee; International Council of Ophthalmology: Gonin Medal Selection Committee; Club Jules Gonin: Member of board and President. In recognition of his outstanding contributions, he received many Honor Awards, i.e., Hermann Wacker Award of the Club Jules Gonin, 1972; Research to Prevent Blindness, Inc. - Trustees Award for outstanding ophthalmic

achievement. American Academy of Ophthalmology, 1978; Award of Merit in Retina Research from Retina Research Foundation, 1980; von Graefe Prize, Deutsche Ophthalmologische Gesellschaft, 1981; Helena Rubinstein Foundation Professor, 1983; Golden Wesseley Medal, 1986; Proctor Medal and Lecture. Association for Research in Vision and Ophthalmology; 1988; Ernst Jung Prize for Medicine from Jung Stiftung für Wissenschaft und Forschung (Jung Foundation for Science and Research), Hamburg, 1993; Alexander von Humboldt Stiftung: Senior Distinguished US Scientist Award, 1993; Howe Medal of the American Ophthalmological Society. 1996; Helen Keller Prize for Vision Research, 1997; Jules Gonin medal and prize, 1998; Alcon Research Institute Award, 1999. He has been granted Honorary degrees from University of Göttingen, Germany: Dr.med.; Thomas Jefferson University, Philadelphia: Dr. sci.. He has delivered 34 special lectures that embrace Jackson Memorial Lecture, 1984; Bjerrum Lecture, 1986; Donders Lecture, 1988; Proctor Lecture 1988. He has published over 300 original articles and books: some examples are "*Vitreectomy*" Grune and Stratton, 1975, 1979; Machemer, R. and Norton, E. W. D.: *Experimental retinal detachment in the owl monkey*. I. *Methods of production and clinical picture*. Am. J. Ophthalmol. 66:388-396, 1968. Machemer, R.: *Experimental retinal detachment in the owl monkey*. II. *Histology of the retina and pigment epithelium*. Am. J. Ophthalmol. 66:398-410, 1968. Kroll, A. J. and Machemer, R.: *Experimental retinal detachment in the owl monkey*. III. *Electron microscopy of the retina and pigment epithelium*. Am. J. Ophthalmol. 66:410-427, 1968. Machemer, R.: *Experimental retinal detachment in the owl monkey*. IV. *The reattached retina*. Am. J. Ophthalmol. 66:1075-1091, 1968. Kroll, A. and Machemer, R.: *Experimental retinal detachment in the owl monkey*. V. *Electron microscopy of the reattached retina*. Am. J. Ophthalmol. 67:117-130, 1969. Machemer, R., Buettner, H. and Norton, E. W. D.: *Vitreectomy: A pars plana approach*. Trans. Am. Acad. Ophth. Otol., Las Vegas, 1970. 75:813-820, 1971. Machemer, R.: *A new concept for vitreous surgery*. II. *Surgical technique and complications*. Am. J. Ophthalmol. 74:1022-1033, 1972. Machemer, R. and Norton, E. W. D.: *A new concept for vitreous surgery*. III. *Indications and results*. Am. J. Ophthalmol. 74:1034-1056, 1972. Machemer, R. and Laqua, H.: *Pigment epithelial proliferation in retinal detachment (Massive periretinal proliferation)*. Am. J. Ophthalmol. 80:1-23, 1975. Laqua, H. and Machemer, R.: *Glial cell proliferation in retinal detachment (massive periretinal proliferation)*. Am. J. Ophthalmol. 80:602-618, 1975. Machemer, R. and Allen, A. W.: *Retinal tears 180 degrees and greater: Management with vitrectomy and intravitreal gas*. Arch. of Ophthalmol. 94:1340-1346, 1976. Machemer, R.: *Massive periretinal proliferation: A logical approach to therapy*. Tr. Am. Ophthalmol. Soc. 75:556-586, 1978. Machemer, R.: *The importance of fluid absorption, traction, intraocular currents, and chorioretinal scars in the therapy of rhegmatogenous retinal detachments*. XLI Edward Jackson Memorial Lecture. Am. J. Ophthalmol. 98:681-693, 1984. Machemer, R.: *Description and Pathogenesis of late Stages of Retinopathy of Prematurity*. Ophthalmol. 92:1000-1004, 1985. Machemer, R., Steinhorst, U.H.: *Retinal separation, retinotomy, and macular relocation: II. A surgical approach for age-related macular degeneration?* Graefe's Arch. Clin. Exp. Ophthalmol 231:635-641, 1993. (Office mailing address: 1532 Pinecrest Rd, Durham, NC, 27705; tel. and fax: +1-919-493-6080; e-mail: mache001@aol.com) (SM)

Mackenzie, Davidson, Sir James (1856-1919), English ophthalmologist, inventor of the cross-thread method of localising foreign bodies by means of the X-rays, and the foremost radiologist of the United Kingdom, was born at Estancia, Santo Domingo, Buenos Aires. He received a liberal education at the Scottish School in that city. His medical training was had at Edinburgh, Aberdeen and London. His degrees in medicine and surgery (M. B. and C. M.) were received at Aberdeen in 1882. For a time he was assistant in surgery at Aberdeen, but in 1886 succeeded Prof. Dyce Davidson as ophthalmic surgeon at the Aberdeen Royal Infirmary. This position he held till 1895. He was also ophthalmic surgeon to the Royal Infirmary and the Royal Sick Children's Hospital, Physician to the Blind Asylum, etc. In 1897 he removed to London, and from that time on devoted exclusive attention to the X-rays. He had, in fact, already, in 1896 -the year after the rays were discovered- gone to Würzburg there to talk with Roentgen about his new discovery. In the July, 1897 number of the "Archives of the Roentgen Ray," he published a cut of a bladder stone radiograph, and from that time forward was one of the foremost workers in

the world on the subject of radiography. He became Consulting Surgeon to the X-ray Department Charing Cross Hospital; X-ray surgeon in charge of X-ray Department, Moorfields; president of the Roentgen Society; president of the Radiology Section of the 17th International Medical Congress; a Fellow of the Physical Society, etc. For the last three years of the war, he was consulting radiologist to the military hospitals of the London district. He was knighted in 1912. Among his more important Publications may be mentioned: "*The Electric Light Applied to the Ophthalmoscope*," Lancet, 1886; "*Localization of Foreign Bodies in Eyeball and Orbit*," Trans. IX Internat. Oph. Congress, Utrecht. Many of his articles appear, in the Transactions of the Ophthalmological Society of the United Kingdom. AJO 2:769-770

Mackenzie, Sir Stephen (1844-1909). A brother of the famous rhino-laryngologist, Sir Morrell Mackenzie, and a general physician, dermatologist and ophthalmologist of considerable importance. Born, the son of a physician, he studied at the London Hospital and at the University of Aberdeen, where he received the degree of M.B. in 1873. In 1874 he was a Member of the College of Physicians of London and in 1879 became a Fellow of the same body. He was for a time assistant physician at the London Hospital, in charge of the skin department and, later, was lecturer on medicine and pathology at the London Hospital Medical College. He was also for some years physician to Moorfields Hospital. He was a charter member and the first Honorary Secretary of the *Ophthalmological Society of the United Kingdom*. He was knighted in 1903, and died at Dorking, Surrey. Among his ophthalmologic writings are: *Glycosuric Retinitis* (*Roy.Lond.Ophth.Hosp.Rep.*, IX) and *On the Immediate Causation of Optic Neuritis* (*Brain*, IJ.) American Encyclopedia of Ophthalmology, Vol.10, p.7569

Mackenzie, William (1791-1868) British ophthalmologists, founder of the Glasgow Eye Infirmary and author of the celebrated text-book, *A Practical Treatise, on the Diseases of the Eye*. Born at Glasgow, he studied in the Glasgow Grammar School and also in the School of Arts at Glasgow University. For a time, intending to become a minister, he studied at Divinity Hall, but, in 1810, deciding to be a doctor, he entered the Royal Glasgow Hospital. From 1815 to 1818 he studied ophthalmology in London, Paris, and, Vienna, as well as a number of places in Italy. Returning to England, he settled as ophthalmologist in London, but, it seems, without success. Even his work, entitled "*Essay in the Excreting Parts of the Lachrymal Organs*," attracted no attention. His waiting-room was always empty, and London permitted, without a remonstrance, the greatest British ophthalmologist of his time to remove to Glasgow. In Glasgow he was almost immediately successful, and there he practised till the day before he died. He never entirely abandoned general medicine or surgery, but he gave to ophthalmology the greater portion of his time. In the Andersonian University he lectured on anatomy, materia medica and medical jurisprudence. In 1824, together with Dr. George Monteith, he established the Glasgow Eye Infirmary. In 1827 or '28 he was appointed instructor on diseases of the eye in Glasgow University, receiving as emolument the funds of the Waltonian lectureship. This position he held for more than forty years, until his death. For two years he edited the *Glasgow Medical Journal*, to which he contributed freely, especially on ophthalmic subjects. In his later years he was appointed surgeon-oculist to the Queen in Scotland. He had an enormous practice, many of his patients arriving from Continental Europe and America. Dr. Mackenzie was hard at work the day before his death. He was somewhat conservative toward innovations (as, for example, the strabismus operation, the ophthalmoscope, and iridectomy for glaucoma) he would finally yield, when the proof adduced was very strong, and acknowledge himself to have been in error. In addition to numerous journal articles, Mackenzie wrote the following: 1. *Introduction to a Course of Lectures on the Diseases and Operative Surgery of the Eye*. (1824.) 2. *Practical Treatise on the Diseases of the Eye*. (1830; later Eds., 1835, 1839 and 1854; two or three American editions; numerous German and French translations). According to Julius →Hirschberg, "This textbook was decidedly superior not only to such English works as had appeared during the first third of the 19th century →Saunders, 1811; →Vetch 1820; →Travers, 1820; →Watson, Edinburgh, 1830 but the best in general since that of Joseph →Beer [1813-1817]; it is the first English text book on ophthalmology which belongs to the literature of the world. 3. *Physiology of Vision*. (1841.) American Encyclopedia of

Ophthalmology, Vol.10, p.7567-7569; Thomson, A.M.Wright: *The Life and Times of Dr.William Mackenzie* (Private print) Glasgow 1973. JPW

Mackenzie, William (1791-1868), Scottish ophthalmologist of Glasgow. Mackenzie studied medicine at the Royal Glasgow Hospital (1810-1815) and ophthalmology in London, Paris, Vienna, and several Italian cities (1815-1818), before establishing a successful Glasgow practice in general medicine, surgery, and especially ophthalmology. In 1824, he founded the Glasgow and Eye Infirmary, and from 1827 to 1868 he taught ophthalmology at Glasgow University. In addition to his celebrated *Practical Treatise on the Diseases of the Eye* (1830), which went through many editions and translations, and *Physiology of Vision* (1841), Mackenzie published numerous journal articles. An acute and painstaking observer, he was among the first to point out the increase of intra-ocular pressure characteristic of glaucoma, and to describe sympathetic ophthalmitis in detail. His works are: *A practical treatise on the diseases of the eye*. London 1830 (2nd edition 1835, 3rd ed. by Thomas Wharton Jones, London 1841). An American edition was published in 1833 in Boston. *The cure of strabismus by surgical operation* London 1841; *The physiology of vision*. London 1841 ; *Traité pratique des maladies des yeux*. Paris 1844. (French translation of *Practical treatise on the diseases of the eye*, with additions and notes by S. Laugier and G. Richelot. Mackenzie, in the foreword of the 4th edition, complains bitterly about the fact that Laugier and Richelot omitted to take over the authors references cited in the first edition). Based on the 4th English edition, E. Warlomont and A. Testelin published a new French translation in two volumes and a supplement: *Traité Pratique des Maladies de l'Oeil*, Paris 1856-1865. see A.M. Wright Thomson *The Life and Times of Dr. William Mackenzie* (JPW)

Mackmurdo, Gilbert (? - 1869) An English ophthalmologist, the date of whose birth is not known. He was, for a short time, surgeon to St. Thomas's Hospital, London, and also instructor in anatomy and physiology at this institution. From 1830 to 1856 he was surgeon to Royal London Ophthalmic Hospital (from 1900 renamed Moorfields Eye Hospital). In 1843 he became a Fellow of the R. C. S. of England, and, a little later, a Fellow of the R. S. American Encyclopedia of Ophthalmology, Vol.10, p.7569

MacLaurin, Colin (1698-1746) Scottish mathematician, born at Kilmodan, Scotland. MacLaurin was educated at the University of Glasgow (M.A., 1715), and became professor of mathematics at Marischal College, Aberdeen (1717-1722), and the University of Edinburgh (1725-1746). A friend and zealous disciple of Isaac Newton, MacLaurin in his major works *Geometria Organica* (1720), the *Treatise of Fluxions* (1742), and *An account of Sir Isaac Newton's philosophical discoveries* (1748, 3rd ed. by Patrick Murdoch 1775) developed and defended Newtonian methods; in addition to his teaching and theoretical work, he devised a number of mechanical appliances, made valuable astronomical observations, did actuarial computations for insurance companies, and improved the science of cartography.

Maclean, Hector (1937-) Australian ophthalmologist, professor of ophthalmology in East Melbourne, Australia. Maclean studied at St.Andrews University (Scotland) and specialised at the University of Dundee (Scotland) and Melbourne (Australia). He specialised in ophthalmology under respectively Alistair A. Douglas, William A. Haining and Gerard W. →Crock. Maclean worked at Dundee Teaching Hospitals (Scotland) and at the Royal Victorian Eye and Ear Hospital (Australia). Became Associate Professor (Clinical) in 1988. Particular interests are in paediatric ophthalmology, in ocular pharmacology and therapeutics. He works at the Centre for Eye Research at the University of Melbourne. Current address: Professor Hector Maclean, Centre for Eye Research, University of Melbourne, Locked Bag 8 , East Melbourne 8002 , Australia. Phone + 61 3 9929 8350 ; Fax +61 3 9662 3859 ; email: hmaclean@cera.unimelb.edu.au (AB)

MacNab, Angus (? - 1914). Scottish ophthalmologist, inventor of the *MacNab Retinoscope*. He was of Scottish descent, and was born in New Zealand, where his brother was once Minister of Agriculture. He studied in the Universities of Otago, Edinburgh, Freiburg and Vienna. He graduated B. A. (N. Z.) in 1895, and in the following year took the degree of B.Sc. In 1901 he proceeded to the degrees of M.B. and Ch.B. in the

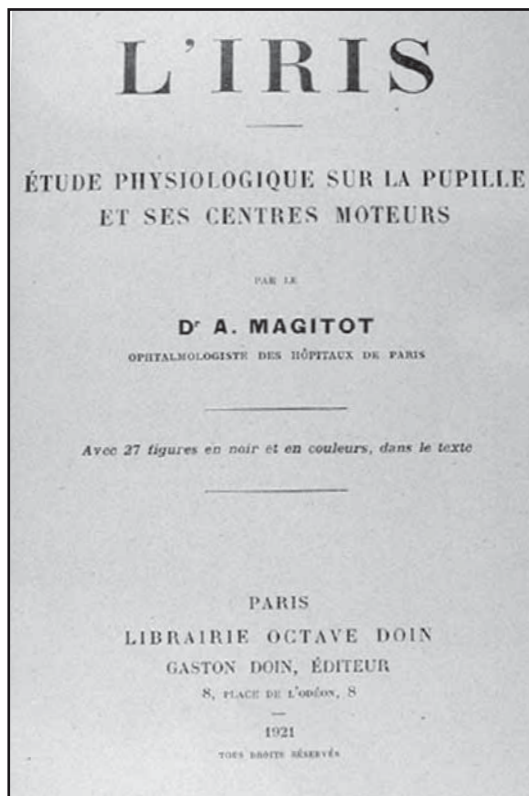
University of Edinburgh, and a few years later took the F.R.C.S., England. After acting as house surgeon to the Ophthalmic Department of the Edinburgh Royal Infirmary MacNab continued his special studies at Freiburg i. Br. and Vienna. His interest in ophthalmic bacteriology was attested by several original communications upon that subject, as well as by his masterly translation of Axenfeld's "*Bacteriology of the Eye.*" He also wrote a very useful book dealing with the *Ulceration of the Cornea* (1907) which included much of the work he had done at Freiburg. At the time of his death he was ophthalmic surgeon to King Edward VII Hospital at Windsor, and was also connected, in the capacity of chief clinical assistant, with the Royal London Ophthalmic Hospital. In 1913 he translated W. Lohmann's "*Disturbances of the Visual Functions,*" a most favorable review of which was published in the *Ophthalmoscope*. At the time of his death, at the early age of thirty-eight, he was a resident of London. American Encyclopedia of Ophthalmology, Vol.10, p.7569-7570; The Ophthalmoscope, 1914, p.743.

MacNamara, Nottidge Charles (1832-1918) English ophthalmic surgeon born at Uxbridge, England. He studied at King's College Hospital, London (M.R.C.S., 1854), and served in India as civil and military surgeon from 1854 to 1876; from 1863 to 1876 he was professor of ophthalmic surgery at the Calcutta Medical College. In the 1870s, MacNamara published several treatises in which he correctly posited that cholera was a water-borne infection, spread by fecal contamination; his claim was ignored, and it remained for Koch to gain the credit. In 1876, Macnamara returned to England, settling in London, where he became surgeon to the Westminster Hospital and the Royal Westminster Ophthalmic Hospital; he specialized in diseases of the bones and joints and in ophthalmology, especially cataract surgery, and wrote extensively on these subjects. In ophthalmology, he wrote: *Lectures on diseases of the eye* London 1866; *A manual of the diseases of the eye* London 1868, 2d ed. London 1872, 4th ed. 1882. He also wrote: *Notes on Leprosy* (1867); *Lectures on Diseases of Bones and Joints* (2nd ed. 1881, 3rd. 1886); *A Treatise on Asiatic Cholera* (1870); *History of Asiatic Cholera* (1876) *Diseases of Joints* (1879). MacNamara was editor of the *Indian Medical Gazette* in which he published many of his papers.

Maddox, Ernest Edmund (1860-1933) English ophthalmologist born in Shipton, England. Maddox received his medical degree in Edinburgh (1882) and became ophthalmic surgeon to the Royal Edinburgh Infirmary and the Royal Victoria and West Hants Hospital. He devised the Maddox Rod and the Maddox Prism, devices for testing deviation of the eye. He wrote: *The clinical use of prisms, and the decentering of lenses.* Bristol and London 1889; *Tests and studies of the ocular muscles* Bristol 1898

Magawly, Count John (1831-1904). Russian ophthalmologist, of Irish origin. Born in Cummingsdorf, near Riga, he received his medical degree at Dorpat, in 1856. He then for a time continued his studies at Vienna, Berlin and Paris, deciding at last to devote himself to ophthalmology because of the influence of von Graefe. In 1859 he settled in St. Petersburg, where he was appointed physician to the Eye Infirmary. In 1873 he became body-oculist to the Imperial Court, and in 1885 a Fellow of the Medical Council. In 1901 he resigned his offices on account of ill health, and from that time onward lived in retirement at Leutsch, near Leipzig. American Encyclopedia of Ophthalmology, Vol.10, p.7577

Magendie, François (1783-1855) French pioneer in experimental physiology. Magendie was born in Bordeaux and in 1791 moved with his family to Paris, where he studied medicine at the Hôpital Saint-Louis (M.D., 1808) and in 1809 published the first of his epoch-making investigations. Magendie made profoundly important discoveries concerning the toxic actions of drugs, the functions of the spinal nerves and the cerebellum, the mechanism of deglutition and vomiting, various aspects of digestion and circulation, the functions of the liver, and the phenomenon of anaphylaxis. He refused to advance theories or generalizations, insisting on dealing only in isolated facts; his enthusiasm for experimentations on living animals won him the eternal condemnation of anti-vivisectionists. *Mémoire sur l'usage de l'épiglotte suivi d'un mémoire sur les images qui se forment au fond de l'oeil.* Paris 1813 ; *Leçons sur les Phénomènes Physiques de la Vie* , 4 vols. Paris 1836-1838 ; *Précis élémentaire de Physiologie*, 2 vols. Paris 1816-1817 (American edition: *An elementary treatise on human physiology* New York 1844).



Magitot, André (1877-1958) French ophthalmologist. Magitot became an interne des hôpitaux in Paris in 1903 and in 1907 served in the clinic of Victor→Morax. In 1935 he succeeded Poulard at the Lariboisière where, apart from his necessary flight during the German occupation of Paris because of his Jewish origin, he remained as senior surgeon until he was succeeded by Edouard Hartmann in 1946. Thereafter his interest in ophthalmology continued unabated, and he retained his active editorship of the *Annales d'Oculistique* until his sudden death at the age of 82 in 1958. There is no doubt that Magitot was one of the most able and original of the ophthalmologists of a previous generation. His initial researches concerned the development of the eye, based on his personal collection of seventy human embryonic and foetal eyes of all ages, as well as the circulation in the optic nerve and chiasma. There followed his classical researches on the nature of the aqueous humour, the ocular circulation, and the control of the intra-ocular pressure. He was the *first* to demonstrate the viability of the cornea after death and was a pioneer in the application of this knowledge to the practice of corneal grafting. But the work for which he will be most remembered is his life-study of the pathogenesis and clinical features of primary glaucoma which he pictured as a medical disease usually of mesencephalic origin; in a long series of papers he insisted that the rise in ocular tension was merely a symptom, the mechanical relief of which by surgery was palliative but not curative. He wrote: *L'Iris* (1921) *Physiologie Oculaire Clinique* (Paris 1946) and with P. Baillart *Manuel d'ophtalmologie* (1950) BJO 1959, 43:128. AJO 1958,47:895-896. JPW

Magne, Pierre Alexandre Charles (1818-1887) French ophthalmologist born at Étampes, France. Magne received his M.D. in 1842 in Paris (thesis: *Quelques Mots sur l'Ophthalmologie*), where he became the assistant and friend of Sanson and subsequently earned distinction as an ophthalmologist. Magne was the author of numerous journal articles and treatises on eye diseases and the uses of spectacles. He wrote: *Hygiène de la vue* Paris 1847 (4th ed.1865) ; *De la cure radicale de la tumeur et de la fistule du sac lacrymal* Paris 1850 (2nd ed.1857); *Études sur les maladies des yeux comprenant l'hygiène de la vue* 2d ed. Paris 1854; *Du croup des paupières ou diphthérie de la conjonctive* (1858) ; *Des Lunettes Conservées, Lorgnons..conseils aux personnes qui ont recours à l'Opticien* (1851) ; *Ophthalmies Traumatiques. Choix d'Observations* (1854). American Encyclopedia of Ophthalmology, Vol.10, p.7577-7578. Albert.JPW

Magni, Francesco (1828-1887). Italian ophthalmologist. Born in Pistoia, he received the degree of Doctor in Medicine at Pisa, afterwards, studying ophthalmology at Vienna, Prague (where he stayed a long time with Ferdinand von Arlt with whom a life long friendship began), Paris and Berlin. At first he settled in Florence, where he founded a Polyclinic for eye patients. Removing to Bologna he became renowned internationally as an operator. Called to Peru to operate, he remained in South America for a year, operating in all the larger cities of that continent. Some years later he also performed a number of operations in Egypt. He wrote a 4 volumes set of lectures on ophthalmology: *Lezioni teoriche di oftalmiatria* which were published in Bologna 1861 to 1867.American Encyclopedia of Ophthalmology, Vol.10, p.7587.Annales d'Oculistique,1887,97:318-321.JPW

Magnus, Hugo Friedrich (1842-1907) German ophthalmologist born in Neumarkt, Germany. Magnus received his M.D. in 1867 at the University of Breslau, where he became lecturer (1873) and then (1883) professor of ophthalmology. A prolific writer, Magnus made especially noteworthy contributions in the fields of color vision and the history of ophthalmology.He main writings are: "*Ophthalmoscopischer Atlas*" Leipzig: Wilhelm Engelmann, 1872; „*Das Auge in seinen ästhetischen und culturgeschichtlichen Beziehungen: fünf Vorlesungen.*“ Breslau: J.U. Kern's Verlag (Max Müller), 1876; „*Geschichte des grauen Staares.*“ Leipzig: Veit & Comp., 1876.[GM 5993] „*Die Entwicklung des Farbensinnes*“ Jena: Hermann Dufft, 1877; „*Historische Tafeln zur Anatomie des Auges.*“Rostock:Hermann Schmidt, 1877; „*Die Anatomie des Auges bei den*

Griechen und Römern“ Leipzig: von Veit, 1878; „*Tafel zur Erziehung des Farbensinnes*“ Breslau: J.U. Kern's Verlag 1879; „*Die Blindheit, ihre Entstehung und ihre Verhütung*“ Breslau: J.U. Kern's Verlag, 1883; „*Die Sprache der Augen*“ Wiesbaden: J.F. Bergmann, 1885; „*Die Jugend-Blindheit. Klinisch-statistische Studien*“ Wiesbaden: J.F. Bergmann, 1886; „*Die Entstehung der reflectorischen Pupillenbewegungen*“ Breslau: J.U. Kern's Verlag, 1889. „*Augenärztliche unterrichtstafeln für den akademischen und selbstunterricht*“ Breslau: J.U. Kern's Verlag, 1892 –1900 *20 parts with plates. Each part is written not only by Magnus, but also by other famous ophthalmologists of his time. For example: Karl → Baas, (1898); Wilhelm → Czermak, (1895); Carl Richard → Greeff, (1897); Edmund → Landolt, (1893, 1887); Maximilian → Salzmänn, (1899); Adolf → Vossius, (1895).* „*Anleitung zur Diagnostik der centralen Störungen des optischen Apparates*“ Breslau: J.U. Kern's Verlag, 1892. (Augenärztliche Unterrichtstafeln, Heft 1); „*Die Darstellung des Auges in der antiken plastik*“. Leipzig: E.A. Seemann, 1892. „*Die Entwicklung des Altersstaars.*“ Breslau: J.U. Kern's Verlag, 1892. (Augenärztliche Unterrichtstafeln, Heft 2); „*Die Haupttypen des ophthalmoskopischen Veränderungen des Augenhintergrundes Allgemein-Erkrankungen*“ Breslau 1893; „*Leitfaden für Begutachtung und Berechnung von Unfallsbeschädigungen der Augen*“ Breslau: J.U. Kern, 1897; „*Die Untersuchung der optischen Dienstfähigkeit des Eisenbahn-Personals*“ Breslau: J.U. Kern, 1898; „*Die Augenheilkunde der Alten*“ Breslau: Kern 1901 translated by Richey L. Waugh jr., (*Ophthalmology of the Ancients*) JP Wayenborgh 2 vols. Ostend 1998-1999; [GM 5997]; Daniel M. Albert Source Book of Ophthalmology, p.212-213; The Ophthalmoscope, London 1907; GM 6624,6640-1; Centralblatt f. Augenheilkunde 1907: 123-124; British Medical Journal, 1907:1096; Hirschberg-History of Ophthalmology 11/1b: 230-231; American Encyclopedia of Ophthalmology, Vol.10, p. 7589.

Magnus, John Antony (1900-1966) British ophthalmologist of German birth. Born in Aachen in Germany he was medically educated in Heidelberg and graduated in 1923. In his youth he served as an ophthalmologist in several German hospitals, but in 1934 came to Britain as a Jewish refugee, to the enrichment of this country. He requalified at the University of Glasgow in 1935 and thereafter gained ophthalmic diplomas including the F.R.C.S.Ed. (1938). In that year he was appointed ophthalmic surgeon to the York City Hospital where he worked until his retirement in 1966. Not only was he mainly responsible for the modernization of the ophthalmic department at York, but he was an active member of the North of England Ophthalmological Society and became president of the York Medical Society. *Brit.J.Ophthal.*1966,50:680

Maher, Odillo (1857-1916). Australian ophthalmologist born in Sydney. After spending some terms at the Sydney University, he went to Ireland, where in 1881 he took the degrees of M.D. and Ch.M. at the Royal University. During a stay in London, he took the membership of the Royal College of Surgeons and became house-surgeon to Moorfields Hospital. On his return to Sydney, Maher was appointed ophthalmic surgeon to the Sydney Hospital and to St. Vincent's Hospital, Sydney. He was also examiner in Ophthalmology at Sydney University and a member of the consulting staff of the Military Base Hospital at Randwick, Sydney. *The Ophthalmoscope*, 1916, p.286.

Mailer, Colin (1935-) Canadian ophthalmologist. Mailer received his medical education at Edinburgh University receiving there his MB Ch. B. in 1959. He became, under T. K. Lyle, ophthalmologist in 1968, having visited first the Hammersmith Hospital, London from 1963 to 1965, then, from 1965 to 1968 Moorfields Hospital. He spent the years 1968 to 1969 at the University of Western Ontario. Mailer wrote about 25 papers, most of ophthalmic nature, amongst those: *Investigation of blood volumes in patients with Hematemesis and Melena* jointly with Abraham Goldberg, R Harden, Grey-Thomas and W. Burnett *BMJ* 1963; *Ocular Pathology of Gargoylism* (Pathology case report, with collaboration of the late Norman Ashton in 1968) *Avulsion of the inferior rectus muscle*, *Canadian J of Ophthalmology*.1970; *Retinal Blood vessel Diameters and the effects of inspired gases*, jointly with Hill, Dollery and de Souza-Ramalho. Mailer also undertook translations from the French language: Jean Bernard Weiss *Ocular Muscle Imbalance and the Weiss coordimeter* (not yet published); Philippe Lanthony *The Eye of the Painters-An ophthalmology Viewpoint* (not yet published) and *History of Corneal Neutralization and of*

Contact Lenses (3 volumes) 2001 ff. Wayenborgh Ostend/Belgium. Colin Mailer is a member of the Canadian Ophthalmological Society and of the American Academy of Ophthalmology. His hobbies are: viola playing in London Community Orchestra, Active membership of London Opera Guild, stamp collecting and the study of European Languages. phone 519-672-2510 (private office), phone (519)-438-6367 (home), fax 519-672-0898. JPW

Maiman, Theodore (1927-) American scientist. Ted Maiman's career has always been marked by more than a bit of iconoclasm . While theoretical physicists wrote papers and debated the merits of different materials and approaches for a laser , Maiman set out to build one . A pragmatic scientist , one of his main concerns was practicality - he not only wanted to build a laser , but he wanted the device to be easy to work with . Along the way , Maiman had to overcome obstacles put in place by scientific colleagues , supervisors ... and the laws of physics . He was determined , however , to let nothing stand in his way . It was his independent attitude that helped Maiman to win the race to build the first laser . In May , 1960 , he demonstrated laser action from a ruby crystal while working at Hughes Research Laboratories in Malibu , California. Maiman left Hughes in 1962 to found Korad Corp , one of the first manufacturers of laser equipment . From 1976 to 1983 he was vice-president of advanced technology for TRW Inc's electronic and defense sector . He is currently a consultant in Marina Del Rey , and a director of PlesCor Optronics . Meanwhile , Theodore Maiman was trying to use his knowledge of ruby masers to make a laser at Hughes Research Laboratories in Malibu. As he relates , he forged ahead , working alone , despite assurances by Schawlow and others that ruby was unsuitable for a laser . Maiman knew better , but those statements led to frowns by management . By the time he succeeded in making the ruby laser work for the first time , on May 16 , 1960 , he was not supposed to be working on the program. Maiman's success is undisputed , but almost immediately he ran into problems in reporting that success . Hughes' management reacted enthusiastically once the laser worked and sponsored a full-fledged press announcement in early July . However , the public relations photographer commissioned to immortalize the first laser on film wasn't satisfied with it . He thought the device too small and insisted that Maiman pose with a bigger flashlamp and ruby rod . Today Hughes is still distributing those pictures , showing Maiman with what isn't really the first ruby laser .A more serious problem came when Maiman submitted his paper for publication . The then-new *Physical Review Letters* summarily rejected it as " just another maser paper " . The journal's founding editor , Samuel Goudsmit , a theoretician best known as the codiscoverer of electron spin , had grown tired of the glut of maser papers arriving at his office , and decided they no longer merited rapid publication . Maiman hurriedly prepared a concise 300-word report which was immediately accepted by the British weekly *Nature* , and when efforts to convince Goudsmit of his error failed , *Nature* carried the first report of the laser on August 6 , 1960: *Theodore H. Maiman Stimulated optical radiation in ruby* *Nature* Vol 187 p. 493 (Aug. 6 , 1960). Maiman later published a more detailed analysis in *Physical Review*: Theodore H. Maiman " *Stimulated Optical Emission in Fluorescent Solids, Part I, Theoretical Considerations*" *Physical Review* Vol.125,p.1145(1961) ; *Theodore H. Maiman , R.H. Hoskins , I.J. D'Haenens , C.K. Asawa , and V. Evtuhov , Part II , Physical Review* Vol 125 p. 1151 (1961) Schawlow's group at Bell Labs was among the first to get a duplicate working , and soon afterwards they and another group reported laser action on slightly different lines in a " dark " or " red " ruby , which has a higher concentration of chromium ions than the " pink " ruby Maiman used . Duplication of Maiman's "pink" ruby laser (with low chromium ion concentration) was reported in *R.J.Collins , D.F. Nelson , A.L. Schawlow , W. Bond , C.G.B. Garret , and W. Kaiser " Coherence , narrowing , directionality, and relaxation oscillations in the light emission from ruby " Physical Review Letters* Vol 5 p. 305 (1960) Production of emission on different lines in " red " ruby with higher chromium concentration was reported in *A.L. Schawlow and G.E. Devlin " Simultaneous optical maser action in 2 ruby satellite lines " Physical Review Letters* Vol 6 p. 96 (1961) Maiman received graduate degrees in both engineering and physics from Stanford University , where he studied under Nobel Prize winner Willis Lamb . He is a fellow of both the American Physical Society and the Optical Society of America , a member of both the National Academy of Science and the National Academy of Engineers, and a recent inductee to the National Inventor's Hall of Fame.(JPW)