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

I

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

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

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

Ibn Sina. See **Avicenna.**

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

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

Hiroshi Ichikawa

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

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

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

Kiyoshi Ichikawa

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

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

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

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

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

Iwao Iinuma

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

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

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

Ichizo Ikeda

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

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

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

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

Hiroshi Ikui

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

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

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

Ken Imachi

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

Shinkichi Imai

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

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

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

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

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

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

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

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

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

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

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

Toyotaro Inoue

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

Tsuutai Inoue

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

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

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

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

Nobuo Inouye

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

Tatsuji Inouye

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

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

Tatsushichiro Inouye

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

Tatsuya Inouye

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

Kimiho Irinoda

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

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

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

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

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

Shinobu Ishihara

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

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

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

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

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

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

Hiroshi Ishizu

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

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

Hosei Ito

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

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

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

Motoharu Ito

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

Yaeji Ito

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

Motokazu Itoi

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

Hideyuki Iwashi

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

Takeo Iwashi

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

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

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

Alexander Iwanoff

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

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

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

Shuzo Iwata

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

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

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

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

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

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

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

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

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

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

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

Eduard Jaeger

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

Ueber die Behandlung

des

grauen Staares

an der

ophthalmologischen Klinik

der

Josephs-Akademie.

Inaugural-Dissertation

von

Eduard Jaeger,

Doctor der Medicin und Chirurgie, Magister der Augenheilkunde und Geburtshilfe, k. k. Ober-Feldarzt, Assistent der Augenklinik an der Josephs-Akademie, Mitglied der med. Facultät in Wien

Wien, 1844.

Gedruckt bei Carl Ueberreuter.

Jaeger´s Inaugural Dissertation.

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

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

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

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

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

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

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

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

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

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

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

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

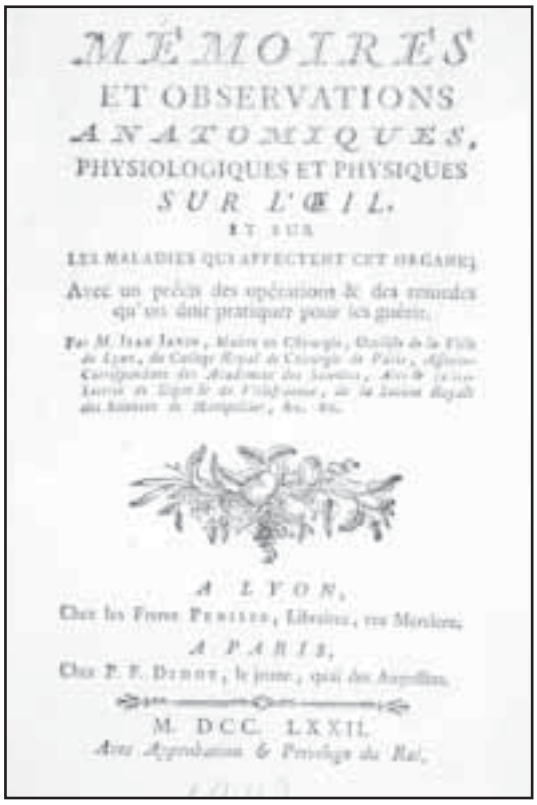
James, Robert Rutson (1881-1959) British ophthalmologist, editor from 1924 to 1948 of the BJO. Educated at Winchester College he was an admirable example of "*manners makyth man*". From Winchester he went to St. George's Hospital and qualified in 1905; in 1906 he gained the F.R.C.S. In 1907 he worked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

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

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

Medical Association, and of the Ophthalmological Society of the United Kingdom. He served on the council of the Oxford Ophthalmological Congress, of which he was a foundation member, for nineteen years, and held the position of Lecturer in Ophthalmology in the University of Birmingham for twenty-five years. He was Middlemore Lecturer on several occasions and his numerous publications covered a wide range of ophthalmic and related subjects. BJO 25,505,1941

Janin de Combe-Blanche, Jean (1731-1811) French ophthalmologist of Avignon, inventor of the well known *"Janin's ophthalmic ointment"* and *"Janin's vesicatory plaster*," but especially renowned for his combination of the highest degree of operative skill with the grossest and most unblushing charlatanry. Born at Carcassonne, June 12, according to Magnus and Pagel, but, according to Truc and Pansier, July 12, 1731, he studied, first, in the Carcassonne Hospital and, later, at the school in Montpellier, where he devoted special attention to ophthalmology. In 1756 he settled in Calmette near Nimes, and was very successful. He then removed to Avignon, and, while there, began to advertise, not only blatantly but untruthfully. Here are three of these advertisements which Truc and Pansier inserted in their work, *"Histoire de l'Ophtalmologie à l' Ecole de Montpellier*," taken from the *"Courrier de Montpellier"* and the *"Courrier d'Avignon."* On the 17th of August, in the *"Courrier d'Avignon* Janin de Combe-Blanche advertised as follows: "M.Janin, physician-oculist, animated by zeal for assisting the unhappy, has just restored sight to a dozen poor persons who are on the common charity of this city. Some of whom had cataract or other blemishes, which had deprived them for a number of years of the power to see even the most distinct objects, and these cures have been affected by virtue of a Specific Water of his invention, which excites the admiration of connoisseurs. This happy discovery, reserved for the cares and labors of M. Janin, will cause him to be honored by posterity; he has applied himself to the understanding of simples, to the study of their properties, to the finding out about their mixtures, to the prescription of their uses and the discovery of their effects. Experience has responded to his study, and success to his hopes. He has not limited his researches; and his continual observations have given occasion to a discovery not less essential. Five persons in the same house experienced its excellent effects; these were attacked for a number of years by frequent fits of epilepsy, called vulgarly *'mal caduc*,' or '*le haut mal*' and these have been completely delivered from this fearful disease. The same sieur Janin offers his consultations to all who shall find themselves in a position to require them, with the disinterestedness and the generosity proper to a person who has always been solely occupied in securing for himself the esteem and good will of everyone. Those who consult him by letter will please be sure to prepay the postage to Avignon, place St-Didier, where he now resides. He will tell such persons exactly what they will have to do to bring about a complete recovery. In the same lay journal, on the 25th of October, 1757, he publishes the following even more remarkable passage: *"M. Janin, physician oculist, sustains here perfectly the reputation which he has long enjoyed. The large number of cures which he has just performed with his Eau Spécifique, dissolving cataract and restoring sight to those who have had the ill-luck to be deprived thereof for a long time, excites the admiration of every person. Connoiseurs behold with astonishment the enduring health of those whom he has cured (announced in the Courrier on the 1st of September last), and especially the great virtues of his Melanagogic Pilules, with which M. Janin cures radically those who are afflicted with the most violent mental diseases, even when their mania has extended to the most extraordinary things imaginable; as he has demonstrated by several persons of every age and both sexes, who had been suffering from insanity, and who are today sound in spirit and understanding. . . . The price of each vial of Specific Water (for the diseases of the eye) is six francs."* As the third and last illustration of Janin's "literature," the following" passage is taken from the *"Courrier de Montpellier"* for Jan. 9, 1760: *"M. Janin, physician oculist, operated on the 9th of last month in the University of this city and in the presence of a numerous assembly of connoiseurs, upon the sieur Michel, gardener, who has been deprived of sight for three years; he removed from him the cataract with so much dexterity that one would swear he*


MÉMOIRES
ET OBSERVATIONS
ANATOMIQUES,
PHYSIOLOGIQUES ET PHYSIQUES
SUR L'ŒIL,
ET SUR
LES MALADIES QUI AFFECTENT CET ORGANE;
Avec un précis des opérations & des remedes
qu'on doit pratiquer pour les guérir.
Par M. Jean Janin, Maître en Chirurgie, Oculiste de la Ville
de Lyon, du Collège Royal de Chirurgie de Paris, Affocié-
Correspondant des Académies des Sciences, Arts & Belles-
Lettres de Lyon & de Villefranche, de la Société Royale
des Sciences de Montpellier, &c. &c.
A LYON,
Chez les Frères Perisse, Libraires, rue Mercière.
A PARIS,
Chez P. F. Didot, le jeune, quai des Augustins.
M. DCC. LXXII.
Avec Approbation & Privilege du Roi.

had carried the manual of this operation to the highest perfection possible. He presented, yesterday, his patient to Messrs. the Chancellors and Professors of Medicine who, when they had carefully tested him, as well as a large number of spectators whom he had not had present the day of the operation, they, being perfectly convinced that the patient had recovered his sight, being able to distinguish colors and the properties of the very smallest objects which were presented to him, have accorded to M. Janin this attestation of cure under the seal of the University." Janin, however, in spite of his quackish advertising, was a really remarkable ophthalmologist. Though no epoch-making invention or discovery can be assigned to the active ingenuity of this person, he nevertheless developed and most thoroughly amplified a very large number of the discoveries and inventions of others. As a swift and accurate operator he seems to have had no equal. He was, moreover, a clear and forceful writer, and his books and articles were pondered deeply by all the ophthalmologists of his day. Among his more important writings, both general and ophthalmologic, are the following: 1. *Observations sur une Fistule Lacrymale, Occasionnée par un Coup de Feu*. (1765.) 2. *Observations sur Plusieurs Maladies des Yeux*. (Lyons, 1768.) 3. *Lettre écrite de la Région des Morts par Daviel, ci-devant Oculiste du Roy, Actuellement Inspecteur de la Librairie des Ecrits de Pluton, au sieur G(uerin), Chirurgien à Lyon, sur les Bords du Styx. Chez la Vigilance et Compagnie de la Vérité,* 1769. (36 pp. small 8vo. A curious affair, the authorship of which is a little doubtful.) 4. *Mémoires et Observations Anatomiques, Physiologiques et Physiques sur l'Oeil et les Maladies qui Affectent cet Organe.* (Lyons, 1772. This book contains an account of the very first experiments with glasses of complementary colors before the two eyes,.) 5. *Réflections sur le Triste Sort des Personnes qui sous une Apparence de Mort ont été Enterrées Vivantes*. (Paris and the Hague, 1772.) 6. *L'Antiméphitique ou Moyen, de Détruire les Exhalations Pernicieuses et Mortelles des Fosses d'Aisance*, etc. (Paris, 1781 and 1782.) 7. *Réponse à M. O'Ryan sur le Magnétisme Animal*. (Geneva and Lyons, 1784,) Janin was ennobled in 1787, and died June 12, 1811. American Encyclopedia of Ophthalmology,Vol.9, p.6706-6708.Albert.

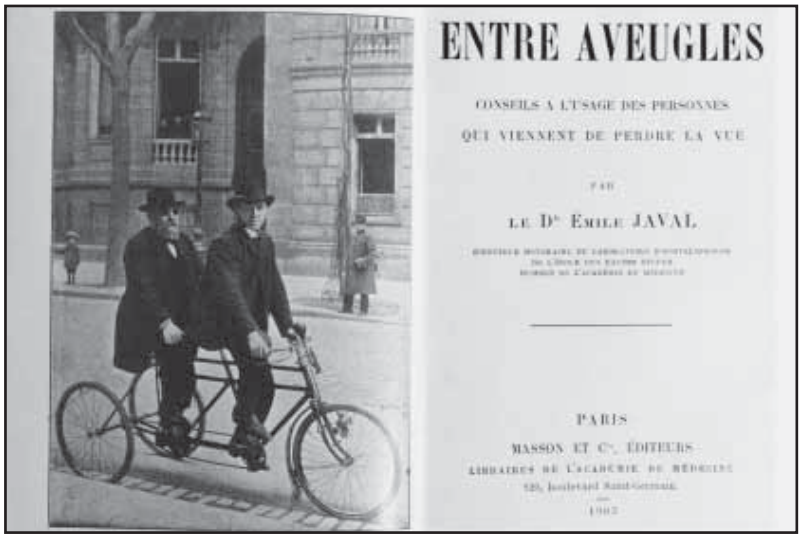
Jardine, Philip (1914-1997) Scottish ophthalmic surgeon, born in Edinburgh. Jardine was a resident at Moorfields 1942-1944 under Ida →Mann´s tutelage. Having obtained his Edinburgh fellowship, his appointment by the Bristol Eye Hospital was delayed by service with the RAF. Jardine is remembered for his bilateral cataract surgery. He *first* inserted an intraocular lens in 1951 and passed through a variety of techniques to finish with endocapsular surgery in 1981. He supported research in 1958 on B12 and tobacco amblyopia and in 1960 work on toxocariasis. Jardine was President of the South Western Ophthalmological Society in 1969-70. BJO 1997, 81, p.335.

Jaumes, Alphonse (1839-1906) French ophthalmologist, who wrote an important work on glaucoma, and who, in later life, gave up ophthalmology for legal medicine. Born at Montpellier, son of Anselme Francois Jaumes, professor of general pathology at Montpellier from 1850 to 1868, he received his degree in medicine in 1861, at the school in which his father was teaching. His graduation thesis, entitled "Glaucôme," was crowned by the Faculty of Montpellier, and brought to the young ophthalmologist a letter of felicitation from the Minister of Public Instruction. It was also one of the most important means of bringing to the attention of the ophthalmologic world the rather recently invented ophthalmoscope (→Helmholtz, 1851), as well as the much more recently devised iridectomy for glaucoma (von →Graefe, 1857). Jaumes settled in Montpellier (having studied for a time with →Sichel, →Desmarres, and →Follin at Paris) and soon had a wide reputation as an operator on the eye. He was appointed in 1866, to the extraordinary chair of surgery in the University, and, eight years later, to the full professorship of legal medicine and toxicology. The latter position he held till 1895. In 1880 he abandoned the practice of ophthalmology entirely, in order to teach and practise legal medicine. In addition to the thesis on glaucoma, Jaumes' ophthalmic writings are as follows: 1. *Contusion Oculaire Droite, Nevrite Optique Consécutive, Diminution Binoculaire de la Vision*. (1881. Supplementary Reports, 1884 and 1891.) 2. *Plaie Contuse du Cuir Chevelu, Ophtalmie, Phlycténulaire Consécutive, Perte de I'Oeil Droit*. American Encyclopedia of Ophthalmology,Vol.9,p.6708-6709

Emile Javal

Javal, Louis Emile (1839-1907). French ophthalmologist, blind in his later years, inventor of the Javal ophthalmometer, and author of the widely known "*Manuel du*

Strabisme." Born at Paris, he became, first a student at the School of Mines and, then, an engineer. Having, one day, a commission to consult von →Graefe concerning a case of strabismus in one of his near relatives, he became so touched and fired by the master's zeal and enthusiasm for medicine in general and for ophthalmology in particular, that he gave up engineering and began the study of medicine. He received his degree at Paris in 1868. The same year, he wrote *Du Strabisme dans ses applications a la Physiologie de la Vision*. In this little book, he titles himself "Docteur en Medecine and…" *Ingénieur civil des Mines*". Having served in the Franco-Prussian war, he turned his attention to ophthalmology. In 1878 he became Director of the Ophthalmologic Laboratory at the School of Higher Studies, and in 1885 became a Fellow of the Academy of Medicine. He was a great investigator and teacher, but not an especially brilliant operator. In fact, his greatest services were rendered ophthalmic science in the difficult field of physiologic optics. Most of his writings appeared in the *Annales d'Oculistique,* and are nearly of uniform value. He wrote, however, in addition to articles, the widely celebrated "*Manuel du Strabisme*,"(1896) and, a work of even higher character, the "*Mémoires d'Ophtalmometrie*."(1886) There was, besides, a still more wonderful little volume, of which we shall speak hereafter. Then, too, Javal made a masterly translation into French (the first to appear in that language) of Helmholtz's *"Handbuch der Physiologische Optik"*: *Optique Physiologique*, Paris 1868. Javal was widely known as an inventor of optical instruments. The chief of these is the once almost universally employed Javal, or Javal-Schiötz ophthalmometer. Helmholtz had invented a similar instrument which depended for its action on two glass plates. Coccius had made an improvement by substituting for the plates a double refraction crystal. Javal retained the crystal, but improved the device as a whole most wonderfully, making it indeed (by the aid of his pupil and afterwards first assistant, Schiötz) a practical and highly useful instrument. A Jew of the finest type, Javal was absolutely possessed by the thought of the intellectual life, by the high idealism so characteristic of his race. He was, in fact, one of the greatest scientists of his day, living, moving, and having his being in his work as ophthalmologist. Yet, like many a lesser and less faithful man, he was subject to innumerable trials and tribulations and petty and wholly unnecessary vexations. Of these the chief, no doubt, was the famous libel suit which was brought against him by a firm of (perhaps) well-meaning opticians. These people had invented a so-called "isometric" lens for spectacles, for which they claimed certain remarkable advantages. Javal, having made a careful study of the lens, "*reported to the Academy of Medicine that the difference 'between the baryta glass [of which these lenses were composed] and ordinary glass was quite insignificant, and that the lenses were no better than those made from ordinary glass*." The court decided for Javal, holding "that a scientific man is at liberty to criticise, any manufactured article for which special advantages are claimed, and that his observations may be published in the public's interest." Not long after the decision in the case, Javal began to go blind. He was suffering, in fact, from chronic bilateral glaucoma. There is something especially touching, as it seems to the writer, about the passage into darkness of any celebrated ophthalmologist. One cannot resist the feeling, in such cases, that an absolute reversal occurs of poetic justice." That a man whose hand has given the light to hundreds of his suffering fellows, should himself be condemned relentlessly, mercilessly and inexorably to everlasting, hopeless, helpless, rayless darkness, is just about the peak and pinnacle of the irony of fate. And Javal, the greatest ophthalmologist of his nation for two decades, was subjected to just such a doom. All that human hands could do for him was done as a matter of course, and yet, in a very brief period, he was blind. Instead of repining at his fate, this practical philosopher, as well as master ophthalmologist, began to direct his attention toward the little which he could do by way of rendering the lot of blind folk


ENTRE AVEUGLES

CONSEILS A L'USAGE DES PERSONNES

QUI VIENNENT DE PERDRE LA VUE

PAR

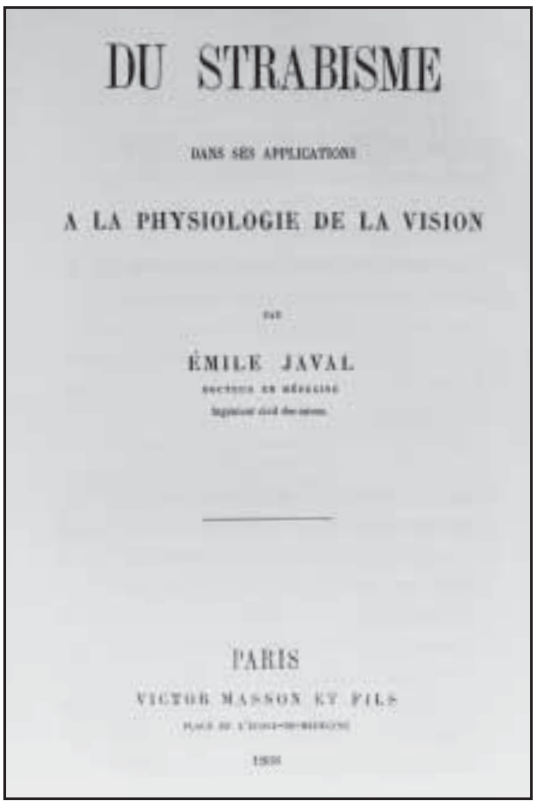
LE Dr EMILE JAVAL

PARIS

MASSON ET Cie, ÉDITEURS

Emile Javal, blind, sitting on a tricycle.

generally a trifle less unhappy. The result of his cogitations, considerations and inventions appeared at length in a precious little volume of extreme originality, entitled *"Entres Aveugles,"* (Paris 1903) or, as it is called in the excellent English translation of Carroll Edson, "*On Becoming Blind*. " This work was the first to appear at any time or in any language on its very important subject-that of the modes, the means, the different sorts of appliances, etc., for rendering the lot of the blind endurable or as nearly so as possible. A strong point made in the volume was that doctors ought to train such patients as are certainly doomed to blindness for the ordeals which they are afterward to undergo. While the patient still retains a modicum of vision, he can learn with far greater quickness, thoroughness, and effectiveness, the things he will later need to do., than ever could be the case if his training were neglected till he once had entered the darkness. In the words of Javal himself : " *. . . . they call it humane and I call it barbarous-to leave these patients in hope while amusing them with injections of strychnine, sittings of electricity, or useless internal treatment, the employment of which, even if given gratuitously, does not increase the reputation of him who makes use of them. To give, by a placebo treatment, consolation to an incurable, is to prevent him from arranging his life in anticipation of the fatal outcome."* Not many years ago there appeared in a leading ophthalmologic journal a vigorous attack upon these views of Javal, the position taken being that the hopes and expectations of a person going blind are of wellnigh inconceivable value and delight to him. But the passage which I have quoted from Javal himself is a sufficient refutation of such shallow reasoning. The efforts of the placeboists are, indeed, not humane, " but simply barbarous." This little volume of Javal, "*On Becoming Blind*," though written for scientific purposes and in the style of a self-contained philosopher, possesses, I think, for all who look beneath the surface, a pathos which is really almost intolerable. In fact the very calmness with which the work is written but serves as a foil to the black, the hopeless, the despairing agony of its incidental revelations. What a desolateness of existence, for only a single example, is displayed (in the very midst of happy human intercourses at that) by the following brief passage: "*What makes the position of the blind most particularly trying in company is that he does not know when his interlocutor leaves. If he has some one with him, his guide should inform him; but this is a hard task for the companion. In a salon one who speaks to a blind person, and by rare chance has taken pains to tell his name at the beginning of his conversation, never thinks to say again who he is when he comes back after a short interval. When I can, I like to take my place on a sofa which allows me to take very lightly between two fingers, quite unseen, a fold of the person's garment with whom I am talking, and who then cannot leave without my knowing it. "It is not given to every one to have a faithful companion who knows how to make him hear the name of whoever comes to him with good affectation, and as if addressing them to wish them good day; who knows how in a conversation to make the needful remarks to save him from addressing someone who has just left or from calling him to witness; who knows how to keep him in touch with the movements of the guests, so as to save him that hateful thing, speaking to empty space. "That hateful thing, speaking to empty space, has, in fact, been often mentioned to me by those who have long been blind as one of the bitterest of all their bitter experiences. Thus, a great giant of a man, who was more than forty years of age, and who had been quite blind for the greater portion of his life, informed me that, whenever he found himself conversing with the empty air, there suddenly arose within him such a longing and yearning as only the tender caresses of his mother could completely dispel*." So the great ophthalmologist continued both to do and to teach, even after he had calmly and serenely gone down into the valley of the shadow of blindness. In this valley of innumerable terrors, he dwelt for a number of years, always patient, always kind, and almost ,always genial, a source of very great pleasure to all who continued to, cultivate as many did his acquaintance. He proposed in 1877 a new numbering of lenses in his "*Numérotage des Verres de Lunettes*" and wrote also "Physiologie de la Lecture" of which a second edition appeared in 1906. A further book written by him is: *Hygiene des Ecoles Primaires* Paris 1883. His collection of Japanese Illustrated books were sold in 1927-28,


DU STRABISME

DANS SES APPLICATIONS

A LA PHYSIOLOGIE DE LA VISION

ÉMILE JAVAL

PARIS

VICTOR MASSON ET FILS

Javal's book on strabismus. Under his name he still used his title "Mining Engineer"

his medical library, containing an exceptional beautiful copy of Bartisch´s Ophthalmodouleia*, went to the French Society of Ophthalmolgy. American Encyclopedia of Ophthalmology, Vol.9, p.6709-6713. Albert.The Ophthalmoscope, London 1907, p.180-181.* The woodcuts of Javal´s copy of Bartisch were used to make facsimili of its colored engravings for the first English translation of that book. *See* Bartisch. JPW

Javate, Reynaldo M. (1954-) Filipino Ophthalmologist, Associate Professor of Ophthalmology, University of Santo Tomas Hospital. He graduated from University of Santo Tomas, Espana, Manila in 1979 and received his M.D. degree. He completed his residency training at the Department of Ophthalmology and served as the Chief Resident in 1981-1985. He studied Oculoplastic and Reconstructive Surgery at the Instituto de Investigaciones Oftalmologicas "Ramon Castroviejo" y En El Centro Especial Ramon y Cajal, Madrid, Spain under Prof. Juan→Murube Del Castillo in 1985 and then at the Manhattan Eye, Ear and Throat Hospital under Dr.Albert→Hornblass during 1988-1992. On his homecoming he was appointed to the present position as above and is the Chief of the Oculoplastic and Orbital Services at the Department of Ophthalmology, Faculty of Medicine and Surgery of University of Santo Tomas since 1994. He also served as the Secretary to the Department, as the Chairman of the Bioethics Subcommittee and the member of the Residency Training Committee. He has joint appointment as the Vice-Chairman of the Department of Ophthalmology and the Chief of the Oculoplastic and Reconstructive Surgery at the Hospital of Infant Jesus, Manila. He has published many scientific papers and made presentations at many congresses: some examples are "*Endoscopic radiofrequency assisted dacryocystorhinostomy and the Griffiths collar button*. Operative Techniques in Oculoplastic, Orbital and Reconstructive Surgery 1998" and "*The endoscope and the radiofrequency unit in dacryocystorhinostomy surgery*. The Journal of the American Society of Ophthalmic Plastic and Reconstructive Surgery as well as "*Radiosurgery - A New Approach to Eyelid Orbital and Lacrimal Surgery*". International Journal of Aesthetics and Restorative Surgery. He is also a member of the Editorial Board of The Journal, Operative Techniques in Oculoplastic Orbital and Reconstructive Surgery. He is the President of the Philippine Society of Ophthalmic Plastic and Reconstructive Surgery (1996-), Vice-President of the International Society of Cosmetic Radiosurgery (1994), and a member of many National and International Societies. He is a recipient of many Award of Excellence from the National Organizations. (University of Santo Tomas Hospital: Espana, Manila 1008 Department of Ophthalmology Office (632) 7315383 ; Fax: (632)7327481 ; email: rmjavate@usinc.net)

Jeffries, Benjamin Joy (1833-1915) American ophthalmologist, the first to direct attention emphatically to the dangers of color-blindness, as, for example, in the railway service. Born in Boston, Mass., March 26, 1833, he came of old New England ancestry. His father, Dr. John →Jeffries (1796-1876, Harvard A. B., A. M., M. D., Brown M. D.) was a very distinguished physician and close friend of Daniel Webster, who practised in Boston for more than fifty-seven years. He married Anne Geyer Amory, a descendant of Hon. Jonathan Amory, speaker treasurer and advocate-general of South Carolina, as well as of Arthur Mackworth, one of the original patentees of Maine. Joy Jeffries' grandfather, Dr. John Jeffries (1745-1819, Harvard A. B., A. M.; Aberdeen M. D.; Harvard Honorary M. D.), was the originator (or, as some will have it, the re-introducer) of the use of cold baths and ice in the treatment of fevers. He was an ardent royalist throughout the Revolution, his house, at the outbreak of the struggle, being the royalist headquarters in America, while Jeffries himself was surgeon-general of the British forces, and a baron of the Cinque Ports. In 1785 he crossed the English channel by balloon, and was the first in history to accomplish the dangerous feat. Dr. Joy Jeffries' greatgrandfather, David Jeffries (1714-1785, Harvard A. B., A. M.) who married a daughter of Chief Justice Jaffrey, of New Hampshire, was for more than thirty years treasurer of the old town of Boston. His father, David Jeffries (1690-1716) was first in his class at Harvard, and his father, the great-great-great-grandfather of the subject of this sketch, was David Jeffries (1658-1742), the first of the family to come to America. He was born at Rhoad, Wiltshire, England, and married Elizabeth Usher, daughter of John Usher, lieutenant-governor New Hampshire, and treasurer and receiver-general for New England, who personally paid the expenses of several Indian wars. The matter of Dr. Jeffries' ancestry is given thus much space (and might have been given a very great deal more) because of a certain historic dinner, which

will long be carried in memory by the ophthalmologists of New England. Dr. Benjamin Joy Jeffries, the subject of this sketch, received his early education at the Boston Latin School and at Harvard University, at the latter institution receiving the degree of A. B. in 1854. He then studied medicine at Harvard, receiving his degree in 1857. The next two years, which were spent in Europe, chiefly at Vienna, were devoted to the study of ophthalmology and dermatology. The teachers who mostly influenced him were von →Arlt and Hebra (a famous Austrian Dermatologist). Returning to America, he settled in his native city, as a specialist on diseases of the eye and skin, in which unusual combination of branches he continued for several years. Together with Dr. Francis P. Sprague, he opened a free dispensary for the treatment of diseases of the eye and skin in Eliot Street. He was also ophthalmic surgeon to the Massachusetts Charitable Eye and Ear Infirmary from 1866 to 1902-more than thirty-six years. He was a member of the New England Ophthalmological Society, of the American Ophthalmological Society, of the Boston Society of Medical Observation, of the Boston Society of Medical History, and of the American Association for the Advancement of Science. He was also one of the founders of the Massachusetts Natural History Society. He belonged to the Somerset Club, the Thursday Evening Club and various yachting associations. At Harvard he belonged to the Porcellian Club and to the Hasty Pudding. Dr. Jeffries was a voluminous writer. Only his works on ophthalmology, however, can here be listed. 1. *I Enucleation of the Eyeball. II Section of Ciliary Nerves and Optic Nerve. III Some Unnecessary Causes of Impaired Vision.* (1868, Boston, D. Clapp & Son.) 2. *Report on Progress of Ophthalmology*. (1871, N. Y., 8 vo.) 3. *The Eye in Health and Disease.* (Alexander Moore, Boston 1871) 4. *On Operations for Breaking up Attachments of the Iris to the Crystalline Lens, or Posterior Synechiae*. (1872, *Report Mass. Char. Eye and Ear Inf.,* XLVI.) 5. White Sarcomatous Intraocular Tumor. Intraocular Tumor. Two Cases of Herpes Zoster Ophthalmicus, Destroying the Eye. Traumatic Rupture of the Choroid, without Direct Injury of the Eye. (All *in Trans. Am. Oph ' Soc.,* 1873.) 6. Records of 105 Cases of Operation for Cataract. *(Boston M. and S. Jour.,* 1874, XCI.) 7. Reports of Sixteen Cases of Cataract Operations. (Ibid., 1875, XCIII.) 8. Incurability of Congenital Color-Blindness. (Ibid., 1878, XCVIII.) 9. Lecture on Color Blindness and its Practical Relations. (1878, Boston.) 10. *Dangers from Color-Blindness in Railroad Employees and Pilots.* (1878, Boston, Rand Avery & Co.) 11. *Relative Frequency of Color-Blindness in Males and Females*. *(Bost. M. and S. Jour.,* 1878, XCIV.) 12. *Color-Blindness and its Practical Relations*. (Lecture, Boston, 1878.) 13. *Color-Blindness; Its Dangers and Detection.* (1879, Boston, Houghton, Osgood & Co. Bound, significantly, in red and green. An authoritative work. Issued as the United States Manual on the subject in 1880.) 14. *Color-Blindness Amongst the Medical Profession*. *(Brit. Med. Jour.,* 1880, II.) 15. *Color-Blindness; Its Examination and Prevalence*. (London *Lancet,* 1880, II) 17. *Hypnotic Color Blindness*. (Bost. *M.* and *S. Jour.,* 1880, CII, 526.) 18. *Color-Blindness and Defective Vision: Their Control*. *(Gaillaird's Med. Jour., N. Y.,* 1881., XXXI, 5-12.) 19. *On Some Points in Regard to Color-Blindness*. *(Jour. Nervous and Mental Diseases, N.* Y., 1881.) 20. *Observations on a Peculiar Expression of the Eyes in the Color-Blind*. *(Tr. Internat. Med. Congress,* London, 1881, III, 121.) 21. *Color-Names, Color-Blindness, and the Education of the Color-Sense in our Schools*. *(Education,* March, 1882.) 22. *Our Eyes and Our Industries. (Rep. Board of Health of Mass.,*1882.) 23. *Physical Examination of Candidates for the United States Naval and Military Academies*. *(Boston M. and S. Jour.,* 1886, CXIV.) 24. *Some Medico-Legal Cases Under State and National Laws*. (*Tr.Am.Oph..Soc.,*1885-7, IV.) 25. *Report of the Examination of 27,927 School Children for Color-Blindness*. (School Document No. 18, 1889, Boston, Rockwell & Churchill.) 26. *Reports on Worsteds for Holmgren's Test. (Tr. Am. Ophth. Soc.,* 1895.). American Encyclopedia of Ophthalmology, Vol.9, p.6716-6720 .JPW

Jeffries, John (1796-1876) American surgeon and ophthalmologist, co-founder with Dr. Edward Reynolds of the Massachusetts Charitable Eye and Ear Infirmary. Born in Boston he received the degree of A..B. at Harvard in 1815, and of M.D. in 1819. Jeffries was surgeon to the Massachussetts Eye and Ear Infirmary and operated there for eighteen years. He wrote "*Lectures on the Diseases of the Eyes*" which manuscript was discovered among the books left by his son Benjamin Joy →Jeffries , edited by Daniel M. →Albert, and for the *first* time published by Wayenborgh Ostend in 1998. American Encyclopedia of Ophthalmology, Vol.9,p. 6720-6721; JPW.

Jeremy, Harold Rowe (1875-1938) British ophthalmologist. Mr. Jeremy was born at Merthyr Tydvil. He was educated at the Merthyr Grammar School, and entered as a medical student at the London Hospital Medical College in October, 1896. He gained several prizes, and, after qualification in 1901, became Clinical Assistant to the Surgical Out-patient and Ophthalmic Out-patient Departments. He was House Surgeon to Mr. T. H. Openshaw in 1903. Soon afterwards Jeremy settled in general practice in Walthamstow, and, at the same time, served as Clinical Assistant to A. B. Roxburgh at the London Hospital and to →Treacher Collins at Moorfields, where he subsequently became a Chief clinical Assistant. In 1911 he took the Fellowship of the Royal College of Surgeons. In March, 1919, he was elected Assistant Surgeon to the Western Ophthalmic Hospital, a post he resigned in January, 1923. In March, 1920, he became Assistant Ophthalmic Surgeon to the London Hospital and full surgeon in 1926. Jeremy published several papers on ophthalmological subjects and was one of the first to draw attention to the association of Mongolism and cataract in 1920, the morphological characteristics of which were subsequently described by Koby. He also was an early observer of lens opacities in cretinism and following thyroidectorav. For nearly twenty years Jeremy taught regularly at the London Hospital, where he endeared himself to successive generations of medical students. BJO 1938,22:637; Brit med J. 1938,2:476

Ji, Xun Chuan (1933-) Chinese Ophthalmologist, Professor of Shanghai Medical University (SMU). He graduated from Shanghai Medical University in 1955 and began to study Ophthalmology under Prof. Guo Bing Kuan. He served as the Professor of Ophthalmology in SMU from 1986 to 1994. And was invited to be a Visiting Professor of the Ophthalmology Department of Pacific Medical Center of San Francisco , U. S. A. during 1982-1983. In the professional societies, he worked as the president in the Ophthalmologic Society of Shanghai Branch of Chinese Medical Association from 1986 to 1994, as the vice-president in the Ophthalmologic Society of Chinese Medical Association from 1986 to 1994 , and as the Member of the Advisory Committee for the International Congress of Ophthalmology from 1985 to 1994. He has served as the editor to many journals of China, such as *Chinese Journal of Ophthalmology*, *Recent Advances in Ophthalmology*, *Foreign Medical Sciences*, *Ophthalmology in China*, Chinese Edition of *Archives of Ophthalmology*, *Chinese Journal of Practical Ophthalmology* and *Chinese Journal of New Drugs and Clinical Remedies* etc. He has published more than 15 original papers, such as *"the appearance of the chamber angle and the mechanism of lowering intra-ocular pressure after trabeculectomy"*, 1981, *"Lens anaphylactic endophthalmitis"*, 1981, and *"Cup-disc ratio and its genetic interaction in twins"*, 1987, etc. (The Eye and ENT Hospital, Shanghai Medical University. Address: Fenyang Road 83#,Shanghai 200031. The R.P China. Phone: 86-21-64377134-706; Fax: 86-21-64377151) (SM)

Jin, Xiuying (1923-) Chinese Ophthalmologist, Professor of Ophthalmology, Tong Ren Hospital, Senior Researcher of Beijing Institute of Ophthalmology. He graduated from the Medical School of Beijing University in 1945 and studied Ophthalmology under Prof. Luo Zongxian of Union Medical University and Prof. Zzhan Xiaolou of Capital Medical College. He extended his study at Kitasato University Medical School, Japan and Beth Israel Medical Center, New York, U. S. A. He served as the Associate Professor of Ophthalmology (1977-1979), Chairman of Department of Microbiology (1979-1985) and Professor of Ophthalmology and Director of the Beijing Institute of Ophthalmology (1985-1987) , and currently he works as the Professor and Senior Researcher at the Institute since 1988 and also the Tutor of the graduate of Capital Medical University (1979-). He is advisor of Corneal Disease Society in the Chinese Ophthalmological Society, Member of International Association of Contact Lens Educators (IACLE) and Vice-President of the Asia-Pacific Region of the IACLE. He published more than 30 papers and wrote many books: some examples are *"Local therapy of corneal allograft rejection with cyclosporin*. Am. J. Ophthalmol. 1995, 119:189", *"Microbiology of the eye*. *System of Ophthalmology*, People Health publisher, 1996", *Sexual transmitted diseases of the eye*. *Modern Ophthalmology*, Beijing Science and Technology Publisher, 1996" and *"Investigations of recombinant human epidermal growthfacter in treatment of corneal injury in rabbits*. Chin. J. Ophthalmol. 1998, 34: 215". He received Awards 20 times for his scientific achievements. (Beijing Institute of Ophthalmology, 17 Hou Gou Lane, Chong Nei Street, Beijing 100005, P. R. China. phone: +86-10-65288424; fax: +86-10-65125617, 65130796) (SM)

Joannes Artuarios. See **Actuarius, John.**

Jobert de Lamballe, Antoine Joseph (1799-1867). A famous French surgeon, who was first to close recto-vesical and vesico-vaginal fistulas. He was also said by some to have been the inventor of "Autoplastie par glissement"-i. e., autoplasty by the sliding flap-a claim which has been vigorously contested. He was, further, a man of some importance in ophthalmology. Born in Matignon (Côte-du-Nord), he received his medical degree at Paris in 1828. In 1830 he was associate to the Faculty, and in 1831 surgeon to the Hôpital Saint-Louis and consulting surgeon to the King. He was a brilliant operator, especially for cataract and the various lacrimal affections, on both of which subjects he published articles in the *Annales d'Occulistique.*American Encyclopedia of Ophthalmology, Vol.9, p.6723.

Johannes, Jacobi. A 14th century French physician of Montpellier who devoted some attention to ophthalmology. The dates of his birth and death are not known. In 1364, however, he was appointed chancellor of the University. In 1384 he was physician to Pope Clement VII, and, shortly afterward, he died. Four of Johannes's writings are still extant. The only one, however, containing ophthalmic matter, is the "*Secretarium Practicae Medicinae*" (Biblioth. Nationale, Paris). This work, which was written in 1378 by order of King Charles V, consists of six divisions or parts, the second of which is devoted to the eye. This ocular division is again divided into ten chapters as follows: Chap. I, on Ophthalmia; Chap.II, On the Ulceration Consecutive to the Aposteme, Treatise on the Ulcer, Foreign Bodies, Leucomata; Chap. III, On Pannus; Chap. IV, On Lacrimation; Chap. V, Subconjunctiva,l Ecchymosis; Chap. VI, On Entropion; Chap. VII, On Weakness of Vision, and on Nyctalopia; Chap. VIII, Dilatation of the Pupil; Chap. IX, On Lacrimal Fistula; Chap. X, On Cataract. The entire division devoted to the eye is extremely brief; in fact, each chapter consists of merely the barest mention of the diseases in question, followed by a suggestion of cure by some collyrium or slight mechanical procedure. American Encyclopedia of Ophthalmology, Vol.9,p.6724

John of St. Paul. Johannes de Sancto Paulo was a medical author of the middle ages, who is said by some to have flourished in the 13th century, by others in the 12th. Some authorities have even questioned whether he lived at all. There seems to be, however, very little reasonable doubt as to his having existed, or as to his having been the author of a work called "*Liber Virtutum Medicinarum Simplicium*" This is merely a short treatise on therapeutics, one chapter of which, entitled "*De Clarificationibus Visum*," consists of a mere enumeration of the commoner remedies at that time employed for the diseases of the eye.American Encyclopedia of Ophthalmology, Vol.9, p.6725

John the Actuary. See **Actuarius, John.**

John, King of Bohemia (1296-1346). Was crowned in 1311. Concerning this potentate there runs an historical passage of especial interest to ophthalmologists. John was plainly going blind (and entirely lost sight in 1340.) So he sent to France for an oculist. The unfortunate eye-doctor arrived, but, proving unable to cure the monarch, he was sewn up in a sack and cast into a river. An Arabian oculist was next sent for. He, also, was unsuccessful, and would no doubt have suffered a like fate with that of his French confrère, except that he had been clever enough to arrange in advance for a "safe conduct." Then the king betook himself to Montpellier, there to consult the great Guido, otherwise known as Guy de Chauliac. Guido, however, would not undertake the case. Instead, he wrote for his royal patient a little work, entitled "Manner of Life for Cataract Patients"-not now extant. The king, however, does not seem to have been greatly cheered by the volume which his calamity had called into existence, and becoming, shortly afterward, stone blind, he purposely sought and quickly found "the greater darkness still" in the battle of Crécy. American Encyclopedia of Ophthalmology,Vol.9, p.6724-6725

John, Master of Mainz. An almost wholly unknown oculist who, in 1351, operated successfully for double-sided cataract on the Abbot Gillion le Muysit at Tournay, Belgium.American Encyclopedia of Ophthalmology,Vol.9, p.6725

Johnson, Christopher Turner. The place and date of his birth are unknown. In 1809, however, he settled in Exeter, England, as surgeon and ophthalmologist. Here, too, he taught anatomy, and here he died, of a dissection wound, March 4, 1811.American Encyclopedia of Ophthalmology, Vol.9, p.6725

Johnson, George Henry Sacheverell (1808-1891) British mathematician, astronomer and clergyman. Johnson was born at Keswick, England, and studied mathematics at Oxford receiving his M.A.. in 1833. He later lectured in Oxford and was there professor of astronomy from 1839 to 1842. From 1854 he was dean of Wells Cathedral. He wrote: *Optical investigations* (2 pts) Oxford 1835.

Johnson, George Lindsay (1853-1943) British ophthalmologist from South Africa. Johnson was born in Manchester, but much of his education was taken in Germany, and he was in Strasbourg when the Prussians seized it in 1870. After spending a year on a ranch in Australia where he had relatives, he studied at Owen´s College,Manchester and at Göttingen University, Germany, at Caius College, Cambridge and St.Bartholomew´s Hospital. He took the M.D. Cantab. in 1890 and the F.R.C.S. in 1884. His ophthalmic career started when he acted as Registrar at the Royal Westminster Ophthalmic Hospital, and later he worked at the Royal Eye Hospital with Brudenell→Carter. Much of his spare time was spent at the zoo where he studied the comparative anatomy of the eye. Papers on the *mamalian eyes* appeared in the *Phil.Transactions of the Royal Society London* in 1901, and on *reptilian and amphibian eyes* in 1924. Johnson was a pioneer in colour photography and maintained his interest to the end of his life. He left England for South Africa in 1911 and practiced for a time in Johannesburg. He spent much of his time devising optical instruments and performing photographic experiments. Johnson wrote a pocket *atlas and textbook of the fundus oculi* (1911) which went trough a second edition, and also *"A new method of treating chronic glaucoma based on recent researches into its pathology,"* London 1884 and *Photographic Optics and Colour Photography*, London 1909, *Photography in Natural Colours*, London, 4 editions until 1922, *Photography in Colours, A textbook for Amateurs* London 1914. BJO 1944; 28:370-371. Albert. C.R.Keeler; LFRCS 1930-1951: 427-428, JPW.

Jokl, Alexander (1895-1965) South African of Johannesburg. Alexander Jokl qualified in medicine in Austria, taking his M.D. in Vienna in 1919, and then post-graduated ophthalmology and research there and in Uppsala, where he obtained the M.D. of that University. He later studied in England, where he qualified M.R.C.S., L.R.C.P. in 1930 before coming to South Africa, where he devoted himself to ophthalmology in Johannesburg for close on thirty-five years. Jokl was one of the earliest members of the Ophthalmological Society of South Africa, and was a Past-President of its Southern Transvaal Branch. His ophthalmological library was his special interest and he bequeathed it to the Southern Transvaal Branch of the Ophthalmological Society of South Africa, who in turn have donated it to the Library of the Medical School in Johannesburg in his memory. Jokl's great interest in ophthalmological literature and the contributions he made to it in former years, made it fitting that he should have been an Associate Editor of Ophthalmic Literature, the Quarterly Review of Ophthalmology and Ophthalmologica (formerly: *Zeitschrift für Augenheilkunde* [JPW]).Brit.J.Ophthal.1965, 49:385

Jones, Samuel Jones (1836-1901). American ophthalmologist of Chicago, Ill. Born at Bainbridge, Pa., son of Dr. Robert H. Jones, a native of Donegal, Ireland, and of Sarah M. Ekel Jones of Swiss American ancestry, he received the degree of Bachelor of Arts at Dickinson College, Carlisle, Pa., in 1857. In 1860 he received from his *alma mater* the degree of A. M. and in 1884 that of LL. D., *honoris causa.* In 1860, at the University of Pennsylvania he received his medical degree, after a three years course of study. In 1860 also (the year of his graduation) he entered as Assistant Surgeon the United States Navy. On May 8, 1861, the frigate to which he had been assigned, "The Minnesota," sailed under sealed orders from Boston as the flagship of the Atlantic blockading squadron. For 21 months the Minnesota was in active service, one of her most exciting experiences being the memorable engagement at Hampton Roads with the death-dealing Merrimac on March 2, 1862. In 1867 he was assigned to duty as surgeon of the frigate Sabine. In 1868 he was promoted to the rank of Surgeon, but, before the year was out, resigned from the naval service, and proceeded to Europe, there to study ophthalmology and otology. Returning to America, he settled in Chicago, and soon was made professor of ophthalmology and otology in the Northwestern Medical School-a position which he held for many years. In this capacity he gave clinical instruction at Mercy Hospital and at the South Side Free Dispensary. He was also ophthalmic and aural surgeon to St. Luke's Hospital. For several years he was editor of the *Chicago Medical Journal and Examiner*-a

publication which prospered greatly under his management. Dr. Jones was a member of numerous medical societies, both general and special. In 1876 he was a delegate from the Illinois State Medical Society to the Centennial International Medical Congress, held in Philadelphia. In 1881 he was a delegate from the American Medical Association and the American Academy of Medicine to the Seventh International Medical Congress, which met in London. In 1887 he was President of the Otological Section of the Ninth International Medical Congress, at Washington. Dr. Jones was twice vice-president of the American Academy of Medicine, and in 1890 its president. His skill as an ophthalmic operator was undeniable.American Encyclopedia of Ophthalmology, Vol.9, p. 6725-6727

Jones, Sydney (1830-1913). British surgeon who became the first appointed *ophthalmic surgeon* to St.Thomas´s Hospital in London. The Ophthalmoscope, London 1914,p. 122.

Jones, Thomas Wharton (1808-1891) English ophthalmologist. Born in St. Andrews, Scotland, he studied at Edinburgh and Paris, and settled in London in 1838 as general practitioner. He was for a time Professor of Physiology at the Charing Cross Hospital and at the Royal Institution. Later, turning his attention to ophthalmology, he became Ophthalmic Surgeon and Professor of Ophthalmology at the University College Hospital. He was particularly celebrated as an ophthalmic diagnostician. For a time he lived in retirement at Ventnor, Isle of Wight, where he later died . Wharton Jones was a man of slight physique, yet of impressive presence, mainly because of his earnest, almost eager manner. His enthusiasm was, in fact, contagious.*[The true Lumen siccum of science glowed in every proposition which fell from the lips of the pale little man, as he stood with downcast eyes, and fingering his watch chain, at one corner of the table."-Thos. H. Huxley.]*. Outside his lectures he was extremely shy and reserved, and to only a few was it given to be admitted to his intimacy. The poorer classes loved him, and always called him "The Old Professor." Many of the charity patients were never satisfied until they had seen "*The Old Professor*." If nothing else, they must at least shake hands with him. Strange as it seems, his private practice was always small, and he was, at times, poor even to the point of destitution. In the winter of 1881 he was found in a starved and almost frozen condition by one of his former pupils. The facts were reported to Dr. Ringer, Mr. Erichsen, and William Jenner, who, conjointly, and very slyly, paid in a goodly sum to Jones credit at his former bankers. Jones was then promptly notified, and, even to his dying day, was firmly of the opinion that he had forgotten a certain sum of money which he himself, a long time previously, had deposited in the bank. Jones' ophthalmic writings are as follows: 1. *The Black Pigment of the Eye*. *(Edin.Jour.,* No. 114, pp. 77-83.) 2. *The Movements of the Pupil*. (Ibid., No. 118, pp. 10-42.) 3. *Defects of Sight: Their Nature, etc.* (London, 1856; 3d ed., 1877; edited with additions, by Laurence Turnbull, Philadelphia, 1859.) 4. *The Principles and Practice of Ophthalmic Medicine and Surgery* 1847 (3d ed., 1865; three American editions, 3rd by Prof. Atlee; one French trans. by Prof. Faucher.) This may be regarded as Wharton Jones' most important service to ophthalmology. It was the leading textbook on its subject both in England and America until the appearance of *"A Treatise on Diseases of the Eye,"* by →Soelberg Wells, the first edition of which appeared in 1869. Hirschberg criticises with some severity the work of Jones, chiefly because of his failure to recognize the value of the ophthalmoscope. Aside, however, from this one great failure, the work is truly excellent, being simple, clear, and reasonably thorough. 5.*Failure of Sight from Injuries of Spine and Head*. (1869.) 6. *Report on the Ophthalmoscope*. *(Brit. and For. Medico-Chirurgical Rev.,* October, 1854, p. 549.) In this article, also, as well as in his "*Principles and Practice*, " Jones discloses a strange inability to appreciate the value of the ophthalmoscope. Thus, on p. 554, he says: "*The little help which the therapeutics of the eye has as yet derived from the ophthalmoscope appears evident from the results of the observations contained in the works before us."* In this same article, however, occurs a passage of great historic importance-the extremely belated announcement, in fact, of →Babbage's anticipation of →Helmholtz in the invention of the most important instrument in ophthalmology. The passage, in full, is as follows (p. 551): *"Dr. Helmholtz, of Königsberg, has the merit of specially inventing the ophthalmoscope. It is but justice that I should here state, however, that seven years ago Mr. Babbage showed me the model of an instrument which he had contrived for the purpose of looking into the interior of the eye. It consisted of a bit of plain [sic] mirror, with the silvering scraped off at two or three small spots in the middle, fixed within a tube at such an angle*

that the rays of light, falling on it through an opening in the side of the tube, were reflected into the eye to be observed, and to which the one end of the tube was directed. The observer looked through the clear spots of the mirror from the other end. This ophthalmoscope of Mr. Babbage, we shall see, is in principal essentially the same as those of →Epkens and →Donders, of →Coccius and of →Meyerstein, which themselves were modifications of →Helmholtz's." 7. Wharton Jones supplied with his own hand a number of the drawings for William Mackenzie's *"A Practical Treatise on the Diseases of the Eye,"* notably the frontispiece which, in its time, was the best which had yet appeared upon the eye in a sectional view. Jones also wrote, 15 pages of excellent matter in explanation of his drawing, which, also, was published in the book of Soelberg-Wells. 8.*Anatomical introduction explanatory of a horizontal section of the human eyeball* 1840. 9. *The wisdom and beneficence of the Almighty as displayed in the sense of vision*. London 1851.10. *Failure of sight from railway and other injuries of the spine and head with a physiological and pathological disquisition into the influence of the vaso-motor nerves on the circulation of the blood in the extreme vessels*. London 1859. American Encyclopedia of Ophthalmology, Vol.9, p. 6727-6729.Albert.BMC

Laurent Joubert

Joubert, Laurent (1529-1583) French surgeon of the 16th century, who devoted considerable attention to diseases of the eye, but whose writings are tinctured with the grossest superstition. Born at Valence (Drôme), he studied his profession at first in his native city. Later, however, he migrated to Montpellier, there receiving the bachelor's degree in medicine in 1551. He practised first at Aubenas, then at Montbrison. Later, he studied at Paris, Turin, Padua, Ferrara, and Bologna. In 1558 he received the degree of Doctor in Medicine at Montpellier. In 1567 he composed a competitive thesis entitled *"An Visio Fiat Emittendo Potius quam Recipiendo*. " Shortly afterward he married Louise de Guichard. In 1583 he died at Lombert, on a journey from Montpellier to Toulouse. His writings are twelve in number, but, with the sole exception of the dissertation mentioned, none is devoted exclusively to the eye. Here and there are brief ophthalmologic passages, but none is of any merit.American Encyclopedia of Ophthalmology, Vol.9, p. 6729.

Joule, James Prescott (1818-1889) This scientific investigator, one of the most distinguished experimental philosophers, was born (1818) at Salford, England. His earliest notable experiments were made with reference to electromagnetic engines; from which he passed to quantitative determinations regarding heat, and the transformation of various forms of energy. He is justly entitled to be considered as the experimental founder of the modern theory of conservation of energy-the grandest generalization ever made in physical science. His collected scientific papers were published (1885-87).

Joux, Louis (b. 1888-1949) Belgian ophthalmologist. Joux became M.D. in Brussels in 1911 and specialized in ophthalmology in Paris, Munich and London (St. Mary's Hospital). Thereafter he became assistant and adjunct departmental head at the Brussels University under Emile→Gallemaerts and Henri→Coppez. In 1940 he leaded the Military Ophthalmic Institute and transferred it to Berck-Plage. He published on the *opsonic index in phlyctenular conjonctivitis* (1912), *treatment of gonococci conjunctivitis by milk injections* (1923), *palsy of the 6th nerve by rachicocainisation* (1923), *radiotherapy of a deep intraorbital tumour* (1924). (Verriest)

Jugler, Johann Heinrich (1758-1812) German physician, who paid considerable attention to the eye. Born at Lüneburg, he studied at Leipsic, Göttingen, Berlin, and Bützow, at the last named institution receiving his degree in 1784. His dissertation on this occasion was: "*De Collyriis Veterum Variisque Eorum Differentiis*." He settled first in Boizenburg then, in 1778, at Wittingen, where he became Landphysicus. In 1795 he removed to Lüchow, and in 1809 to Lüneburg, where he later died. Jugler's ophthalmologic writings are as follows: 1. *Bibliothecae Ophthalmicae Specimen Primum*. (Hamburg, 1783.) 2. *Opuscula Bina Medico-Litteraria: Alterum Specimen Bibliothecae Ophthalmicae Primum, Recensens Auctores, Qui usque ad Q. Sereni Sammonici Aetatem in Medicina Oculari Unquam Claruere, etc.* (Leipsic and. Dessau, 1785.) 3. *Hippocratis de Visu Libellus*. (Helmstädt, 1792.) American Encyclopedia of Ophthalmology, Vol.9, p. 6730-6731

Juler, Frank Anderson (1888-1962) British ophthalmologist. Juler was educated at St. Paul's School, Trinity College, Cambridge, where he gained a first in the Natural Sciences Tripos, and then at St. Mary's Hospital, at which he obtained an Entrance University

Scholarship, he was soon one of the top flight of ophthalmologists, with Staff appointments at Moorfields and St. Mary's. He served in both world wars: in the first, as a Captain in the R.A.M.C., he was a member of Sir William Lister's group of ophthalmic specialists at Etaples, and in the second, he was consulting ophthalmic specialist to the B.E.F. in France. Juler had many other appointments, among them Surgeon Oculist to the households of King George VI and Queen Elisabeth II. He was awarded the C.V.0. in 1947 and in the following year became President of the O.S.U.K. He was also President of the Ophthalmic Section of the Royal Society of Medicine. BJO 1962,46:319

Juler, Henry Edward (1842-1921) British ophthalmologist, brother-in-law of William Adams →Frost, descendant of a Huguenot family, he received his medical education at St. Mary's Hospital, London, where he held the posts of demonstrator of anatomy (1877) and medical superintendent of the Hospital. While holding the former he had gained some experience of general practice by assisting a Dr. Gibson, at that time surgeon to Newgate Prison, and he then passed the examination for the fellowship of the Royal College of Surgeons of England. He studied in Paris and Berlin and decided to devote himself to eye work. Upon his return to London he was appointed clinical assistant to the Royal London Ophthalmic Hospital. He went into practice in Wimpole Street, and received the appointment of pathologist to the Royal Westminster Ophthalmic Hospital. In those days, although clinical material was abundant, there was no systematic teaching at that hospital, but Juler with the help of his colleagues speedily laid the foundation of a school of ophthalmology, and was the first to encourage students from Charing Cross Hospital to attend the neighbouring ophthalmic hospital. In 1884 he was appointed to the staff of St. Mary's Hospital as junior to Sir Anderson →Critchett, and in 1901 when Sir Anderson retired, Juler became senior ophthalmic surgeon to the Hospital. Juler's chief contribution to the literature of ophthalmology was his "*Handbook of Ophthalmic Science and Practice*" (1884), a well-written, careful compendium, adorned with many illustrations. It was written when Juler was comparatively young, and firmly established his reputation as a keen clinical observer. It has gone through three editions in England and three in America. BJO 1921,5:286-288.Albert.

Julesz, Bela (?-) American scientist of Hungarian origin, state of New Jersey Professor of Psychology, and Director of the Laboratory of Vision Research, Rutgers University. In 1950 he received a Diploma of Electrical Engineering from the Technical University, Budapest; The Hungarian Academy of Sciences granted him his Ph.D. in1956. From 1956 until 1989 he worked at the (AT&T) Bell Laboratories. Dr. Julesz taught and did research in communications systems for several years prior to 1956. Since joining Bell Laboratories, he has devoted himself to visual research, particularly depth perception and pattern recognition. He is the originator of the Random-dot Stereo image technique and of the method of studying texture discrimination by constraining second-order statistics. He has written extensively in the area of visual and auditory perception, and is author of *Foundations of Cyclopean Perception* (1971, University of Chicago Press), and a second monograph *Dialogues on Perception* (1995, Bradford/MIT Press). Dr. Julesz was Head of the Sensory and Perceptual Processes Department from 1964 till 1982, and in 1983 became Head, Visual Perception Research Department. In January 1989 after 32 years at Bell Laboratories he retired and became a State of New Jersey Professor of Psychology and Director of the newly established Laboratory of Vision Research at Rutgers University. He has been a visiting professor of experimental psychology at M.I.T. and other universities. In 1983 he received (for five years) the MacArthur Fellow Award for his work in Experimental Psychology and Artificial Intelligence. He was a Fairchild Distinguished Scholar at the California Institute of Technology from 1977 to 1979 and in 1987. Fellow, AAAS, OSA, and American Academy of Arts and Sciences; Corresponding Member of the Goettingen Academy of Sciences and Honorary Member of the Hungarian Academy of Sciences. In 1982 he was elected Neurosciences Associate of the Neurosciences Institute for nine years. In January 1985 was awarded Dr. H. P. Heineken Prize by the Royal Netherlands Academy of Arts and Sciences. From 1985 through 1993 he was Continuing Visiting Professor at Caltech's Biology Division during the winter semesters. In 1987 he was elected member of the National Academy of Sciences. In April 1989 he received the Karl Spencer Lashley Award by the American Philosophical Society and was elected Fellow of the Society of Experimental Psychologists. He is a member of

the advisory board of the Santa Fe Institute. Papers: Julesz published 210 papers between 1950 and 1995 (to be found in the internet at: *http://zeus.rutgers.edu/julesz_bibl.html*. Received patents: B. Julesz, 2,974,195, Economy in TV Transmission, dated March 7, 1961; C.C. Cutler, B. Julesz, K.S. Pennington, 3,543,237, Pattern Recognition Apparatus and Method, dated Nov. 24, 1970; B. Julesz, B.T. Kerns, M.E. Terry, 4,023,911, Stereopsis Test Patterns for Adjustment of Stereomicroscopes in the Inspection of 3-D Objects, dated May 17, 1977; B. Julesz, 4,032,237, Stereoscopic Technique for Detecting Defects in Periodic Structures, dated June 28, 1977. Address: B.Julesz, LVR, Psychology Bldg. Busch Campus, Piscataway, NJ 08854, telephon: (908) 445-6660, fax: (908) 445-6715, e-mail: julesz@cyclops.rutgers.edu (JPW)

Junge, Eduard (1832-1898) Russian ophthalmologist who was born at Riga, and who received his early professional education at the University of Moscow, and then proceeded to study ophthalmology under Albrecht von →Graefe. From 1860 until 1882 he was full professor of ophthalmology at St. Petersburg, as well as a member of the Upper Military-Medical Court and Fellow of the Military-Medical Committee. These positions he resigned in 1882, for the purpose of undertaking, in the following year, the reorganization and supervision of the St. Petersburg Academy of Forestry and Agriculture. He died in Jalta. Junge wrote, in Russian: "*The Mechanical Center of the Eye,*" and "*Measures to be Taken by Troops against Conjunctivitis and Trachoma*;" in German: "*Zur Histologie der Glashäute*..... *Die Getigerte Netzhaut*..... *Ueber Netzhautverengerung bei Cirrhose*. "American Encyclopedia of Ophthalmology, Vol.9, p. 6732.

Jüngken, Johann Christian (1793-1875) German ophthalmologist of Berlin, pupil and assistant of Carl Ferdinand →Graefe and the first to perform an ophthalmic operation under general anaesthesia. Born at Magdeburg, Germany, the son of a physician, he began to study medicine at Göttingen about 1812. For a time his studies were interrupted by his military services, which he rendered in a medical capacity. In 1816, however, he was back in Berlin, again at his medical studies and also assistant to von →Graefe. In 1817 he received his degree, presenting the dissertation "*De Pupillue Artificialis per Coreoncion Graefianum Conformatione*." The very same year he qualified as privatdocent at Berlin for surgery and ophthalmology, and, the year following, enjoyed a year of scientific travel. In 1825 he was made Extraordinary Professor of Ophthalmology at Berlin, and three years later was appointed head of the newly-founded Clinic for Ophthalmology in the Charity Hospital-a position which he held for forty years. In 1834 he became Professor of Surgery and Ophthalmology. After the reception of numerous honours of the highest character through a period of many years, he celebrated, in 1867, the semi-centennial of his doctorate. Though not a great inventor, Juengken was an excellent teacher and operator. He was a warm-hearted, clear-headed, and very helpful man, and, therefore, the idol of his students. His most important ophthalmologic writings are: 1. *Das Coreoncion. Ein Beitrag zur Künstlichen Pupillenbildung*. (1818. A German translation by himself of his graduation thesis, above mentioned.) 2. *Die Lehre von den Augenoperationen, etc.* (1829.) 3. *Die Lehre von den Augenkrankheiten, etc*. (1832; 2d ed., 1836; 3d ed., 1842.) 4. *Mém. sur l'Ophtalmie qui Règne dans I'Armée Belge*. (Brussels, 1834. Germ.trans., same year.) 5. *De Blennorrhoeis Oculi Humani*. (1837.) 6. *Ueber die Anwendung des Chloroforms bei Augenoperationen*. (1850.) 7. *Die Augendiätetik oder die Kunst, das Sehvermögen zu Erhalten und zu Verbessern*. (1870.) American Encyclopedia of Ophthalmology, Vol.9, p. 6730

Jung-Stilling, Johann Heinrich (1740-1817) German poet, novelist and ophthalmologist. Born at Grund, Germany, he began at first to work as apprentice at the trade of charcoal-burner, but soon tired of it and devoted himself to tailoring. Shortly afterward, though chiefly self-instructed, he became a schoolmaster. A failure in this profession, he became a private tutor; but soon determined to study medicine. In accordance with this resolution he studied from 1770-72 at the University of Jena, whither as he states, he had gone with "*half a French dollar*," and where he became acquainted with →Goethe, Herder, and other fellow students, who were later to become famous. In 1772 he settled in Elberfeld as a, general practitioner, devoting, however, his chief attention to ophthalmology. He was soon renowned as a highly skilful operator, but, at the end of only six years, because of the unfortunate issue of a cataract operation which he performed on the eye of a prominent citizen, relinquished medical practice and accepted an invitation to the chair of economy,

finance, and statistical science at the University of Marburg. While here, however, he did not wholly abandon the practice of ophthalmology. In 1804 he accepted a similar appointment at Heidelberg. Still later he moved to Carlsruhe, where he became a Privy Councilor and where he later died. Jung's life is well described and at considerable length in Goethe's *Dichtung und Wahrheit*. His more important writings were: "*Günstige Erfolge mit dem Daviel'schen Verfahren der Cataract-Extraction, Sendschreiben an Herrn Hellman in Magdeburg, etc.*" (Frankfurt a. M., 1775) and "*Methode den Grauen Staar Auszuziehen und zu Heilen*." (Marburg, 1791), both of them valuable publications.American Encyclopedia of Ophthalmology, Vol.9, p. 6732-6733.Albert.

Jurin, James (1684-1750). British physician of some importance ophthalmologically. Born in London, he studied at Trinity College, Cambridge, and settled as physician in London about 1712. He became, in succession, Fellow, Secretary and President of the Royal Society. He was much interested in the application of mathematics to the field of physiology; hence his attention to physiological optics. His most important writings are: 1. *Physico-Mathematical Dissertations*. (London, 1732.) 2. *An Essay upon Distinct and Indistinct Vision*. (Cambridge, 1738: an appendix to Robert Smith's " *Optics.")*American Encyclopedia of Ophthalmology, Vol.9, p.6733.

K

Kabir, Md. Humayun (1939-) Bangladesh Ophthalmologist. He was born on 13th December, 1939 in a respectable Muslim Family of village Keshabpur, Thana-Daudkandi, Dist. Comilla. His father Late Moulana Abdus Zaher was a peer-e-kamel of the locality. He was matriculated in 1955 from the then East Pakistan Secondary Education Board and passed Intermediate Examination from the University of Dhaka in 1957. He passed MBBS from Dhaka Medical College in 1962. He passed FCPS (Ophthalmology) Examination in January 1970 from Pakistan College of Physicians and Surgeons. He is founder fellow of the Bangladesh College of Physicians and Surgeons. Prof. Kabir received higher training in Ophthalmology as a fellow WHO in 1977 and '78 in U.K., France, Germany and Spain. He was awarded FACS from the American College of Surgeons in 1987. He received FRC Ophth. of the Royal College of Ophthalmologists, UK in 1989. He joined the Government Service in the then East Pakistan Health Services (Upper) on 19th March, 1963 in the Mitford Hospital, Dhaka as Assistant Surgeon. He worked in the Department of Ophthalmology of the same Hospital in different capacities till April 1967. He then joined the Institute of post Graduate Medicine and Research, Dhaka for FCPS course. After he got his Fellowship in Ophthalmology he joined the Department of Ophthalmology, Chittagong Medical College in February 1970. In the middle of 1971 he joined as Consultant Ophthalmologist in the Modernized District Hospital of Comilla and worked till June, 1976. On the 6th July Dr. Kabir joined Barisal Medical College as Associate Professor of Ophthalmology. In the middle of 1977 Prof. Kabir was awarded fellowship by WHO for higher training in Ophthalmology in U.K., France, Germany and Spain. Back home in 1978 he again joined Barisal Medical College and worked there till middle of 1982. He then joined Sylhet Medical College and worked there till October, 1984. Prof Kabir joined as Professor of Ophthalmology on 21st October, 1984 in Barisal Medical College. On 12th September, 1985, Prof. Kabir joined as Prof. of Ophthalmology in Institute of Post Graduate Medicine and Research, Dhaka and worked till 10th February, 1991. On 10th February, 1991 Prof. Kabir joined as Director-cum-professor, National Institute of Ophthalmology, Dhaka. On 26th September, 1993 he joined as Professor of Ophthalmology in IPGMR again and then joined as Director-cum-Professor, National Institute of Ophthalmology in 1995 from where he retired in 1997. Now he is member of the Academic council of Banga Bandhu Sheikh Mujib Medical University. He is frequently appointed as examiner of MBBS, DO, DCO, MCPS, FCPS & MS (Ophthalmology) examination by the different Universities and Bangladesh College of Physicians and Surgeons. He was also appointed as External Examiner of MS Ophthalmology by the Tribhuvan University, Kathmandu, Nepal. Prof. Kabir was appointed as External Examiner FCPS Ophthalmology final part by the College of Physicians and Surgeons of Pakistan. Prof Kabir was also appointed as Observer Examiner of the final FRC Ophth. Exam. in the Royal College of Ophthalmologists, U.K. Prof. Kabir is the life member of the Ophthalmological Society of Bangladesh (OS B), Bangladesh Medical Association, Bangladesh National Society for the Blind, Jalalabad Blind Welfare Association, Sylhet. He was Vice President and Secretary General of OSB for two terms each Professor Kabir has been elected as President of the

Bangladesh Academy of Ophthalmology. Then he was elected as the President of the Ophthalmological Society of Bangladesh. He was an Apexian and he was in Lionism and served as Multiple District Sight first chairman in the District 315, Bangladesh. He has been organising rural Eye Camps regularly for the last more than three decades in the country. He has established one 20 bedded Eye Hospital and one Mother & Child Hospital at his village home in the Daudkandi Thana of District Comilla. He also established one Primary School and one Girls School at his village. Prof. Kabir has more than 40 publications at home and abroad. His special interest is anterior segment, specially cataract and IOL implantation and glaucoma. He attended XIII Congress of APAO in Kyoto, Japan 1991, SAARC Ophthalmic Conference in Kathmandu 1991, SAARC & Non Aligned countries Ophthalmic Conferences in Delhi and IAPB Regional Assembly in Delhi 1992. He attended XVII APAO Congress in Manila in 1999. He visited India, Nepal, Thailand, Hong Kong, Japan, U.K., France, Germany, Spain, Rome, Tehran, Pakistan, K.S.A. and Phillipines. (AB)

Kaestner, Abraham Gotthelf (1719-1800) German mathematician, son of a professor of jurisprudence, was educated (philosophy, mathematics and physics) at the University of Leipzig, where he taught (1739-1756) mathematics, logic and natural law, before becoming professor of mathematics and physics at Göttingen (1756-1800). Kaestner published extensively on mathematics and its applications in optics, dynamics, and astronomy. His most popular work was *Mathematische Anfangsgründe* (4 parts) Göttingen 1757-1800. He also wrote a history of mathematics: *Geschichte der Mathematik* (4 vols.) Göttingen 1796-1800 and *Catopricae analyticae de focis et aberrationibus*. Leipzig c.1750. Albert.DSB.

Shigeru Kagoshima

Kagoshima, Shigeru (1882-1953) Japanese Ophthalmologist, Professor Emeritus of Kumamoto University. He graduated from Chiba University Medical School in 1906, and studied Ophthalmology under Prof. J.→KOMOTO for 2 years and then he practiced in the city of Ohmuta in Fukuoka Prefecture for 3 years. He came to Tokyo in 1916 to study Pathology at Tokyo University under Prof. T. OGATA for almost 10 years. He received his Doctor of Medical Sciences from Tokyo University in 1923, with the thesis "*Xerophthalmia, Rickets and Vitamin A*". During his study at Tokyo University he visited Europe, and helped Prof. J.→HIRSCHBERG pack his voluminous library in order to ship it to Tokyo (see KOMOTO Jujiro). On homecoming, he was appointed the Professor and Chairman of the Department of Ophthalmology of Kumamoto University in 1926 and served until 1941, when he retired and practiced in the city of Kumamoto. During his tenure he served as the President of 45th Congress of the Japanese Ophthalmological Society. (SM)

Kaiser, Hermann (1815- ?) German ophthalmologist. Born at Erbach, Odenwald, he studied at Giessen and practised, successively, at Biblis, Ulrichstein, Seligenstadt, and Dieburg. The date of his death is not procurable. Kaiser's ophthalmologic writings are numerous but not specially important, and deal, for the most part, with physiologic optics. American Encyclopedia of Ophthalmology, Vol.9, p. 6738

Mutsuo Kajiura

Kajiura, Mutsuo (1912-1997) Japanese Ophthalmologist and Professor Emeritus of Fukushima Prefectural Medical College. He graduated from Okayama University in 1938, studied Ophthalmology under Prof. B.→HATA and was granted Doctor of Medical Sciences in 1942. He was appointed the Assistant Professor in1943. In 1948 he was invited to Tokyo Medical and Dental University and then in 1951 he was promoted to be the Professor of Ophthalmology of Fukushima Medical College. His main interest was Ophthalmic Optics, and he designed many optical instrument, e.g. Kajiura Binocular Great Ophthalmoscope, an improved version of Gullstrand´s Binocular Ophthalmoscope, Kajiura Slit-lamp Microscope, non-spherical Lens for Ophthalmoscopy, and these instruments were used throughout Japan. His experiences in Ophthalmic Optics were condensed in his Special Lecture "*Slit-lamp Microscopy of the Fundus-its Theory and Practice*" at the 81st Congress of the Japanese Ophthalmological Society in 1977: this Lecture was awarded with the Highest Prize of the Japan Medical Association of the year. His interest also covered contact lenses and he served as the President of the Joint Scientific Meeting of the Japan Contact Lens Society and the Contact Lens Association of Ophthalmologist in 1968. He was also the President of the Ophthalmological Optics Society of Japan and the

President of the 30th Congress of the Japanese Society of Clinical Ophthalmology 1976. He retired from the University in 1979 and was entitled Professor Emeritus of the University. In recognition of his contribution, the Government conferred the Third Order of the Rising Sun upon him in 1987. (SM)

Kalevar, Vasundhara (1936-) Indian Ophthalmologist, former Professor of Ophthalmology, BJ Medical College, Ahmedabad. She graduted from M.G.M. Medical college, Indore in 1960 and did her postgraduation in opthalmology in1963. She studied Ophthalmology under Prof. DHANDA R.P. and worked with him for 38 years. She has specialized her practice in corneal diseases and surgery since 1962. She is the first Indian ophthalmologist to be awarded *Fight for Sight* International Fellowship in 1966 sponsored by National Council to Combat Blindness, New York. She worked at Wilmer Institute, Johns Hopkins Baltimore on '*Histopathology of Tropical Cornea*' with Dr.A.F.Maumenee and Dr.J.R.Duke Jr. This study, on return to India, was continued under a research grant by Indian Council of Medical Research. She was selected by National Institutes of Health, Bethesda U.S.A. as a postdoctoral Fellow for a project on Keratoprosthesis under the guidance of Dr. C.H.→Dohlman in Boston in 1970-1971. She actively participated in all Corneal surgery training programmes with Dr.Dhanda at Indore and Ahmedabad, India. She has been the first Professor in Eye-Banking and Corneal surgery in India. She has been co-author with Professor Dhanda for the book on *Cornea* published in Boston by Little,Brown and Co. and later in India. Her contribution in the *Textbook of Clinical Ophthalmology* as a co-author is significant. There is perhaps no other team of ophthalmic surgeons who have worked together for 38 years (1960-1998) in general ophthalmology and Corneal surgery in particular. Dr.Kalevar has been the third lady President of All India Ophthalmological Society (AIOS) in 1997. She was editor for the *Proceedings of AIOS* annual conferences from 1987-1992, two consecutive terms as an elected office bearer of the Society. She has been awarded Gold medals by AIOS and five other state Ophthalmic societies for her work on cornea. She has many publications in national and International ophthalmic literature, some examples are *"Donor Cornea for preservation*. Br. J. Ophthalmol.52: 695, 1968", *"Viability of Donor Cornea in Tropics*. Trans. Asia-Pacific Academy of Ophthalmol. (1968), p. 188" , *"Blood stained Cornea - Clinico-pathological evaluation and scope of keratoplasty*. Conc. Ophthalmol. (1974), Vol 2, p. 737" and "*Glyco-protein (mucus) content of tears from normals and dry eye patients*. Exp. Eye Res. 22: 359, 1975, with C. H.Dohlman". (107 Sapna Chambers, 12/1. Sarju Prasad Marg, Indore-452001 India; e-mail: appalto@bom4.vsnl.net.in) (SM)

Kalt, Eugene (1861-1941) French ophthalmologist, born in Landser (Alsace) near Mulhouse and Basle. He went to the high school of Belfort where he was received as bachelor in 1879. He studied medicine first in Besancon, moving after one year to Nancy, and joining the medical school of Paris, becoming physician there in 1882. In 1886, he sustained, under Ph.Panas, his doctoral thesis " *Recherches anatomiques et physiologiques sur les opérations de strabisme* ". The same year he won, by contest, the position as deputy chief of the Eye Clinic under Panas. After a new contest, in November 1889, he becomes chief of the Eye Clinic of the famous Quinze-Vingts, a position he was to retain for the next 52 years. For a new treatment of the eyes, he was named, in 1909, Chevallier de la Légion d´Honneur and later, in 1921, promoted to Officier de la Légion d´Honneur. His interest being focused on Histology, he was considered, in France, the inventor of ocular patho-histology. Due to his very long career, he was probably the French ophtalmologist who performed the highest number of cataract operations. Kalt was a founding member of the Société d´ophtalmologie de Paris (1888). He was an editor of the Annales d´Oculistique, in which he published a great number of papers. He also was a collaborator to Lagrange and Valude´s great *Encyclopédie Française d'Ophtalmologie* published 1903. Kalt was a promoter of new cataract operations: suture of the corneal cut of the cataract, of the intracapsular extraction of the lens (1894), and of the so-called " *forceps of Kalt* " for its extraction (1910-1925). He was also a promoter of a treatment of the gonococcal ophtalmia of the newborn and the adult by irrigation with permanganate of potash with the help of a funnel of his invention. Heitz *History of Contact Lenses*, Ostend Wayenborgh 2002-2003. JPW

Sadayoshi Kamiya

Kamiya, Sadayoshi (1916-1992) Japanese Ophthalmologist, a graduate from Osaka Medical College in 1939 studied Ophthalmology at Osaka University under Prof. B.

→NAKAMURA and Prof. Y. →UYAMA. He was appointed the Professor and Chairman of the Department of Ophthalmology of Nara Medical University in 1953. His clinical research covered flicker fusion, dark adaptation, light sense, keratoplasty, eye drops, amblyopia etc. In 1962, he opened an Eye Camp in Nepal at the request of a Nepalese student. Subsequently, he visited Nepal many times and carried out Eye Camp Activities. He retired from the University in 1971. In 1990 the King of Nepal conferred upon him a decoration of High honor (*Suprabala Gorakha Dakshinabahu*), in recognition of his service for the prevention of blindness in Nepal.(SM)

Kämpf, Moritz K. (1835- ?) Austrian physician born in Friedeberg, Austria. Kämpf was a physician at the military hospital in Vienna for some years, then, retiring, he became 1878 an ophthalmologist in Krems an der Donau. He wrote: *The causes and prevention of near-sightedness*. Translated from the *Wiener Zeitung* by Henry W. Williams. Boston 1871;*Ueber die sogenannte ägyptische Augenentzündung* (Zeitschrift f.praktische Augenheilkunde 1872); *Regeneration des grössten theils der Hornhäute* (same journal 1868). Albert.Fischer.

Kanai, Atsusi (1937-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Juntendo University, Director of the WHO Collaborative Centre for Prevention of Blindness. He graduated from Juntendo Univeristy in 1963, studied Ophthalology under Prof.→NAKAJIMA Akira and received his Doctor of Medical Sciences in 1968 (thesis: *Electron Microscopic Study of Keratoconus*. J. Jpn. Ophthalmol. Soc. 72: 902-918, 1968). He extended his study at the University of Florida in 1968-1971 and at Louisiana State University 1979-1980 and worked with Prof. H. Kaufman (a joint work: *The Fine Structure of Sclerocornea, Invest*. Ophthalmol. 10: 687-694, 1971). He was promoted to be the Assistant Professor of Juntendo University in 1979 and to the present position as above in 1989, as the successor of Prof. Nakajima Akira. He holds key positions in many professional societies: President of the Japanese Society of Keratoplasty, Board of Trustees of Japan Eye Bank Association, Japan National Society for the Prevention of Blindness, Japan Contact Lens Society, Japanese Society of Ophthalmic Surgeons (President of the 20th Congress) and Japanese Society of Ocular Inflammation. He is also a Councillor of the Japanese Ophthalmological Society and many other National Societies, and also of the Asia-Pacific Academy of Ophthalmology. The WHO Collaborative Centre for Prevention of Blindness has been placed in this Department since 1989. He also serves many Government Councils and Committees. His research interest is in cornea, keratoplasty, contact lens, refractive correction and sports vision, and he has many publications, e.g. ″*Future contact lens*. special lecture to the 40th Congress of Japan Contact Lens Society, J. Jpn. Cont. Lens. Soc. 39: 271-278, 1997″, ″*Corneal dystrophy*. *System of Ophthalmology* 2A: p.231, Nakayama Publ. Co. Tokyo 1996″. He has been active in the Prevention of Blindness activities in Asia-Pacific Region, and received an Honor Award for International Prevention of Blindness Program from the Ministry of Health, Thailand(1997) and Vietnam Red Cross Medal (1997). (Department of Ophthalmology, Juntendo University, 3-1 Hongo, Bunkyo-ku, Tokyo, 113-8413, phone: +81-3-3813-3111, fax: +81-3-3817-0260)(SM)

Charimet Kanchanaraya

Kanchanaraya, Charimet (1936-1985) Thai Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Ramathibodi Hospital, Mahidol University. He graduated from the Faculty of Medicine, Siriraj Hospital, University of Medical Sciences, and received his M.D. degree in 1960. He continued his study in the U.S.A. from 1964, at New York Eye and Ear Infirmary and Retina Foundation, Boston: he received the Diploma of the American Board of Ophthalmology in 1967 and the Diploma of the Thai Board of Ophthalmology in 1972. He came home in 1968 and joined the teaching staff of the Ramathibodi Hospital, Mahidol University, and he was promoted to Assistant Professor (1976), Associate Professor (1978) and then to the Professor in 1983. He worked as the Chairman of the Department of Ophthalmology of Ramathibodi Hospital during 1978-1985. His professional activities were very active: he served as the Executive Member of the Committee of the Faculty of Medicine of Mahidol University (1978-1985), Member of the Committee of the Ophthalmological Society of Thailand (1975-1985), Executive Member of the Thai Board of Ophthalmology (1976-1985) and the Executive Member of the Committee of the Eye Bank of Thai Red Cross (1972-1985). He contributed to the 8th Congress Asia-Pacific Academy of Ophthalmology as a Member of the Organizing

Committee. He published many scientific papers in his field of retinal diseases and also of general Ophthalmology, e.g. "*Harada's Disease*" J. Med. Ass. Thai. 53: 524. 1970, "*Cases of ocular angiostrongyliasis associated with eosinophilic meningitis*. Am. J. Ophthalmol. (1971): 931 and "*Natural history of rhegmatogenous retinal detachment among Thai patients*." Trans. Asia-Pacific Acad. Ophthalmol. 8: 581, 1981. (SM)

Dang Kanchanaraya

Kanchanarnaya, Dang (1905-1971) Thai Ophthalmologist, Professor of Ophthalmology, Siriraj Hospital Medical School of Chulalongkorn University. He graduated from Siriraj Medical School of Chulalongkorn University and received his M.D. degree in 1926, and received Ophthalmology training at the Hospital. After having completed further study in India (1929-1930), he founded the Department of Ophthalmology of Siriraj Hospital in 1930 and served as the Head of the Clinic. He was then appointed the Professor of Ophthalmology of Siriraj Medical School. He is the founding member of the Ophthalmological and Otolaryngological Society of Thailand since 1956. He was also a Founding Member of the Asia-Pacific Academy of Ophthalmology in 1960. He educated many students, who are currently contributing not only to the eye care but also to the public health in Thailand. In recognition of his service, the King of Thailand conferred on him " *The Knight Commander of the most exalted Order of the White Elephant*". (by PRACHAKVEJ Prachak). (SM)

Fumio Kandori

Kandori, Fumio (1904-1981) Japanese Ophthalmologist, Professor Emeritus of Tottori University. He was a graduate of Kyushu University in 1932. He studied Ophthalmology under Prof. Y.→SHOJI and received his Doctor of Medical Sciences from Kyushyu University in 1941 after graduating from the Postgraduate School of Medicine. He was sent to Chintao (now Qingdao, China) Medical School as the Professor of Ophthalmology and worked until the end of the World War II. He returned to Japan in 1946 and was appointed the Assistant Professor of Yonago Medical School (now Tottori University). In the next year he was promoted to be Professor and Chairman of the Department of Ophthalmology of Tottori University. He stayed in this position until retirement in 1970 and then became Professor Emeritus of the University. During his tenure, he served as the President of the 70th Congress of the Japanese Ophthalmological Society in 1966 and delivered a Special Lecture "*Electron Microscopic Studies of Cataract and Medical and Surgical Managements*" at the 73rd Congress of the Society in 1969. He reported rare cases with many small yellow flecks in the Fundus in 1959 (*Jpn. J. Clin. Ophthalmol*. 13:382) and similar cases with hemeralopia in 1966 (*Yonago Acta Med*. 10:98): this disease is now called *Flecked Retina of Kandori*. The Government honored him in 1975 with The Third Order of the Rising Sun. (SM)

Kaneko, Akimichi (1938-) Japanese Physiologist, Professor and Chairman of the Department of Physiology of Keio University. He graduated from Keio University Faculty of Medicine in 1962, studied retinal physiology under the guidance of Prof. TOMITA Tsuneo and received his Doctor of Medical Sciences in 1968. He spent 2 years, 1968-1970, as a Postdoctoral Research Fellow at the Department of Neurobiology, Harvard Medical School. He served as the Professor and Chairman of the Department of Information Physiology of the National Institute for Physiological Sciences in Okazaki Japan and as the Dean of Life Science Faculty of the Institute (1988-1990). He has served in the present position as above since 1991. He is the Chief-Editor of *Jpn. J. Physiol*. since1987, and serves as a Member of Editorial Board of Biomedical research, Neuroscience Research, Vision Research (1985-1990), Neuron (1989-1994), NeuroReport and News in Physiological Science. He served as Visiting Professor to Marine Biological Laboratory Woods Hole (1980) and to the Department of Neurobiology of Northwestern University (1988). He is a recipient of *Paul Kayser International Award of Merit in Retina Research* from the Retina Research Foundation (ISER 1996). His many publications embrace "*Physiological and morphological identification of horizontal, bipolar and amacrine cells in goldfish retina*. J. Physiol. 207: 623, 1970" and "*Transient calcium current of retinal bipolar cells of the mouse*. J. Physiol. 410: 613, 1989". (Department of Physiology, Keio University, Shinano-machi, Shinjuku-ku, Tokyo, 160-0016, Japan; phone: 81-3-5363-3748, fax: 81-3-3359-0437, e-mail: kaneko@physiol.med.keio.ac.jp)(SM)

Kani, Kazutaka (1939-) Japanese Ophthalmologist, Professor and chairman of the Department of Ophthalmology, Shiga University of Medical Science. He graduated from

Kobe University in 1963, studied Ophthalmology at the Graduate School of Medicine of the University under Prof. IMACHI Jo, and received his Doctor of Medical Sciences in 1968 (thesis: *Electrophysiological study on the visual pathway. Effects of blood circulatory arrest and pressure on cat optic nerve*. J. Jpn. Ophthalmol. Soc. 72: 1880,1968). He has been in the present position as above since 1989. His research interest is in Neuro-ophthalmology, Psychophysics, Visual Optics and Visual field, and he has many publications in this field, e.g. ″*An analysis of human visual receptive fields using perimetric method*. in Ed. Lakshminarayanan: *Basic and Clinical Applications of Vision Science*, p. 238-286, Kluwer Academic publishers, Netherlands, 1997″ and ″*Spatial extent of binocular suppression in normal and strabismic subjects*. Strabismus 4: 175-187,1994″, ″*Perimetry under television ophthalmoscopy"* in Documenta Ophthalmologica Proceeding Series 14: 231-236, 1977 and ″*A new fundus perimeter by which the target can automatically pursue eye movement*. Ed. Wall & Heijl: *Perimetry Update 1996/1997*, p. 75-79, Kugler Publications, Netherlands, 1997″. He is a Councillor of the Japanese Ophthalmological Society (JOS), Board of Trustees of the Japanese Society of Neuro-ophthalmology, of Japanese Society of Strabismus and Amblyopia, Japanese Society of Ophthalmological Optics and Secretary to the Japan Society of Vision and to the Japan Society of Perimetry. He is a member of the International Perimetric Society, International Society of Neuro-ophthalmology and International Society of Strabismological Association. (Department of Ophthalmology, Shiga University of Medical Science. Seta Tsukinowa-cho, Ohtsu, 520-2192, Japan. phone: +81-7-7548-2276, fax: +81-7-7548-2279, e-mail: kani@belle.shiga-med.ac.jp) (SM)

Karl Theodor, Duke of Bavaria (1839-1910) German ophthalmologist, father of Elisabeth, Queen of Belgium. Karl Theodor was first officer, when he took part in the Bavarian-Prussian struggle in 1866, and then in the war against France in 1870 being in several bloody battles, such as Gravelotte and Sedan. It was this experience which drove him to take up medicine. He quitted the army, studied medicine and received 1872 his diploma of medicine. Since he was particularly interested in ophthalmology , he went to Vienna and attended Professor von →Arlt´s lectures and received special instruction in ophthalmology and operating from Arlt´s then assistant Dr.Ernst →Fuchs. He made progress and also attended lectures given by the celebrated surgeon Theodor Billroth. Being delicate, he felt himself unequal to major surgery , and soon confined his energies to ophthalmology. Returning to Bavaria, he treated patients in his hospital at Tegernsee, near his summer residence, and in his clinic in Munich during the winter. He also treated patients during a part of the winter in Meran , South Tyrol, where he used to go for his own fragile health. The Archduke operated on more than 5000 cataract patients. During the first years of his medical activity he also occupied himself with histological work , and wrote on changes of the vitreous body in myopia and on inflammation of the retina in nephritis. His daughter, Elisabeth, married the Belgian Prince Albert and became later, a very beloved Queen of Belgians. The Ophthalmoscope, 1910,p.69-70 (by Ernst →Fuchs); JPW.

Karp, Louis A. (1940-1999) American ophthalmologist, chief of the ophthalmology section at Pennsylvania Hospital and clinical professor of ophthalmology at Thomas Jefferson University and the University of Pennsylvania, Philadelphia. Louis Karp, a magna cum laude graduate of Franklin and Marshall College, Lancaster, Pa, received his medical education at Thomas Jefferson University where he graduated in 1965. He completed his residency training in ophthalmology at the University of Pennsylvania under Harold G.→Scheie MD, and later completed a residency in anatomic pathology at the same institution. This was followed by a year of study in ophthalmic pathology at The Armed Forces Institute of Pathology in Washington, DC, where, along with others, he wrote a landmark article on primary intraorbital meningiomas: ″Karp LA, Zimmerman LE, Borit A, Spencer W. ″*Primary intraorbital meningiomas*.″ Arch Ophthalmol. 1974;91:24-28. Karp established a large practice to which he dedicated virtually all of his time. Karp won a special award from the residents who appreciated his unselfish devotion to their needs. In larger groups, he was successful as well. He taught a course in slitlamp microscopy for several years at the University of Puerto Rico in San Juan. More recently, he made a trip to Vietnam and was looking forward to establishing a teaching program there. He was highly regarded by his colleagues at Pennsylvania Hospital, where he was active in the continuing medical education program. Arch Ophthal 118,449,2000

Kass, Michael A. M.D. (1941-) American ophthalmologist. Head of the Department of Ophthalmology and Visual Sciences, ophthalmologist-in-chief at Barnes-Jewish hospital. A professor of ophthalmology and visual sciences since 1983, he was vice chairman of the department and director of clinical services from 1992 to 1998. An expert of glaucoma, Kass is the principal investigator and study chairman of the national Ocular Hypertension Treatment Study, a 22-center trial sponsored by the National Institutes of Health to determine whether using eye drops to reduce pressure in the eyes of patients with elevated intraocular pressure prevents delays in the onset of glaucoma. Kass has spent much of his career studying new methods of lowering pressure and looking at whether the benefits of treatment outweigh the risks. He has published more than 130 peer-reviewed scientific articles. Kass is a diplomate of the American Board of Ophthalmology, a fellow of the American Academy of Ophthalmology and secretary for continuing education in the academy. In addition, he is a member of several professional societies and organizations, including the Association for Research in Vision and Ophthalmology, the American Glaucoma Society and Prevent Blindness America. He is a member of the Alpha Omega Alpha, the national honorary medical society, and he is consistently listed as a leading ophthalmologist in "The Best Doctors in America" a book based on a survey of more than 7,000 physicians in the United States. He is a past recipient of the American Academy of Ophthalmology's Senior Honor Award and, in 1987, he was that organization's Recognition Award winner. Kass received his medical degree and a degree in neurophysiology from Northwestern University in 1966. A Chicago native, he was an undergraduate at the University of Michigan. After medical school, Kass completed a one-year internship at Passavant Memorial Hospital in Chicago and served two years in the U.S. Army Medical Corps before coming to Washington University in 1969 as an ophthalmology resident. In 1972, he was chosen to be the chief resident in ophthalmology. That same year, he did a special fellowship in glaucoma, sponsored by the National Eye Institute. He joined the faculty at Yale University in 1973 and was an assistant professor of ophthalmology and director of the glaucoma service there before returning to Washington University in 1975 as an assistant professor of ophthalmology.(AB)

Kato, Keiichiro (1936-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Fukushima Medical University, School of Medicine. He graduated from the University in 1961, studied Ophthalmology under Prof. KAJIURA Mutsuo and received his degree Doctor of Medical Sciences in 1968 (thesis: *Influences of aniseikonia on binocular vision with special reference to depth perception*. J. Jpn. Ophthalmol. Soc.72: 1415, 1968). He has been in the present position, as above, since 1979. His research interest is in physiological optics and its clinical significance. He has many publications in the field, e.g. "Special Lecture: *Accommodation function and its clinical evaluation*. J. Jpn. Ophthalmol. Soc. 98: 1238, 1994". He is a Councillor of the Japanese Society of Ophthalmological Optics, Japanese Society of Cataract Research and Japanese Society of Ophthalmic Surgeons.(Department of Ophthalmology, Fuskushima Medical College, Hikarigaoka, Fukushima, 960-1247, Japan. phone: +81-2-4548-2111, fax: +81-2-4548-2640, e-mail: keikato@mtci.ne.jp)(SM)

Ken Kato

Kato, Ken (1914-1984) Japanese Ophthalmologist and Professor of Ophthalmology of Nihon University. He graduated from Keio University in 1938, and studied Ophthalmology under Prof. S.→SUGANUMA and Prof. M.→UEMURA. He was granted Doctor of Medical Sciences from the University in 1952. In 1956 he was promoted to Assistant Professor of the University, and studied for 2 years, 1961-1963 at the University of Pennsylvania. On return to Japan, he was promoted to be the Professor of Ophthalmology of Nihon University in 1963 and served in this position until retirement in 1980. During his tenure, he served as the President of the Japanese Ophthalmological Society in 1975-1977, and also served as the President of 29th Congress of Japanese Society of Clinical Ophthalmology. He was the Vice-President of the International Symposium of Fluorescein Fundus Angiography held in Tokyo in 1972. He was a Visiting Professor to Pennsylvania University. He also sat on many Government Committees. His research interest was in fundus diseases in hypertension. As one of the Symposists at the 67th Congress of the Japanese Ophthalmological Society, he lectured on "*Findings in the Fundus in Hypertension*", he proposed a Criteria of Classification of vascular changes, and this Classification is most popular throughout Japan. On that subject, he wrote,

assisted by Mizuo Matsui: *Retinal Changes of Systemic Hypertension and Diabetes Mellitus* (2nd edition) Kanehara Tokyo 1966. This work was also published in English "*Hypertension and Diabetes mellitus, their ocular fundus findings*, Kanehara-Syuppan, Tokyo 1966". With Misao Uemura (also spelled Uyemura) as editor, Kato wrote: *Color Atlas of Fundus Diseases* (in Japanese) Tokyo 1961. He also delivered a Special Lecture "*Macular Region and its Abnormalities*" at the 80th Congress of the Society. After retirement from the University, he served as the Professor at Science Research Institute of the University for 2 years. The first edition of his *Atlas of Ophthalmic Surgery* (in Japanese) was published in Tokyo by Kanehara Shuppan in 1969. This atlas was written with the collaboration of Hirohiko Inoue, Mizuo Matsui, Hajime Suzuki, Hiroshi Tomita and Yasuo Uyemura, all from Tokyo. In June 1973, a *Memorial Collection of Ken Kato´s Ophthalmic Papers* was published at the occasion of the 10th Anniversary of his professorship. (SM)

Kinkichi Kato

Kato, Kinkichi (1911-1987) Japanese Ophthalmologist, a graduate of Tokyo University in 1937, studied under Prof. S. ISHIHARA and was granted his Doctor of Medical Sciences from Tokyo University in 1943. He was appointed to be the Professor of Ophthalmology of Tokyo Women's Medical College in 1948 and served until 1974. His main interest was the Color Sense and he has many publications on this subject in Japanese Journals in Ophthalmology. (SM)

Seiichi Kato

Kato, Seiichi (1910-1987) Japanese Ophthalmologist, Professor Emeritus of Shinshyu University. He was a graduate of Tokyo University in 1935. After having completed his thesis for Doctor of Medical Sciences, he was made Professor of Ophthalmology at the Medical School of Karafuto (now Sachalin, Russia) in 1943. After the end of the World War II, he came home and was invited to the Professorship of Ophthalmology of Shinshyu University in 1946 and stayed in this position until 1958. His research interest was Accommodation and he has many papers in Japanese Journals in Ophthalmology. In 1958, he was promoted to be the Director of the University Hospital, and in 1966 he was made the Dean of the Faculty of Medicine. In 1973, he was elected President of Shinshyu University and served for 8 years. In recognition of his outstanding service, the Government conferred upon him the Second Order of the Rising Sun in 1981. (SM)

Kattah, Jorge C. (?-?) American neurologist. Dr.Kattah is Chairman of the Department of Neurology University of Illinois, College of Medicine Peoria, Illinois. Dr. Kattah received his undergraduate education and the degree of Doctor of Medicine in his native Colombia, in South America. He came to the United States in 1972, and undertook specialty training in neurology at Georgetown University in Washington, D.C. Subsequently he joined the teaching faculty and became Professor of Neurology. In 1977 he was a fellow in neuro-ophthalmology at the University of Pittsburgh. Currently, he is Chairman of the Department of Neurology at the University of Illinois College of Medicine in Peoria, Illinois. He is a member of the American Academy of Neurology.

Genjiro Kawakami

Kawakami, Genjiro (1864-1915) Japanese Ophthalmologist and Congressman. He graduated from the Medical School (4-year course) of Tokyo University in 1885, and studied Ophthalmology under Dr. K. UME and Dr. J.→SCRIBA: he published clinical statistics of Tokyo University Hospital in 1886 and also the first statistics in Japan of congenital blindness. He was one of the promoters of the Foundation of the Japanese Ophthalmological Society. He was elected as a Congressman in 1902. He published "*Weekly of Japanese Medicine*" in 1895, and he was one of the Founders of the present Nippon Medical School. (SM)

Kawakami, Riichi (1895-1982) Japanese Scientist for human genetics. He graduated from Chiba University Medical School in 1917. He studied Ophthalmology at the Department of Ophthalmology of Keio University under Prof. S. SUGANUMA, and was promoted to Assistant Professor in 1929. In the following year he moved to the Department of Public Health of the University. After World War II, he worked at the National Institute of Public Health and was interested in human heredity with particular attention to eye diseases. He studied more than 164 cases of Leber's disease and determined that *Lossen-Kitajima* rule was followed without exception in the inheritance of this disease, i.e. the disease is transmitted from the mother and the maternal grandfather is never affected. He also showed that the female carrier develops this disease in almost 60 % of cases, and J.

→IMACHI (see IMACHI Jou) confirmed this. He also studied Oguchi's Disease extensively. Dr. Kawakami gave a Special Lecture "*Ophthalmology as seen from Human Genetics*" at the 53rd Congress of the Japanese Ophthalmological Society in 1949. He wrote a great monograph on heredity in Ophthalmology, as a part of the *Handbook of Ophthalmology*, Kanehara Pub. Co., Tokyo, 1955 (SM)

Kawamura, Satoru (1949-) Japanese Biologist specializing in retinal physiology, and Professor at the Department of Biology, Graduate School of Science of Osaka University since 1996. He graduated from Kyoto University in 1973 and received his Ph.D. degree from the University in 1978. He has been working in the field of Phototransduction and adaptation, and his many publications in the field include "*Calcium-dependent regulation of cyclic GMP phosphodiesterase by a protein from frog retinal rods*, Nature 349:420, 1991" and "*Rhodopsin phosphorylation as a mechanism of cyclic GMP phosphodiesterase regulation by S-modulin*." Nature 362: 855,1993". He is a member of Japanese Society of Physiology, of Biophysics, of Biochemistry and of Zoology. (Department of Biology, Faculty of Science, Osaka University, Machikaneyama, Toyonaka, 560-0043, Japan, phone:81-6-6850-5436, fax: 81-6-6850-5444, e-mail: kawamura@bio.sci.osaka-u.ac.jp) (SM)

Kawasaki, Kazuo (1936-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Kanazawa University. He graduated from Kanazawa University in 1967, studied Ophthalmology under Prof. KURACHI Y. and received the degree Doctor of Medical Sciences in 1967 (thesis: *The early potential in the human electroretinogram*. J. Jpn. Ophthalmol. Soc. 70: 1594,1966). He is in the present position as above since 1988. He has been a Councillor of the Japanese Ophthalmological Society (1987), Executive Councillor of the Society (1997-) and the President of the Japanese Society for Clinical Electrophysiology of Vision (1999-). His research interest has been Electrophysiology of Vision and is a member of the International Society for Clinical Electrophysiology of Vision (ISCEV), International Society for Ocular Toxicology (ISOT). He developed a method for early diagnosis of retinal diseases such as diabetic retinopathy by quantitative analyses of the Oscillatory Potentials (*Electrical responses from diabetic retina*. Progress in Retinal and Eye Research 17: 59, 1998). He is the first in the world to record the early receptor potential in the human eye. He also discovered the Electro-oculogram responses to bicarbonate, diamox and hyperosmolarity that are significant for early diagnosis of the disturbances of the retinal pigment epithelium (*Nonphotic standing potential responses: hyperosmolarity, bicarbonate, and Diamox responses*. *Principles and Practice of Clinical Electrophysiology of Vision*. 125, Mosby YearBook, St Louis, 1991). He was a guest lecturer at the 28th Congress of the ISCEV in 1990 (*ERG rapid off-response in red-green color deficiency and EOG drug-induced responses in Retinal Pigment Epithelium disorders*), at the 2nd Congress of ISOT in 1990) (*Electroretinographical changes due to antimicrobials*) and at the 4th Congress of ISOT (*Ocular toxicology studies using electrophysiological methods in rabbits*) and he also delivered a Special Report at the 102nd Congress of the Japanese Ophthalmological Society in 1998 (*Preretinpathic changes in the oscillatory potential in diabetic retina: interpretation and significance*). In recognition of his meritorious service, he was granted the "Hokkoku Culture Award" in 1997. (Department of Ophthalmology, Kanazawa University, 13-1 Takaramachi, Kanazawa 920-0934, Japan. phone:+81-7-6262-8151, fax: +81-6222-9660, e-mail: DZB13566@nifty.ne.jp) (SM)

Keeler, James Edward (1857-1900) American Astronomer born at La Salle, Ill., who graduated from Johns Hopkins University in 1881. He accompanied the Colorado solar eclipse and the Mt. Whitney expeditions. In Germany he studied optics under Quincke at Heidelberg and →Helmholtz in Berlin. He was assistant in the Lick Observatory in 1886 and became its astronomer in 1888; its director in 1898. Among his writings are *Spectroscopic Observations of Nebulae*. He also wrote numerous papers for the *Astrophysical Journal.* American Encyclopedia of Ophthalmology, Vol.9, p. 6742.

Keeler, Richard Charles (1937-) British ophthalmic instruments manufacturer. After qualifying as a dispensing optician, Richard Keeler joined the family firm in 1959. He started in instrument sales, introducing the Kowa hand-held fundus camera in 1962, the first of its kind. Keeler was made an Honorary Fellow of the Royal College of

Ophthalmologists in 1993. He was made curator of the museum and library of the Royal College of Ophthalmologists in 1999. He is a trustee of the Keeler Scholarship Foundation, provider of one of the larger academic awards in ophthalmology in the UK. He has written on ophthalmic subjects, a recent publication being *'The Ophthalmoscope, Atlas*, part of the Julius Hirschberg Series on the history of ophthalmology. Other recent papers are: *The Evolution of the British Ophthalmoscope* (Documenta Ophthalmologica 94:139-150, 1997), *150 years since Babbage's Ophthalmoscope* (Archives of ophthalmology Vol.115, Nov.1997). Also *The Keeler Micro Ophthalmic Surgical Unit* (Microsurgery of the Eye, 1st Symposium oph.Microsurg. Study Group, Tübingen 1966. Adv.Ophthalm 20: 51-61.) and *Report on Changes since 1966 of the Keeler Micro Surgical Unit* (Microsurgery in Glaucoma. 2nd Symposium oph.Microsurg.Study Group, Burgenstock 1968. Adv.Ophthalm. Vol.22: 17-19.) and *Retinal Photography in Animals* (Brit Journal of Ophthal 1968, 52:200). Keeler collects old ophthalmoscopes and related instruments as also ophthalmoscopic literature in first editions. Address: 1 Brookfield Park, London NW5 1ES, England. Tel:++44.(171) 485.7451 Fax:++44 (171) 267.8311 Email: richard@rkeeler.co.uk AB

Keeney, Arthur H. (1920-1996) American ophthalmologist. His higher education began at the College of William and Mary, where he received the BS degree. Thereafter, he earned the MD degree from the University of Louisville and the DSc in Ophthalmology from the University of Pennsylvania. Additional professional training was obtained as an ophthalmology resident at the University of Louisville and at Wills Eye Hospital in Philadelphia. Early in his medical career, Keeney served in the Medical Corps of the United States Army and was assigned to the 71st Station Hospital in Pusan, South Korea. During off duty hours and on weekends, he provided voluntary care to patients in a Korean provincial leper colony. After returning to the United States, Keeney continued to work with the armed forces as Consultant to Army and Navy Hospitals. After undertaking academic positions in the Department of Ophthalmology at the University of Louisville from 1951 to 1965, Keeney was appointed Ophthalmologist- in-Chief at Wills Eye Hospital and Professor and Chairman of the Department of Ophthalmology at Temple University. He relinquished these positions in 1973 to accept appointment as Dean and Professor of Ophthalmology at the University of Louisville School of Medicine. In 1980, Keeney was honored by appointment as Dean Emeritus and Distinguished Professor of Ophthalmology at the University of Louisville. As an ophthalmic scientist, Keeney completed important studies on the utilization of ultrasonography as a diagnostic modality. However, most of his research and outstanding organizational skills were focused on prevention of blindness through the development of safety standards for road signs, driver visual acuity, safety equipment for automobiles, and safety lenses. He was Chairman of the American National Standards Institute Z.80 Committee on Ophthalmic Standards for 16 years. In this capacity, he earned the respect of industrialists, manufacturers, and vision specialists through effective advocacy of standards to prevent eye injury and through his work to promote assistance for the visually handicapped. Keeney authored more than 300 publications in the ophthalmic literature, presented at least 20 named lectures, and served as officer of many professional and volunteer organizations. Among these, he was Vice-President of the American Academy of Ophthalmology and President of the Kentucky Academy of Eye Physicians and Surgeons.He wrote *Ocular Examinations, Basis and Technique*, St.Louis 1970; *Lens Materials in the Prevention of Eye Injuries*, Springfield 1957(?) and edited *Industrial and Traumatic Ophthalmology-Symposium of the New Orleans Academy of Ophthalmology*, St Louis 1964. AJO 1997,123:155-156; Arch Ophthalmol 1997,115:437.JPW

Kelly, Thomas Stuart-Black (1911-1996) British ophthalmologist. He graduated in Medicine at the Manchester University in 1934 and begun training in neurosurgery. During the Second World War he served as a squadron leader with the Royal Air Force. There he was involved in pioneering aviation medicine. His interest in the working of the human eye was enhanced by his work on night bombing training aids and how the eye could assess a distance in the air at night without landmarks or horizon to assist. After the war he became Fellow of the Royal College of Surgeons in Edinburgh and completed further training in ophthalmology in Bristol. He settled in Hereford. In 1959 he moved to Bath where he was appointed eye surgeon at the city´s eye infirmary(now part of the

Royal United Hospital). From then and after his retirement Kelly pioneered many treatments for eye disorders. In 1962 he drove to Prague to obtain soft contact lenses who where at that time only produced there. He also, in 1965, was the first to introduce the eye laser into Britain.Kelly was the first to accurately measure the length of the human eyeball using ultrasound. He also was the first to introduce the treatment of myopia. (The Times, Jan 6, 1996)

Kelman, Charles D. (1930-) American ophthalmologist, born in New York. Charles Kelman pioneered several exciting techniques in ophthalmology, but he is best known as the father of phacoemulsification, a method of using ultrasonic vibrations to break up a cataract inside the eye. This revolutionized cataract surgery because it enabled surgeons to extract a cataract through a tiny incision, greatly reducing the size of the wound. For this technique, he was awarded the National Medal of Technology by President George Bush in 1992. Kelman has also designed numerous ophthalmic instruments and intraocular lenses and has made significant contributions to plastic surgery. Kelman wrote: *Atlas of Cryosurgical Techniques in Ophthalmology*, St.Louis 1966 and *Cryosurgery*, Boston 1967. In addition to his surgical skills, he is an accomplished Broadway producer, composer, and jazz saxophonist. JPW

Kendall, William (?-1942) British ophthalmologist. His education was received in Ireland where he qualified M.B., B.Ch. in 1893 and where he proceeded to his M.D. in 1895. He held honorary appointments at Hitchin and St. Albans and was a regular member of the Oxford Ophthalmological Congress and the Ophthalmic Section of the Royal Society of Medicine. Early in his career he had worked at Moorfields as Chief Clinical Assistant and during the 1914-18 War he was an ophthalmic specialist to the Army with the rank of Captain, R.A.M.C. Later he served as ophthalmic surgeon to the Ministry of Pensions. Kendall was interested in professional organization and was a member of the City Division of the British Medical Association, of which he had been President in 1929. He contributed some papers to the Proceedings of the Section of Ophthalmology of the Royal Society of Medicine. As oculist to the Hertfordshire County Council Schools and to the London Teachers Association he knew well the problems connected with vision, both of scholars and teachers.BJO 26,239,1942

Kennedy, Peter (1685- ?) English surgeon, who, ill in his youth, had suffered much from sore eyes, and who, thereby, had his attention directed to the subject of ophthalmology. He traveled extensively in France, Italy, and Holland and wrote : *Ophthalmographia, or a Treatise of the Eye* (London, 1713); *Supplement to Ophthalmographia against Bracken, Porterfield, Cheselden, Jurin and Sharp* (London, 1739) and *An essay on external remedies* etc...London 1715. American Encyclopedia of Ophthalmology, Vol.9, p. 6743. Albert.BMC

Kepler, Johann. See **Keppler.**

Johannes Kepler

Keppler (or Kepler), Johannes (1571-1630) This immortal theologian, astronomer and physicist, was born at Weil, in the duchy of Würtemberg, Germany. He received his bachelor's degree at Leonberg, and, in 1588, entered the University of Tübingen, with the intention of becoming, ultimately, a minister. Here he received instruction in the new Copernican astronomy of the great Michael Maestlin. Thus far he had felt but little inclination for natural science. In 1594, however, being offered the chair of astronomy in the school at Graz-a Lutheran institution-he accepted, and, soon after, was "immersed in the science of the stars." In 1598, owing to the edict of the Archduke Ferdinand, directed against all Protestant preachers and professors, he fled to Hungary. In 1600, at the invitation of his friend, Tycho →Brahé, he departed for Prague, there to become the assistant of this celebrated astronomer. The association, however, proved to be uncongenial. Keppler was irritable and supersensitive, and the elder man was snobbish and overbearing. Tycho Brahé died in 1601, and, from that time forward, Keppler shone as the bright star of the astronomical heavens. In 1630, after a long and exhausting horseback journey, he died at Ratisbon, aged only 59. It is absolutely unnecessary here even to enumerate the astronomical achievements of Johannes Keppler. To think of the man himself, is to think also of his astounding astronomical discoveries and inventions. His services, however, to the world of ophthalmology-which are almost all expounded in his two great optical works, " *Ad vitellionem paralipomena, quibus astronomiae pars optica*

traditur ... de modo, visionis, & humorum oculi usu, contra opticos & anatomicos Francofurti 1604 ″ and *"Dioptrice seu demonstratio eorum quae visui & visibilibus propter conspicilla non ita pridem inventa accidunt* ... Augustae Vindelicorum 1611″ are very little known even to ophthalmologists. To be as brief as possible, and yet convey some definite idea of the nature and extent of these services, we may state, formally, that the following optical facts, either absolute or approximate, were by him expressed either for the very first time, or else for '*the first time* clearly and distinctly. 1.A retinal image consists of as many couples, or pairs, of lightcones (placed base to base at the lens), as there are points in the object looked at. (Keppler did not, contrary to the assertion of Baas, in his *"History of Medicine,"* Eng. trans. by Henderson, p. 539, recognize the function of the lens as a part of the optic system of the eye, thus overturning the entire doctrine of the ancients which had hitherto prevailed, that sight took place by means of the lens.″ This work was done by →Maurolycus in 1597, in his great work entitled, *"Photismi de Lumine et Umbra*,″ and Plater, soon afterward conceived and published the notion of the screen-light function of the retina.) 2.The central point of the retina possesses the sharpest vision. 3.Eccentric vision does not give satisfaction, but merely invites the eye to turn in this or that direction for the purpose of securing a sharper view. 4.It is the vitreous humor that holds the retina taut. 5.The crystalline humour presents, behind, a hyperbolic surface, in front, a spherical-which produces a better refraction. 6.Every eye possesses a point, externally, of sharpest vision. The bundle of rays which sets out from this point, unites in a point again upon the retina. Every object which lies beyond this point, appears to be indistinct. 7.Eyes that see far objects plainly, but near ones dimly, are helped by convex lenses. 8.Those, on the other hand, which see far objects dimly, but near ones plainly, are benefited by concave glasses. 9.The convex lenses assist by altering the rays which pass to the eye from near objects in such a manner that they become like to those which proceed from objects more remote. 10. The concave lenses, on the contrary, alter the rays which come from distant objects in such a fashion that they seem to proceed from points that are near at hand. 11.Without the concave lenses, rays which come from a distant point would intersect one another in front of the retina, and, having still farther to proceed, would disperse themselves into a certain breadth, instead of a sharp point. 12.When sunlight shines upon a prism, there arise three kinds of rays: (1) the unchanged; (2) those of the color of the glass; (3) rainbow colored. 13.A plane-sided right-angled prism does not permit the rays falling parallel to a cathetus to pass through. 14. An object looked at through a prism, appears to have been moved in the direction of the edge. 15.Every distant point emits rays in all directions. As to the eye, however, or as to any lens, whose diameter is negligibly little in comparison with the distance, the most external of the rays which strike upon the eye or the glass, may be regarded as parallel. 16.Of all the rays in any pencil that impinges on a curved surface, only one can be regarded as vertical thereto. 17.Rays proceeding from a near point, diverge as they pass toward the pupil of the eye. Of rays proceeding from different points on the same object, however, many necessarily converge as they move toward the eye. One should carefully distinguish between the bundle of rays emitted by a simple point, and the different rays sent out by several points. In addition to establishing all these highly important facts, Keppler also considerably enriched the optical nomenclature. Thus, to him, we owe at least in their optical acceptations the terms, *prism, lens* [The crystalline body, or humor, of the eye, was first denominated lens by Govert Bedloo, of Amsterdam, in 1685.] and *meniscus*. *"Prisma"* before his time, meant, simply, *"sawingblock*; *lens "* meant a *"lentil"* and *"meniscus"* the *"half-moon"*. Altogether, we may say that no one, probably, has done so much, even to the present day, for the development of optics, physical or physiological, than did Johannes Keppler. American Encyclopedia of Ophthalmology, Vol.9, p. 6743-6746.Albert.DSB.BMC.

Kerr, James (?- 1941) British physician, born in Glasgow. From there he went to Manchester Grammar School. Thence he went to St. John's College, Cambridge, with a science scholarship. He justified that scholarship, for he got first class honours in the Natural Science Tripos. Then he went to St. Bartholomew's Hospital in London as a senior science scholar. He gained all his degrees, and the D.P.H. at Cambridge. He started practice in Bradford, and soon got on the staff of some of the hospitals there. One of these was the Bradford Eye and Ear Hospital. In that city he became linked with school work, and was made medical superintendent of the Bradford School Board. He did a fine piece of work in

organising a school medical service. That brought him to London, where he was the first medical officer of the old time London School Board; which ultimately was absorbed into the London County Council. In that office he started the greatest school medical service that has ever been known. He called a number of young eye men who were working as clinical assistants at Moorfields and other hospitals, to help him in an investigation of the vision of the London school children. Each of the chosen ophthalmologists was allotted an area of schools and were to give three half-days a week to the work of testing their visual acuity with a test card, to record their findings so that they can be made use of in a general record of the state of the eyes of the children. That early work, based on Dr. Kerr's idea, was immensely fruitful, as every school medical officer knows, and as many ophthalmic surgeons know. In 1924 American engineers and architects produced a good work : " *The Code of Lighting School Buildings*." This was commented upon and extended in a masterly paper by Dr. Kerr at the meeting of the London Illuminating Engineering Society in London, 1926. He dealt with natural lighting. This paper of his became a real standard of reference. His book on "*School Vision and the Myopic Scholar*", and his great work " *The Fundamentals of School Health*," were notable pieces of work.BJO 25, 592-593, 1941

Kersten, Ferdinand Leopold (1804-1853) German physician, who devoted considerable attention to ophthalmology. Born in Magdeburg, he received the degree of M.D. at Berlin in 1828, his dissertation being "*Nonnulla de Dacryolithis seu potius Rhinolithis*." He settled in Magdeburg, there became Assessor of the Provincial Medical College, and, a little later, Medical Councillor. He died of some affection of the liver at Carlsbad. In addition to his graduation dissertation, Kersten wrote the following: 1. *Ueber Steinerzeugung aus der Thränenflüssigkeit* (Dacryolithen). (Hufeland's Jour., 1843.) 2. *Ueber die Freiwilligen Blutungen aus den Augen* (Rust's Mag., 1841.) American Encyclopedia of Ophthalmology, Vol.9, p. 6844.

Kettesy, Aladar (1893-1983) Hungarian ophthalmologist, until his retirement director of the Eye Clinic of the Medical University of Debrecen, Hungary. Kettesy's last name was originally Kreiker. He changed it to a name with a Hungarian ring, as was expected of anyone who wished to enter public life. He received his medical degree in 1919 at the University of Pozsony (now Bratislava) and began his ophthalmologic career in the department headed by Professor→Imre. Two years later, Kettesy became the assistant of Professor →Blaskovics at the Ophthalmological Department of the University of Debrecen. Blaskovics put him in charge of the eye clinic there. In 1926 the 33-year-old Kettesy was promoted to a professorship. Kettesy spent a total of 61 years in Debrecen, and his accomplishments were intertwined with historical changes. In 1921 there was not a single ophthalmologist in the area. Two general physicians treated patients with ocular problems. Today, in addition to those working in the eye clinic, several ophthalmologists are available at various outpatient clinics as a result of Kettesy's role as a teacher. Two university professors and several chiefs of ophthalmology at various hospitals in Hungary were once his students. Kettesy and his students probably treated hundreds of thousands of patients throughout the years. His textbook on ophthalmic surgery, written in German (his second mother tongue) was for several decades the "Bible" of European eye surgeons. The Spanish version of this book was widely used throughout South America. Thousands of medical students were introduced to ophthalmology through his textbook. His "*Physiological Optics*" was indispensable for the Hungarian ophthalmologist preparing for his Boards. Kettesy was one of those rare individuals able to make lasting contributions to ophthalmology in several different areas. Some of the surgical procedures he introduced 30 to 40 years ago are still used with little modification. His research into physiologic optics has also proven to be of lasting value. Some of his histologic findings are still quoted. In Hungary every patient undergoing refraction is tested with the Kettesy chart. Kettesy's mastery of his subject and the way in which he was able to present it account for his immense popularity as a teacher. In the years after his retirement from active teaching, he wrote 14 papers that summed up a lifetime's experience in his chosen and beloved field. AJO 1983,96:104-105

Keyser, Peter Dirk (1835-1897) American ophthalmologist, founder of the Philadelphia Eye and Ear Infirmary and for a long time Dean of the Faculty of the Medico-Chirurgical College of Philadelphia. Born in Philadelphia, of German ancestry, he received his education in the arts and sciences at Delaware College, and from 1852 till 1854, studied

chemistry in the laboratory of Dr. F. A. Genth, Philadelphia. During these two years of chemical study, he published a number of analyses in the American *Journal of Sciences,* which were afterwards reprinted in Dana's *Mineralogy.* He then studied medicine in Germany for four years. Returning to America in 1858, he practised medicine for a time in Philadelphia, but on the outbreak of the war, he entered as captain of the 91st Pennsylvania regiment. After the battle of Fair Oaks, in which he had been severely wounded, he resigned from the army, and returned to Germany for further study. Entering first the University of Munich, he soon moved to Jena, and there received his medical degree in 1864. After a year of further scientific study in Berlin, Paris, and London, he returned to America, and, after a brief period of military service, settled as ophthalmologist and otologist in Philadelphia. In 1864 he founded the Philadelphia Eye and Ear Infirmary, the name of which, in 1869, was altered to the Philadelphia Eye and Ear Hospital. In 1868 he gave a course of graduate instruction on the eye. Two years later he delivered *"the first regular course of lectures upon ophthalmology ever given in Philadelphia."* He soon was made Professor of Ophthalmology at the Medico-Chirurgical College of Philadelphia, and, not long afterward, its dean. In 1887 he was vice-president of the Ophthalmological Section of the Ninth International Congress, and again, in 1890, of the Tenth Congress. He was widely known as the inventor of the *Keyser clinical ophthalmoscope*. Among Dr. Keyser's numerous ophthalmologic articles may be mentioned: *"On Persistent Pupillary Membranes" "On the Measurement of the Prominence of the Eye with a New Instrument therefor " "Reports on Cataract Operations;" "On an Instrument for Measuring the Face and Nose for Fitting Spectacle Frames, and a New Scheme for Recording Cases of Refraction."* and *Glaucoma: its symptoms, diagnosis, and treatment*. Philadelphia 1864. American Encyclopedia of Ophthalmology, Vol.9, p. 6844 –6845.Albert.BMC

Khadka, K. B. (1944-) Nepalese Ophthalmologist, Ophthalmologist at Lumbini Rana Ambika Eye Hospital, Bhairahawa, Nepal. He graduated from N.R.S. Medical College of Calcutta with MBBS in 19733 and received MD degree from the All India Institute of Medical Sciences, New Delhi in 1985. He works at the present post since 1997.(SM)

Kham, Phan Duc (1928-) Vietnamese Ophthalmologist Professor. He was born in Ha Tinh. He graduated Hanoi Medical College in 1960. He worked at National Institute of Ophthalmology from 1954 to 1979 as the Head of Eye Traumatic Department and Head of Training and Science Research Department. Later, he worked at 108 National Army Hospital as the Head of Eye Department. He participated in teaching on ophthalmology at Hanoi Medical College and Army Medical Institute. He is Vice-President of Vietnam Ophthalmological Society from 1984. He was a member of French Ophthalmological society. He published 63 articles, mostly on diagnosis and treatment of eye trauma (in the war as well as in the peace). He was contributors of some ophthalmological textbooks. He is awarded the title the Eminent doctor, order of Resistance first degree. He was very active on prevention of blindness (trachoma, cataract). He attended some international ophthalmological conferences (in France 1979, in Canada 1985). He worked in Congo as an ophthalmological consultant in 1988-1989. (SM)

Khan, Akhtar Jamal (1944-) Pakistani Ophthalmologist, founder surgeon at Akhtar Eye Hospital (Pvt.) Ltd. Postgraduate Teaching Hospital for Ocular diseases. "He received M.B.B.S. in 1967 from Liaquat Medical College, Hyderabad (University of Sindh), DO (London) 1971 , F .R.C.S. (England). His postgraduate medical training included Junior House Officer Surgery Oldham & District Hospital Management Committee -Oldham Royal Infirmary , London, 1969- 70, Senior House Officer and Registrar Birch Hill Hospital Rochadale, England 1970- 72, Medical Assistant Ophthalmology and Locum Consultant Edgware General Hospital, England 1972- 76, Consultant Ophthalmologist EI-Maghrabi specialist Hospital, Saudi Arabia 1976-82 and Consultant and Medical Director Akhtar Eye Hospital, Karachi. He has been the Member of American Intraocular Implant Society, USA, member of Keratorefractive Society of USSR, Member of Asia Pacific Academy of Ophthalmology and member of the Ophthalmological Societies of U.K. He has attended many courses, seminars and congresses e.g. International Congress of Ophthalmology, Japan 1978, International Congress of IX Asia -Pacific Academy of Ophthalmology in Hong Kong 1983, International Congress of Ophthalmology, Rome 1986, International Vitreoretinal Surgery Symposium, Cairo, Egypt 1987, International

Cataract, Implant, Microsurgical & Refractive Keratoplasty Meeting, Singapore 1987, Annual meeting of the American Academy of Ophthalmology, Dallas, USA (1987) and Annual Congress of Ophthalmological Society of the UK , Harrogate, UK (1988). He also attended advance courses like Advanced Vitreous Surgery Course -Duke University Medical Center, Durham, North Carolina (1984), and Radial Keratotomy Course - University of Moscow. He has vast teaching experience. Since 1982 had been engaged in teaching postgraduate students in Ophthalmology in MCPS courses held at College of Physician and Surgeon of Pakistan. Since January 1988, he has been involved in teaching the undergraduate students at Aga Khan University, Karachi. His publications are numerous which include three publications in national and thirty-seven publications in international journals of repute in Ophthalmology. (Address: Akhtar Eye Hospital, FL-1 (4/ C), Block 5 Gulshan-e- Iqbal, Karachi, Pakistan.
Phone: Office: +92-463368; +92- 463647) (SM)

Khan, Mohammad Daud (1948-) Pakistani Ophthalmologist, Professor of Ophthalmology, PGMI, Hayatabad Medical Complex, Peshawar (1997). He passed "Matric from Government High School Miran Shah in 1962 and Premedical from Islamia College Peshawar, Pakistan. He received M.B.B.S. degree from Khyber Medical College Peshawar in 1969. His postgraduate Qualifications include Diploma in Ophthalmology from University of London (1971). Fellow, Royal College of Surgeons, Edinburgh, UK (1976), Fellow of Royal College of Ophthalmologists, London, U .K. (1989), Fellow of American Academy of Ophthalmology, USA (1989), and Fellow, Pakistan College of Physicians and Surgeons (1994). His current appointment is Rector, Khyber Institute of Ophthalmic Medical Sciences Hayatabad Medical Complex, Peshawar. He is also Chairman, National Committee for Prevention of Blindness, National Coordinator for WHO Prevention of Blindness Programme for Pakistan, President Asia Pacific Academy of Ophthalmology for years 99-200I. His teaching appointments have been Assistant & Associate Professor of Ophthalmology, Khyber Medical College (1977-1984), Associate Professor & Professor of Ophthalmology, PGMI, Lady Reading Hospital, Peshawar 1984-1997, Professor of Ophthalmology, PGMI, Hayatabad Medical Complex, Peshawar since 1997. He has been the Member/ fellow of 30 national and international professional societies and organizations, chairman/ member of more than 31 national and international committees in the field of Ophthalmology and Prevention & control of blindness. He acted as Administrator, Lady Reading Hospital 1990-1992 and as Administrator/Chief Executive, Hayatabad Medical Complex (92-2000). His editorial assignments include editorship of ten national and international journals of Ophthalmology. His academic & research activities include, attendance of more than 32 international conferences on Ophthalmology, presented 17 papers in such conferences, attended 26 national conferences on Ophthalmology and presented 50 papers in such conferences. He is the author of 35 scientific papers published on many aspects of Ophthalmology in various national and international journals of Ophthalmology. He runs a four years Residency Programme for Postgraduate students in Ophthalmology and has so far produced 30 specialists in Ophthalmology. He also runs one year M.Sc course in Community Ophthalmology, runs a Postgraduate Diploma Course in Ophthalmology for Nurses and runs a one year Ophthalmic Technicians' Course for Paramedics in Ophthalmology. He is an examiner in Ophthalmology to 8 national universities, colleges of Physicians and Surgeons Pakistan and National University of Malaysia. On the social work side, he has so far conducted 30 outreach programmes in various far off districts/ agencies of NWFP, is on the board of trustees of Layton Rahmatullah Benevolent Trust under which he established two charity hospitals in NWFP (Akora Khattak & Swat), is on National Management Board of Al-Basar Foundation, under which he established a charity hospital in Jalalabad, Afghanistan, is working as Patron of Khyber Eye Foundation under which a charity eye hospital is being established in Peshawar ,is working as senior vice President of Pakistan Eye Foundation under which human eyes are imported from Sri Lanka for free transplantation to corneal blinds in NWFP. He is also on the board of newly constituted Raja Mumtaz Trust and is the Vice-Chairman "IAPB" EMR. region. His major achievements are, he assisted in the establishment of Department of Ophthalmology, Khyber Teaching Hospital, Peshawar, established the Department of Ophthalmology at Lady Reading Hospital, established the Department of Ophthalmology, Hayatabad Medical Complex, established Pakistan Institute of Community Ophthalmology at Hayatabad Medical Complex, is

instrumental in the establishment of Khyber Institute of Ophthalmic Medical Sciences at Hayatabad Medical Complex, prepared the 1st National Eye Care Programme for Pakistan in 1994, prepared a revised National Comprehensive Eye care Programme for Pakistan for 2000 and onward, established a very close liaison with WHO and many national and international NGOs and successfully involved them in training, research and development of district Comprehensive eye Care Programmes in the country, is in the process of constituting a consortium of various donor agencies in support of National Comprehensive Eye Care Programme, established Ophthalmologic Society of Pakistan Research Foundation, established and is currently heading Pakistan Glaucoma Interest Group under Ophthalmological society of Pakistan , established National Guidelines for Management of Glaucoma in Pakistan. He is a recipient of many Awards. He obtained the President Award for outstanding position in final MBBS exam. 1969, won a merit scholarship for postgraduate studies in Ophthalmology in UK, awarded the highest award in Ophthalmology, the "President of Pakistan Ramzan Ali Syed Gold Medal in Ophthalmology (1992), awarded OSP Golden Jubilee Medal in 1997, awarded the best services award by Asia Pacific Academy of Ophthalmology in Hong Kong in 1995, awarded the Best Paper award in International Congress of Ophthalmology in Singapore in 1990, delivered the prestigious "Susruta Lecture" in the Asia Pacific Academy of Ophthalmology meeting at Manila (March 7-12) 1999 , elected President of AP AO in March 1999 , awarded the President of Pakistan Pride of Performance award. on March 23, 2000. His hobbies include reading specially Ophthalmic sciences, history , biographies and travelling. He has visited India, Saudi Arabia, UAE, Bahrain, Maldives, Thailand, Philippine, Japan, Korea, Hong Kong, Singapore, Malaysia, Greece, Italy, Sweden, Denmark, Switzerland, Yugoslavia, Bulgaria, Turkey, Iran, Afghanistan, France, Ireland, U.K. , Gambia, Kenya and USA. His address is 49, J-2, Phase 2, Hayatabad, Peshawar NWFP, Pakistan. Phone No. Clinic: +92-91-211259; Hosp: +92-91-9217188; Fax: +92-91-814438; E-mail: pico@pes.comsats.net.pk) (SM)

Khoo, Chong Yew (1939-) Singaporean male ophthalmologist. Visiting Consultant, Singapore National Eye Centre and Department of Ophthalmology, National University Hospital, Singapore. MBBCh (1965, Belfast) DO (1969, Dublin) FRCSE (1971, Edinburgh) FAMS (1973, Singapore) FRACS (1982, Australasia) FRCOphth (1988, UK) PBM (1996, Public Service Award, Singapore). Clinical Teacher, National University of Singapore. Chairman, Ethics Committees of the Parkway group of hospitals, of the Singapore National Eye Centre and of the Singapore Eye Research Institute. Besides general ophthalmology, his special interest has been in the field of contact lenses. He is Chairman of the International Contact Lens Council of Ophthalmology, and of the Organizing Committee of the International Medical Contact Lens Symposium in Sydney in the year 2002. He delivered the Javal Gold Medal Lecture ("*Complications of Contact Lens Wear - An Asian Perspective*") at the ICO in Toronto in 1994, and the Prof G. Peter Halberg Honour Lecture ("*The Effect of RGP Contact Lens Wear on the Cornea and Axial Length in Ten-Year Old Myopic Children*") at the ICO in Amsterdam in 1998. He was awarded the Distinguished Service Medal by the Asia Pacific Academy Of Ophthalmology in 1987, and the Singapore National Eye Centre Gold Medal in 1997. Publications include "*Corneal Blindness in Singapore*", Asia Pacific Journal Of Ophthalmology, Vol 4 No 2, p.20, 1992" and "*A 3 Year Study on the Effect of RGP Contact Lenses on Myopic Children*", Singapore Medical Journal Vol 40 No 4 p.230, 1999". With Prof. Montague Ruben, he co-authored the book "*Contact Lenses Medical Aspects*", PG Publishing, Singapore, 1989. He was editor of the book "*New Frontiers in Ophthalmology*," proceedings of the XXVI ICO, Excerpta Medica, Amsterdam, 1991. He is a Board Member of the Singapore National Eye Centre, Singapore Eye Foundation, World Eye Surgeons' Society, and the Asia-Pacific Academy of Ophthalmology. He is also a member of the Singapore National Committee on Ophthalmology, the Contact Lens Practitioners' Board, and Specialists' Training Committee for Ophthalmology, and is an examiner for the FRCS Edinburgh/M Med Singapore examination. Dr Khoo was president of the Singapore Medical Association (1985—87), Chairman of the Medical Advisory Board of the Mt Elizabeth Hospital (1985—87), Singapore, and member of the Singapore Medical Council (1990—93). He is currently a member of the inquiry committees of the Singapore Medical Council (since 1998) and the Law Society (since 1986). Since 1995, he has led annual medical missions to Cambodia. (Dr Khoo Chong Yew Gleneagles Hospital, #02—38

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Kiep, Walter (1886-1944) Scottish ophthalmologist, born in Glasgow. Kiep studied medicine at the Glasgow University graduating M.B., Ch.B., with commendation in 1908. After holding various house appointments, he became assistant surgeon to the Ophthalmic Institution and Honorary Oculist to the Royal Hospital for Sick Children in Glasgow. His clinical outlook for ophthalmology was greatly influenced by the teachings of Maitland →Ramsay, with whom he worked in very close association. During the war in 1915-16 he was specialist in ophthalmology in Malta. After the war he became professor of ophthalmology to the Medical School at Cairo, and relinquished this office on his appointment as honorary ophthalmic surgeon to the Royal Eye and Ear Hospital, Bradford, in 1923. He was elected President of the North of England Ophthalmological Society in 1936. Kiep wrote many contributions in the *Transactions of the Ophthalmological Society of the United Kingdom*.BJO 1944; 28:102-103.

Kieser, Dietrich Georg (1779-1862) German physician, ophthalmologist and botanist. He was also an authority on anatomy and embryology. Born in Harbourg, Hanover, he studied at Göttingen and Würzburg, returning to Göttingen in 1804 to receive his degree. His dissertation on this occasion was entitled ″*Commentatio Physiologica de Anamorphosi Oculi*.″ From 1804 to 1806 he practised at Winsen a.d. Lube. From 1806 till 1812 he was official physician for town and country at Nordheim, near Göttingen. In 1812 he was made extraordinary professor of medicine at Jena, but two years later entered the army in his medical capacity, and saw much service in the military hospitals at Paris, Leyden, Liège, and Versailles. After the war he taught again at Jena and held many official positions. In 1836 he was president of the Fourteenth Convocation of German Scientists and Physicians at Jena. From 1831 till 1847 he was Superintendent of the Medico-Chirurgical and Ophthalmiatric Private Hospital. In 1854 he celebrated the fiftieth anniversary of his doctorate, on which occasion he was awarded the Doctor Honoris Causa of Philosophy. In addition to works of a general character and the thesis above mentioned, Kieser wrote the following: 1. *Ueber die Metamorphose des Thier-Auges*. (Himly und Schmidt's *Ophth. Bibl.,* 11, 3, 73-124, 1804.) 2. *Clerophthalmos.* (Himly und Schmidt's *Ophth. Bibl.,* III, 3, 79-94, 1807.) 3. *Ueber die Natur, Ursachen, Kennzeichen und Heilung des Schwarzen Staares*. (Göttingen, 1811.). 4.*System der Medicin* (2 vols.) Halle 1817-1819. 5.*System des Tellurismus oder Thierischen Magnetismus* (2 vols.) Leipzig 1822. American Encyclopedia of Ophthalmology, Vol.9, p. 6845-6846**.** Albert.BMC

Kikkawa, Yoshizo (1913-) Japanese Ophthalmologist, Associate Professor of Osaka University (1963-1974), Director of the Clinical Examination Department of Osaka National Hospital (1974-1981). He graduated from the Faculty of Science of Tokyo University in 1940, and then from the Faculty of Medicine of the University in 1949. He studied Ophthalmology under Prof.→HAGIWARA Hogara and received the degree Doctor of Medical Sciences in 1958 (thesis: *Submicroscopic structure of rabbit cornea studied by polarization optics and thermoelasticity*. Jpn. J. Physiol.5: 167 1955, *Elastic double system and selective permeability to cations in the stroma of the rabbit cornea*. Ibid. 6: 300 1956, *Diffraction spectra produced by the rabbit cornea*. Ibid.8: 138 1958). His interest has been cornea and contact lens, and he has published many articles, e.g. ″*Light scattering studies of the rabbit cornea*. Jpn. J. Physiol. 10: 292 1960″, ″*Intracellular potential of the corneal epithelium*. Exp. Eye Res.3: 132, 1964″, ″*Effects of light-dark cycle and a corticosteroid on the diurnal variation in corneal thickness*, ibid. 18: 157, 1974″ and ″*Soft contact lens kinetics*, Ed.Rubin et al. Contact Lens Practice, p 113, Chapman & Hall Medical, London 1994. He is one of the Founders of the Japanese Chapter of the International Society for Eye Research, and is a member of the ISER and ARVO.(SM)

Killick, Charles (1875-1923) British ophthalmologist of Bradford. Killick was born at Rawdon, Yorkshire. Charles Killick was educated at Rossal Preparatory School, Montreux, and Bradford Grammar School. In due course he went to Cambridge (Trinity College), and after taking his arts degree with honours in the natural science tripos, he gained a university scholarship at St. Mary's Hospital, London. From the first he showed an inclination towards eye work. He went to Maidstone as house surgeon to the Kent County Ophthalmic Hospital, remained in that town as an ophthalmic surgeon, and was appointed

to the staff of the Ophthalmic Hospital. During the war Killick served with the First Home Counties Ambulance, as lieutenant, captain, and major (T.D.). He was given a specialist appointment, and five ophthalmic centres were placed in his charge. Later he was stationed at Aylesbury, and while there placed upon the staff of the Royal Buckinghamshire Hospital in that town. He was appointed ophthalmic surgeon to the Bradford Royal Eye and Ear Hospital in 1919, and put on the staff of the Bradford Royal Infirmary in 1922. He had served upon the Pensions Board (Bradford) as specialist since 1919. BJO 1923,7:303-304

Kim, Chung Whan (1928-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Korea University. He graduated from Severance Medical College (now Yonsei University) in 1950 and received training in Ophthalmology at the Air Force Hospital in his military service years (1952-1955). He received the degree Doctor of Medical Sciences from Soo Do Medical College (now Korea University College of Medicine) in 1964. He was appointed Assistant Professor at the Department of Ophthalmology, Soo Do Medical College in 1961, and served as the Chief of the Editorial Board of the Korean Ophthalmological Society (KOS) (1963-1966). He was appointed the Associate Professor (1964) and the Chairman of the Department of Ophthalmology, Soo Do Med. College (1965). He worked as a visiting fellow at the Department of Ophthalmology and the Department of Pathology, Sabbatsberg Hospital and Karolinska Institute, Sweden (1966-1967). He served the KOS as the President (1968-1970) and the Korea Medical Association as a Member of the Editorial Board (1972 - 1974). He was appointed Professor and Chairman of the Department of Ophthalmology, Korea University College of Medicine in 1971: the position he had held until retirement in 1976. He also worked as the Chief of the Board of Education and Training of Interns and Residents, Korea University Hospital (1973- 1974). Currently, he is practicing at his private clinic in Seoul.(SM)

Hee Jun Kim

Kim, Hee Jun (1907-1979) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Korea University. He graduated from Seoul Medical College (now Seoul National University) in 1932 and received the degree Doctor of Medical Sciences from Kyoto University, Japan in 1940. He worked as a Clinical Instructor of Ophthalmology at Seoul Medical College in 1940. He was appointed the Professor and Chairman of the Ophthalmology Department, Seoul Women's Medical College (present Korea University College of Medicine) in 1941. He served the Korean Ophthalmological Society (KOS) as the President in 1951. In the same year he was also appointed Clinical Instructor of Ophthalmology at Seoul National University. He was then promoted to the Chairman of Soo Do Medical College Hospital (now Korea University Hospital) in 1958. He served as the Dean of Soo Do Medical College (now Korea University College of Medicine) in 1961: the position he had held until retirement in 1962. For his great contribution of surgical eye care to those who were in dire needs and could not afford treatment, the President of the Republic of Korea granted him the High Award in 1974, and he was also a recipient of the Award of the President of the International Lions Club in 1978. He had worked for Korea University as Clinical Professor of Ophthalmology (1962-1978). (SM)

Kim, Hong Bok (1935-) Korean Ophthalmologist and Professor of the Department of Ophthalmology, Yonsei University College of Medicine. He graduated from Yonsei University College of Medicine in 1960 and completed his residency at the Department of Ophthalmology, Yonsei University College of Medicine during the years 1963 to 1967. He received his Ph.D from Yonsei University in 1974 and completed his fellowship at the Proctor Foundation, Department of Ophthalmology, UC San Francisco Medical Center in 1974-1975. He served as the Chairman of the Department of Ophthalmology at Yongdong Severance Hospital in 1983-1984 and acted as the Chairman of the Department of Ophthalmology, Yonsei University College of Medicine during the years 1984 to 1990. He served as the Chairman, Executive Board of Trustees of the Korean Ophthalmological Society during 1986 to 1988 and also was the President of the Korean External Eye Disease Society during 1993 to 1995. He is the Director of the EYE and ENT Hospital in Yonsei University College of Medicine. Some examples of his publications are *"Behcet's disease in Korea*, J. of the Korean Ophthalmological Society vol 29, 1988", *"Ophthalmologic manifestation of Behcet's disease*. Yonsei Medical J.

1977.", "*Quantitative antibiotic sensitivity determinations of Staphylococcus aureus isolated from eye cultures*. Arch Ophthalmol. 1977 vol 95(6)." (Department of Ophthalmology, Yonsei University College of Medicine, 134 Shinchon-Dong, Sodaemoon-ku, Seoul, Korea; phone: +82-2-361-8450, fax: +82-2-312-0541)(SM)

Kim, Jae Ho (1936-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Catholic University and Dean of the Graduate School. In 1960, he graduated from the Catholic University of Korea Medical College after the graduation of Seoul National University College of Education (Biology), and received training in ophthalmology under Prof. SOHN Chung Kyoon and Prof. KOO, Bong Sool. He was appointed a full-time Instructor of Ophthalmology, Catholic University of Korea in 1967 after full 3 years service as a military captain. In the next year he was granted the Doctor of Medical Sciences from the Catholic University of Korea. He carried out research as an Ophthalmic Research Fellow at the Wilmer Institute Johns Hopkins University Hospital, as a grant awardee of US NIH Post-doctoral Fogarty Fellowship (1970 –1971). He was also granted the visiting professorship from the Japanese Society for Promotion of Science (JSPS) and conducted research on fluorescein dynamics in the eye, at the Department of Ophthalmology, Tokyo University Faculty of Medicine in 1975. He was then promoted to full Professor of Ophthalmology in 1978 and was appointed the Chief of the Ophthalmology Department (1980 - 1994), with Associate-Director of Kangnam St. Mary's Hospital Catholic University (1980-1982). He was then appointed the Professor and Chairman at the Department of Ophthalmology of the Catholic University of Korea (1991-1997). During his university tenure, he served as the Director of the University Hospital (Kangnam St. Mary's Hospital) (1986-1988), Director of the Clinical Research Institute of Catholic Medical Center (1988-1994) and the Dean of the Graduate School of the Catholic University of Korea (1994 - 1999). He is a recipient of many honor awards such as "*Dong-Baek-Chang*" a National Medal in recognition of his contributions through charity eye surgery and through his scientific contributions (1986), and several prizes on his best academic articles and distinguished services from the University, National and International Ophthalmic Societies and Corporations. He also served as Chairman of the Korean Ophthalmological Society (1988-1990) and a Board Advisor of the Society since 1990. He delivered a *Special Lecture on keratoplasty and immunology* at the 39th Annual Meeting of the Korean Ophthalmological Society (1977). He served as the Chairman of the Organizing Committee of the 4th ICIMRK Meeting (1991), Planning Board Director, the 12th Congress of the Asia-Pacific Academy of Ophthalmology (APAO) in Seoul (1989), and the Founder and President of the Korean External Diseases Study Society (1995 - 1997), Presidents of the Korean Contact Lens Study Society (1996 - 1998), Korean Intraocular Lens Study Club (1989 - 1993) and Korean Association of Eye Banks (1995 - 1997). He also served as Regional Secretary of APAO (since 1991), Chairman of the Korean Chapter of Excimer Laser Surgery (1990 - 1999). Representative of International Society of Refractive Society (since 1993) and also the President of the Korea-Japan Joint Meeting of Ophthalmology (1997 - 2001). He is the founding members of the International Intraocular Implant Club (IIIC) and Asia-Pacific Intraocular Implant Association (APIIA) since 1986. He has many editorial assignments for professional journals: J. Korean Ophthalmol. Soc., Afro-Asian J. Ophthalmol., J. Refractive Surgery, Annals of Ophthalmol., Bull. Catholic Clinical Institute, Ocular Surgery News International edition and many others. He has published about 400 professional articles in National and SCI-international journals and has written sixteen books on Ophthalmology including *Textbook of Ophthalmology*, *Cornea*, *RGP Contact Lens*, *Excimer Laser and Small Incision Cataract Surgery* etc. Professor Kim is currently serving as the Director of the Eye-ENT Centre, Kangnam St. Mary's Hospital Catholic University, and Chairman of the Catholic Foundation of Eye Research. He is also a well-known pioneer surgeon on keratoplasty, eye-banking, scleral grafting, Excimer laser refractive surgery, and small clean corneal incision of phaco-surgery etc. (Department of Ophthalmology, Catholic University Medical College, Kangnam St. Mary's Hospital, 505 Banpo-Dong, Seocho-ku, Seoul 137-040, Korea. Phone:82-2-590-2798, Fax: 82-2-533-6718, e-mail: kimjh@cmc.cuk.ac.kr) (SM)

Kim, Jae Myung (1938-) Korean Ophthalmologist, Professor of Ophthalmology of Kyung-Hee University, Seoul. He graduated from Seoul National University in 1963 and studied in the Graduate School of Medicine of the University and completed the course in

1967. He received a Ph.D. degree from the University in 1971 (*Studies on the experimental chloroquine retinopathy in rabbits*. Kor. J. Ophthalmol. 11:1, 1970). He obtained his Ophthalmology Board in 1968 and the License to be an Air Force doctor in 1969. He has been in the present position since 1971. He has served as the special member of the Korean Army Medical Association, Permanent Trustee and Editor-in-Chief of the Korean Ophthalmological Association (KOA) (1972-1978), Permanent Trustee and Head of Science Division of KOA (1980-1982) and the Secretary General of the KOA (1983-1985). His research interest is glaucoma and he studied this subject at Osaka Medical College with Prof. AZUMA Ikuo (1985-1986), and he has served on the Executive Board of Trustees of KOA and Korean Glaucoma Society. He is co-author of the "*Textbook of Ophthalmology*, 4th edition, 1995", and "*Glaucoma co-worker*, 1996". (Department of Ophthalmology, Kyung-Hee University. (Department of Ophthalmology, Kyung-Hee University, 1 HockiDong, Dong Dae Mun, Seoul, Korea 130-702. phone: +82-2-958-8458, fax: +82-2-966-7340, e-mail: KDH1135@channel-i-net.)(SM)

Kim, Sang-Ha (1933-) Korean Ophthalmologist, Professor Emeritus of Kyungpook National University. He graduated from Kyungpook University in 1958 and received the DOMS (Vienna) in 1965 and worked as the Scientific Assistant at Johann Wolfgang von Goethe University in Frankfurt and received his Dr.med. from Ruprecht-Karl University of Heidelberg in 1968. On homecoming he worked as the Head of the Eye Clinic of Maryknol Hospital in Pusan in 1972-1976. He was then appointed the Professor and Chairman of the Department of Ophthalmology of Kyungpook National University (1976-1995) and retired from the Professorship of the University in 1998. During his tenure, he served as the Dean of the Medical Research and Education of the University Hospital (1984-1986), Superintendent and Medical Director of the University Hospital (1987-1989). He also served as the President of the Korean Ophthalmological Society (1995-1996), Founder of the Retina Society of Korea and the President (1989-1992), President of Catholic Physicians Guild, Taegu (1992-1996). He is Emeritus Member of International Society of Clinical Electrophysiology, member of the International Society for Eye Research and International Consultant to Highlights of Ophthalmology (1990-). His many publications include "*Myelo-optic neuropathy caused by aconitine in rabbit model* Jpn. J. Ophthalmol 35: 417, 1991", " *Intraocular hemocoagulase in human vitrectomy*. Jpn. J. Ophthalmol. 338: 49, 1994" and " *Electroretinographic evaluation in adult diabetics*. Doc. Ophthalmol. 94: 201, 1998". He delivered a lecture "*The cause-specific prevalence of blindness and care of visually impaired elderly in Korea*" at the HOYA Vision Care the First Asia-Pacific International Conference in 1998 (*Proceedings*, ed. S. →Mishima, p.150, 1998). He is currently the Medical Director and Advisor of the Most Holy Trinity Hospital in Taegu (San 127 Boem-oe-2 Dong Susoeng-ku, Taegu 706-014, Korea, fax: +82-53-756-3070, e-mail: shkim34@channeli.net)(SM)

Kimura, Samuel J. (1912-1979) American ophthalmologist, professor of ophthalmology emeritus at the University of California's School of Medicine in San Francisco. Kimura was born in Stockton, California. After graduation from high school, he entered the University of California at Berkeley where he obtained both the Bachelor of Arts and the Master of Science (anatomy) degrees. He received his M.D. degree from the University of California in 1940, and after a year of internship in Chicago he joined the Army, serving in the Medical Corps in southern Europe. He later returned to California to enter the ophthalmic residency program of the late Frederick C.→Cordes, M.D., in San Francisco. While in this program he made his first contacts with Phillips Thygeson, M.D., and the late Michael J.→Hogan, M.D., men who were to influence his later career in inflammatory diseases of the eye. Kimura was known for his many contributions to the fields of uveitis and external diseases of the eye. In collaboration, with other members of the Francis I. Proctor Foundation for Research in Ophthalmology, he established the importance of lysozyme deficiency in keratoconjunctivitis sicca; he demonstrated the presence of herpes virus in the corneal epithelium by means of fluorescein-tagged antibody; he made significant observations on the pathogenesis of herpetic uveitis and on Fuchs' heterochromic iridocyclitis; he studied and classified many forms of uveitis associated with inflammatory joint diseases; and he contributed to highly significant studies on toxoplasmic retinochoroiditis. He and Robert Weinreb, showed the importance of angiotensin converting enzyme in the diagnosis of sarcoid uveitis. He was the developer of

a flexible metal spatula for the performance of diagnostic scrapings of the conjunctival epithelium, and this instrument still bears his name. He was a member of many scientific societies including the Association for Research in Vision and Ophthalmology (of which he was once secretary treasurer), the American Ophthalmological Society, and the American Medical Association. He was a member of the course faculty of the American Academy of Ophthalmology. He was President of *That Man May See, Inc.,* a private fund-raising organization dedicated to the support of eye research. Kimura wrote, with Ernest K. Goodner *Ocular Pharmacology and Therapeutics and Problems Medical Management*, Philadelphia 1963. AJO 1980,89:149-150. JPW

King Merrill Jenks (1894-1965) American ophthalmologist who was born at Whitewater, Wisconsin. After attending Lake Forest College, he studied medicine at the University of Pennsylvania, obtaining his M.D. degree in 1919. Before deciding on ophthalmology as a career he spent some years in pathology and in bacteriology, working with such distinguished men as Dr. Frank Mallory and Dr. Hans Zinsser at the Harvard Medical School. Completing his residency in ophthalmology at the Massachusetts Eye and Ear Infirmary in 1932, he began private practice in Boston in association with Dr. Allen Greenwood, taking over the practice when Dr. Greenwood died. But his love of research resulted in his devoting half time to the Howe Laboratory, under Dr. Frederick→Verhoeff, where his main interest was ocular tuberculosis. Meanwhile he had joined the clinical staff of the Massachusetts Eye and Ear Infirmary where he eventually became a full surgeon in 1947. He also participated in the teaching of Harvard Medical School Students. During the early 1930's he became intensely interested in the newer methods of retinal detachment surgery brought over from Europe. He was one of the first in Boston to do this operation on a large scale. Another disease which claimed his attention was retrolental fibroplasia, which had made its appearance during World War II. He devoted many hours to the study and treatment of young children with this disease. He was a member of all the major ophthalmologic societies, his membership in the American Ophthalmological Society starting in 1939. He devoted a great deal of time to the American Board of Ophthalmology, which he served for 12 years as secretary. AJO 1966,61:358

King, Clarence (1877-1936) American ophthalmologist born in Newport, Kentucky, who graduated from the Medical College of Ohio in 1901. He put in post-graduate work under Ernst→Fuchs in Vienna and later in Berlin. He started practice in ophthalmology in Cincinnati, but went to India in 1912 to work under Col. Henry Smith. Dr. King served in France during the war as Major A.M.S., first at a Base Hospital and later as consulting ophthalmologist in the Allery Area, in Coblenz. He was surgeon at the Cincinnati General Hospital and Director of the ophthalmic clinic at the Children's Hospital. After having held the post of Assistant Professor of Ophthalmology at the Medical College, University of Cincinnati, for several years he succeeded the late Dr. Victor Ray, sen., as Professor. As Professor he reorganized the department under his care. Clarence King was not a prolific author, but all he wrote reached a very high level as his standard was of the highest. He was succeeded by Derrick T.→Vail. BJO 1937,21:158-159

King, Jr., John Harry (1910-1986) American ophthalmologist. He was born in Washington, D.C., and received his M.D. degree from Georgetown University Medical School in 1933. After internship at Letterman General Hospital in San Francisco, he joined the Army Medical Corps. He subsequently served as Chief of the Ophthalmology Service at Tripler General Hospital and Walter Reed Hospital and was the first medical director of Andrews Air Force Base in Maryland. During World War II he served as a flight surgeon in both the European and Pacific theaters. When he retired as a colonel in 1955, he was the Army's Director of Eye Research. In 1954, King developed the process of preserving corneal tissue for transplantation by dehydrating the tissue and storing it in anhydrous glycerin solution. The tissue, preserved at room temperature, has been used successfully in lamellar transplants after more than 23 years of storage. King was in private practice in Washington from 1955 until 1985. He served as clinical professor of ophthalmology at Georgetown University and associate professor of ophthalmology at George Washington University Medical School. He helped develop the Lions Eye Bank of Washington, D.C., and became its medical director. He then helped organize and served on the first Board of the Eye Bank Association of America. He was an organizer of the Society of Military Ophthalmologists. He formed the International Eye Bank in 1960 to

provide fresh and preserved ocular tissue for corneal transplantation in countries where it was not readily available. In 1969 he founded the International Eye Foundation, which coordinates programs for the prevention of blindness in undeveloped nations. King served as a consultant to the Surgeon General of the Air Force and the Surgeon General of the U.S. Army. He was a director of the National Society to Prevent Blindness and the Pan American Association of Ophthalmology. He was a charter member of the Academia Ophthalmologica Internationalis and received the Honor Award of the American Academy of Ophthalmology and Otolaryngology. The Pan American Association of Ophthalmology gave him the Gradle Medal for Teaching in 1968 and its Distinguished Humanitarian Award in 1982. He was an honorary member of the Ophthalmological Societies of the Dominican Republic, Egypt, El Salvador, Guatemala, Greece, Mexico, Peru, and Turkey. His *Atlas of Ophthalmic Surgery*, written with J.C.→Wadsworth, had three or more editions. Additionally, he was the author of over 100 scientific papers.AJO 1986,102:746

Kinoshita, Jin (1922-) American ophthalmic biochemist. Born in San Francisco, CA. as a second generation of Japanese origin. He received his A.B. from Bard College, Columbia University in 1944 and his Ph.D. from Harvard University in 1952. He was invited by Professor David G. Cogan to join the Howe Laboratory of Ophthalmology, Harvard Medical School in 1952 and rose to the rank of Professor of Ophthalmic Biochemistry in 1970. In 1971, he transferred his research activities to the Intramural Program of the National Eye Institute (NEI) encouraged by Dr. Carl Kupfer, Director of the NEI. Kinoshita began as Chief of Laboratory of Vision Research and then became Scientific Director of the NEI from which position he retired in 1990. Since then, he has been Clinical Research Professor of Ophthalmology at University of California at Davis. Kinoshita's main research interests are summarized in three of his major publications. In 1964, he presented the "*Cataracts in Galactosemia*, Invet. Ophthalmol. 4: 782, 1965" when he was honored with the Jonas S. Friedenwald Award. In 1974, he presented, as the Proctor Medal Award Lecture "*Mechanisms Initiating Cataract Formation*, Invest. Ophthalmol. 13: 713, 1974". His third notable contribution is his XLIII Edward Jackson Memorial Lecture at the American Academy of Ophthalmology in 1986 entitled "*Aldose Reductase in the Diabetic Eye*, Am. J. Ophthalmol. 102:685,1980". He was honored by the Japanese Ophthalmological Society in 1978 by a lectureship. He delivered many named lectures, e.g. V, Everett Kinsey Lecture (1989), Zacharias Dische Lecture (1991), etc. He was a member of Editorial Board of many scientific journals, e.g. *Arch. Ophthalmology*, *Invest. Ophhthalmol*, *Exp. Eye Res*, and many others. He also served as Chairman of the Board of Trustees of the Association for Research in Ophthalmology (1970) and the Vice President of the International Society of Eye Research (1978-1983). He is a recipient of many Awards, e.g. Alcon Research Awards (1983,1984), from the Cataract Foundation of Japan (1985) and from the National Eye Institute and the Japan Society for the Promotion of Science (1989). He is an Emeritus Member of the Japanese Ophthalmological Society and an Honorary Member of the International Society of Eye Research. Since 1992 he is an active Member of the Scientific Advisory Board of Research to Prevent Blindness. In recognition of his outstanding service, President Ronald Reagan, in 1981, presented Kinoshita the Presidential Rank Award for Meritorious Executive, and the Government of Japan conferred on him the Third Order of the Rising Sun in 1994.
(e-mail: jinkinno@davis.com)(SM)

Kinoshita, Shigeru (1950-) Japanese Ophthalmologist, Professor and Chairman of Kyoto Prefectural Medical University. He graduated from Osaka University in 1974, studied under Prof. MANABE Reizo and received his degree Doctor of Medical Sciences in 1983. He has been in the present position as above since 1992. His research interest is in the cornea, and he established, in collaboration with Dr. Richard Thoft, the concept of the stem cells of the epithelium that has given the basis for corneal surface reconstruction (*Sex chromatin of donor corneal epithelium in rabbits*. Invest. Ophthalmol. Vis. Sci. 21: 434, 1981, *Long-term results of keratoepithelioplasty in Mooren's ulcer*. Ophthalmology 98: 438, 1991). He is currently working on the molecular biology of the corneal epithelium (*Apolipoprotein J expression in human ocular surface epithelium*. Invest. Ophthalmol. Vis. Sci. 37: 2285, 1996). He served as the active Director of the World Congress on the Cornea IV in 1996 and Program Committee (Cornea section) member of ARVO in 1996-1999. He is the Chief Editor of "*Atarashii Ganka*: Journal of the Eye" and on the Editorial

Board of "*Cornea*", and is a recipient of the Alcon Research Award 2000. (Department of Ophthalmology, Kyoto Prefectural Medical University, Kajii-cho Kawaramachi, Kamigyo-ku, Kyoto 602-0841, Japan. phone: +81-7-5251-5578, fax: +81-7-5251-5663, e-mail: skinoshi@ophth.kpu-m.ac.jp)(SM)

Kinsey V. Everett (1909-1978) American ophthalmologist, a leading ophthalmic researcher of this century, a pioneer of research ophthalmology in its formative years, he made major contributions to the understanding of the transparency of the Cornea, the secretion of aqueous humor, the pathogenesis of retrolental fibroplasia, and the metabolism of the lens. Kinsey was born in Pittsburgh and received the bachelor of science degree from the University of Pittsburgh in 1931. He then assisted the mathematical biologist Dr. Nicholas Rashevsky in biophysical research at the research laboratory of the Westinghouse Electric Company, and became interested in the effects of x-rays on living tissue. In 1935, he obtained a Ph.D. degree in zoology from the University of Pittsburgh where he studied the biologic effects of x-rays on glutathione, phosphotase, and esterase. The following year he studied the effects of short-wave radiations at the Cancer Research Laboratory at the University of Pennsylvania, and in 1937 and 1938 he worked as a research biochemist at the Sharp and Dohme Biological Laboratories. He investigated methods of purifying antitoxins. In 1938, he became a research associate in the Department of Ophthalmology at the University of Pittsburgh. In 1940, he joined the staff of the Howe Laboratory of Ophthalmology of the Harvard Medical School as an assistant in ophthalmic research. His initial studies on the cornea with David Cogan led to accurate delineation of the movement of water through the cornea and much of our early information on the deturgescent mechanism. For these studies, be shared with Cogan the Warren triennial award of Massachusetts General Hospital. In 1942, he began studies with W. Morton Grant on the kinetics of intraocular fluid transport, which led to our present theories of aqueous humor secretion and the nature of the primary aqueous humor secreted into the posterior chamber. Ocular injuries to arc welders during World War Il led to the study of ultraviolet keratitis. Additional studies concerned the actions of mustard gas on the eye. From 1946 through 1950 be was director of research on retrolental fibroplasia at the Massachusetts Eye and Ear Infirmary. He subsequently headed a collaborative group that studied the role of oxygen in this disorder. For this work be received the Modern Medicine Distinguished Award and the Lasker Award. In 1950 Kinsey turned his attention to the lens. He developed a method to maintain the lens in vitro and demonstrated that the epithelium was responsible for the transport function in this lens. Throughout his life be had tremendous enthusiasm and was responsible for stimulating many individuals to enter ophthalmology. He was unfailingly generous and collaborated with a number of distinguished investigators, many of whom he had initially directed. From 1950 to 1968 be was assistant director of the Kresge Eye Institute of Wayne State University and professor of ophthalmic chemistry. In 1968, he went to Oakland University as the first director of the Institute of Biological Sciences, where be became director emeritus in 1975. In addition to his vision research, Kinsey was active in organizational ophthalmology. He was adviser to the National Society for the Prevention of Blindness on retrolental fibroplasia; be was chairman of the committee on this topic from 1968 until his death. He served as a member of the Society's Committee on Basic and Clinical Research since 1949. He served as a trustee and chairman of the Association for Research in Ophthalmology (now ARVO), as a member of the Sensory Disease Study Section of the United States Public Health Service of the National Institutes of Health, and subsequently on the Council of the National Institute for Neurologic Diseases and Blindness and the Council of the National Eye Institute. He was the first chairman of the National Eye Institute Board of Scientific Counselors. He served on the editorial boards of the Archives of Ophthalmology and Experimental Eye Research. He served as chairman of the Scientific Advisory Board of the National Foundation for Eye Research and as a member of the Scientific Advisory Board of the National Council for the Prevention of Blindness (Fight for Sight!). He was an early advocate of scientists working with clinicians to solve medical problems. He was an honorary member of the New England and the Detroit ophthalmological societies. Kinsey received the Proctor Medal Award of the Association for Research in Ophthalmology in 1952. At that time he expressed the need for tenured positions for full-time, investigators in ophthalmology, adequate laboratory space for experimental studies, and adequate funding. His philosophy was expressed in his remarks made at the acceptance of the Proctor Medal Award (Am.J.

Ophthalmol. 36:7, 1953), and earlier in Science (105: 373, 1947). Science was but one of his interests and he brought leadership and devotion to whatever activity he undertook. He was a director of the Detroit opera theater. He became interested in boating, and became an instructor in a powerboat squadron. He was an analytic thinker, and nothing was more pleasant than to review a day's scientific program with Everett commenting on what should have been done, how data could have been interpreted differently, and the new problems encountered. AJO 1978,86:845-847

Kipp, Charles John (1835-1911) German-American ophthalmologist. Born at Hanover, Germany, he came to the United States at the age of nineteen. Here he received his medical degree at the College of Physicians and Surgeons in the City of New York in 1861. He served in the army from 1862 until considerably after the close of the war; being Acting Assistant Surgeon in 1862, Assistant Surgeon in 1863, Major and Surgeon in 1864, Brevet Lieutenant Colonel and Surgeon in 1865. In Nov., 1867, he resigned. In 1869 he settled in Newark, N. J., as an ophthalmologist. He founded the eye and ear clinic at St. Michael's Hospital and the Newark Eye and Ear Infirmary.He was Chief Surgeon of the Newark Eye and Ear Infirmary and Consulting Surgeon to the German, St. Barnabas, Bayonne, Mountainside, and Somerset Hospitals. In 1885 and 1886 he was President of the New York Ophthalmological Society, in 1886 of the New Jersey Medical Society and, from 1901 till 1906, of the New Jersey State Tuberculosis Sanitarium. In 1907 and 1908 he was President of the American Ophthalmological Society, President of the Otological Society, and Vice-President of the A.M.A. He was also a member of the Heidelberg Ophthalmological Congress. According to Peter Callan, of New York, he was the first to recognize the frequent connection between optic neuritis and otitic thrombosis of the lateral sinus, and was the first to report in America a case of cysticercus in the ocular conjunctiva. Harry V. Würdemann said of him that one of Kipp's notable achievements in science was his discovery of a form of eye disease caused by malaria, to which be was first to call attention, in the early nineties. Kipp was a frequent contributor to periodical literature, and also to the medical encyclopedias. Perhaps his most important writing is the section on diseases of the ear in the *International Handbook. of Surgery.* Among his ophthalmic writings we may mention the following: 1.*On Gonorrheic Irido-Choroiditis*. *(Med. Rec., N.* Y., 1880, xvii.) 2. On the Significance of the Development of Optic Neuritis in Cases of Purulent Inflammation of the Middle Ear. *(Arch. Otol.,* 1885.) 3. *A Case of Double Vascular Exophthalmos; Recovery under Intermittent Compression of the Right Carotid Artery and the Internal Use of the Iodide of Potassium. Cocaine Conjunctivitis.* (*Tr. Am. Ophth. Soc.,* 1888-90.) 4. *Three Cases of Transient Bilateral Horizontal Nystagmus Occurring in Connection with Purulent Inflammation of the Middle Ear*. *(Tr.Am.Otol. Soc.,* 1887-90.) 5.*A Case of Acute Purulent Inflammation of the Middle Ear with Double Optic Neuritis, but without Tenderness or Swelling of, etc*. *(Tr.Am.Otol.Soc.,* 1891.) 6. *A Case of Bilateral Recurrent Inflammation of Ténon's Capsule in Connection with Profound Mercurial Poisoning*. *(Tr.Am.Ophth.Soc.,* 1891-3.) American Encyclopedia of Ophthalmology, Vol.9, p. 6848-6849. The Ophthalmoscope, 1911,p.305.

Athanasius Kircher

Kirby, Daniel B. (1891-1953) American ophthalmologist from New York. Born in Cleveland, he was educated at the Western Reserve University and an interne at the Toronto General Hospital and the Bellevue Hospital, New York. He entered practice in this city in 1923 in association with John M. Wheeler. He served in the U.S. Navy in the first World War, and became Director of the Department of Ophthalmology of the Bellevue Hospital, and Professor of Ophthalmology at New York University. He was one of the best known figures in ophthalmic surgery in the United States, and his book *The Surgery of Cataract* (1950) was a unique contribution to ophthalmic knowledge of this subject of which his practical experience was immense. He was widely known and had a large circle of friends outside the U.S.A.: an American edition was published in 1953. Another edition was published in 1955 under the title *Advanced Surgery of Cataract*. JPW; AJO 1954,37:443-444

Kircher, Athanasius (1602-1680) German priest, philosopher and scientist. Kircher was born at Geisa, Germany, and was educated at Jesuit schools. He was ordained a priest in 1628. He taught philosophy, mathematics, astronomy, and Hebrew, among other subjects, at the Universities of Würzburg and Avignon. In 1633 Kircher settled in Rome, where he spent the rest of his life, engaged chiefly in independent research and in writing. Kircher's

studies encompassed the fields of magnetism, optics, acoustics, music theory, astronomy, mathematics, philology, chemistry, geography, archeology, theology, philosophy, and medicine. Although he contributed little that was new, his writings furthered the dissemination of knowledge on a wide range of scientific topics. Among many books, he also wrote: *Ars magna lucis et umbrae* Rome1646, another edition was published in Amsterdam 1671; *Ars Magnesis* etc..Herbipoli 1631; *Ars magna sciendi in XII libros digesta*..etc.. (2 vols.) Amsterdam 1669; *China monumentis*..etc. Amsterdam 1667; *Magnes, sive de arte magnetica opus tripartitum* Rome 1641; *Mundus subterraneus, in XII libros digestus*..etc..Amsterdam 1665; *Phonurgia Nova*..etc.Campidonae 1673; *The Vulcanos: or, burning and fire-vomiting Mountains*..etc. London 1699. Albert.BMC

Kirchhoff, Onstav Robert (1824-1887) German physicist. He became professor in Berlin University in 1874, and distinguished himself in the sciences relating to the mechanics of heat, optics, and especially of spectrum-analysis.American Encyclopedia of Ophthalmology, Vol.9, p. 6849.

Naganori Kirisawa

Kirisawa, Naganori (1907-1980) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Tokyo University in 1931, studied under Prof. S. ISHIHARA, and was made the Professor of Ophthalmology of Iwata Medical School in 1920. He was promoted to Assistant Professor of Tokyo University in 1937 and was granted his Doctor of Medical Sciences from the University in 1939. His main interest was the medical treatment of eye diseases and he gave a special lecture "*Chemotherapy in Ophthalmology*" at the 58th Congress of the Japanese Ophthalmological Society. He was appointed the Professor and Chairman of the Department of Ophthalmology of Tohoku University in 1955 and he held this position until retirement in 1971. During his tenure he served as the Director of the University Hospital. In 1969 he was the President of the 73rd Congress of the Japanese Ophthalmological Society, and at the 72nd Congress in 1968 he delivered a special lecture "*Recent problems in medical therapy in Ophthalmology*". He was also interested in uveitis, and discovered a fulminant necrotizing retinochorioiditis of KIRISAWA, where herpes zoster or varicela virus is suspected as a cause. After retirement he was entitled Professor Emeritus of Tohoku University and served as the Director of Nihon Monopoly Bureau Hospital (now JT Co.). In 1983, the Government conferred the Second Order of Sacred Treasure upon him in recognition of his distinguished services. (SM)

Kirkpatrick, Lt-Col. Henry (1872-1958) British ophthalmologist, who spent most of his life in the Indian Medical Service. Kirkpatrick was educated in Dublin, where he qualified in 1894, and did his postgraduate work in St. Mark's Eye and Ear Hospital in that city under the instruction of →Swanzy and →Werner. In 1898 he joined the Indian Medical Service and was appointed to the staff of the General Hospital, Madras, where he acted as physician and professor of pathology. There he came under the influence of Col. R. H. Elliott, whom he succeeded in 1914 as Superintendent of the Government Ophthalmic Hospital and Professor of Ophthalmology in Madras. While in this office he supervised the construction of the Elliot School, a large teaching institution, and spent much of his time in improving the facilities for postgraduate training particularly in pathology. Leaving Madras in 1920, he started consulting practice in London, again initially in association with Elliot, becoming ophthalmic surgeon to the Hospital for Tropical Diseases, and lecturer in ophthalmology at the London School of Hygiene and Tropical Medicine. In 1937 he gave up consulting practice and retired to live in the country in Hampshire. Kirkpatrick was an excellent ophthalmologist, an accomplished surgeon, and a conscientious teacher. His greatest achievement was the advancement of ophthalmology in South India. He made a considerable number of contributions to ophthalmic literature, published two small volumes *Cataract and its Treatment* (1921) and *Diseases of the Eye* (1936)-and collaborated with Elliot in the production of his standard *Textbook of Tropical Ophthalmology* (1920). BJO 1958,42:512

Kirwan, Ernest William O´Gorman (1887-1965) Irish ophthalmologist, who one year after graduating in medicine in Dublin, joined the Indian Medical Service in 1910. After serving in France, Mesopotamia, and the North-West Frontier of India during the First World War, he took up the specialty of ophthalmology and occupied the chair in that subject in Calcutta until his retirement from the Indian Service in 1944~ thereafter he

came to London and became lecturer in ophthalmology at the London School of Hygiene and Tropical Medicine and ophthalmic surgeon at the Tropical Diseases Hospital. After some ten years he retired altogether and spent the last decade of his life happily ill California. .Kirman raised the standard of teaching and investigation in ophthalmology in Calcutta to a level it had not reached before, and was accepted as a world authority on tropical ophthalmic diseases, particularly leprosy, of which he made a special study. Brit.J.Ophthal.1966,50:168

Kishi, Shoji (1950-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Gunma University. He graduated from Gunma University in 1976, studied Ophthalmology at the University under Prof. SHIMIZU Koichi and received his Doctor of Medical Sciences in 1987 (thesis: *Posterior vitreous detachment and the fovea*. J. Jpn. Ophthalmol. Soc. 89: 1251, 1985). He carried out research under Prof. Mark Tso at University of Illinois at Chicago in 1981- 1983. (Kishi S, Tso MOM, Hayreh SS: *Fundus lesions in malignant hypertension I. A pathologic study of experimental hypertensive choroidopathy*. Arch Ophthalmol 103:1189-1197,1985). He has been in the present position as above since 1998. He is a Councillor of the Japanese Ophthalmological Society, and a member of the Vitreoretina Society of Japan, Japanese Society of Ophthalmic Surgeons, Japanese Society of Ophthalmic Diabetology, and a fellow of the American Academy of Ophthalmology, and a member of the Association for Research in Vision and Ophthalmology. His main interest in research has been retinal and vitreous diseases, and he has many publications in this field that include the following two papers: *Vitreous cortex remnants at the fovea after spontaneous vitreous detachment*. International Ophthalmology 9: 253-260, 1986 and *Posterior precortical vitreous pocket*. Arch Ophthalmol.108: 979-982,1990 (Department of Ophthalmology, Gunma University, 3-39-15, Showamachi, Maebashi, 371-8511, Japan; phone: 81-27-220-8338, fax: 81-27-233-3841, e-mail: kishi@akagi.sb.gunma-u.ac.jp)(SM)

Masao Kishimoto

Kishimoto, Masao (1911-1991) Japanese Ophthalmologist, Professor Emeritus of Kyoto University. He graduated from Kyoto University in 1935, studied under Prof. S.→MORI and was promoted to Assistant Professor in 1949. He was elected as one of the symposists at the 60th Congress of the Japanese Ophthalmological Society and gave a lecture "*Fluctuation of the intraocular pressure and aqueous vein: significance of the vein in glaucoma*". He was then appointed the Professor of Ophthalmology of Nagasaki University in 1962 and was invited to be the Professor and Chairman of the Department of Ophthalmology of Kyoto University in 1968: he held the position until retirement in 1975. He served as the President of the 79th Congress of the Japanese Ophthalmological Society in 1975 and delivered a special lecture " *Retinal detachment and its treatment*" at the 78th Congress of the Society in 1973. After retirement he was given the title Professor Emeritus of Kyoto University and served as the Director of Osaka Teishin Hospital under the Ministry of Posts and Telecommunications until 1982. The Government conferred the Third Order of the Rising Sun upon him in recognition of his lifetime services. (SM)

Kitahara, Kenji (1941-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Jikei University School of Medicine. He graduated from Jikei University School of Medicine in 1967, studied Ophthalmology at the University under Prof.→FUNAHASHI Tomoya, and received his Doctor of Medical Sciences in 1980 (thesis: *Measurement of spectral sensitivity of retinal receptors and its clinical application*. Rinsho Ganka (Jpn. J. Clin. Ophthalmol.) 30:323,1976). He extended his studies in 1977-1980 at the University of Michigan, U.S.A. and worked with Prof. Mathew Alpern. They published "*Classical tritanopia*. J. Physiol.335: 655, 1983" and "*The dependence of the colour and brightness of a monochromatic light upon its angle of incidence on the retina*." J. Physiol. 338: 651, 1983. On return home, he served as the Assistant Professor (1984-1990) and he was promoted to the present position as above in 1990. His professional activities include Councillor (1991-) of the Japanese Ophthalmological Society, Executive Director (1990-) of the Japanese Society of Neuro-ophthalmology, Executive Director (1992-) of the Japanese Society of Ophthalmological Optics, Committee Member of the International Perimetric Society (1982-1988), of the International Color Vision Society, and of Commission Internationale de L'eclairage (CIE). He serves as an editor of *Ganka* (Ophthalmology) (1991-). He is an expert in vision physiology, color vision, physiological optics and visual rehabilitation: some examples of his many publications are "*Congenital*

color vision deficiencies, Kanehara & Co. Tokyo, 1999″ and "*Dichromatism in Macaque monkeys*." Nature 402: 139, 1999. (Department of Ophthalmology, Jikei University School of Medicine, Nishi-Shinbashi, Minato-ku, Tokyo, 105-8461, Japan. phone:+81-3-3433-1111, fax:+81-3-3435-7959, e-mail: kkenji@po.iijnet.or.jp)(SM)

Kitano, Shusaku (1925-) Japanese Ophthalmologist, Professor Emeritus of Nihon University. He graduated from Tokyo University in 1949, studied Ophthalmology at the University under Prof.→HAGIWARA Hogara and received his Doctor of Medical Sciences in 1955 (thesis: *An embryological study on the human corneal nerves*. J. Jpn. Ophthalmol. Soc. 59: 262, 1955). He conducted research on the cornea during 1963-1965 at the Retina Foundation, Boston, as Research Fellow with Dr. C. H.→Dohlman and found the roles of keratocytes in reproduction of mucopolysaccharide in the corneal stroma (*Cytoplasmic granules of the corneal stroma cell*. Invest. Ophthalmol. 3: 277, 1966; Cytologic and histochemical changes in corneal wound healing. Arch. Ophthalmol. 76: 345, 1966). He was appointed the Assistant Professor of Nihon University under Prof. →KUNITOMO Noboru in 1958 and then promoted to the Professor and Chairman of the Department in 1973: he served in this position until retirement in 1991. He has served as a Councillor (1973-1991) and a Executive Director (1979-1981, 1985-1989) to the Japanese Ophthalmological Society (JOS), and as a Councillor (1977-1991) and as the Chairman (1984-1988) of the Japan Contact Lens Society and as a Councillor (1977-1999) to the Japanese Association of Ocular Infection (JAOI) (1977-1999). He is one of the Founders of the JAOI and currently serves as the Chairman of the Association. He worked extensively on the cornea and infection of the anterior segment of the eye (*Electron microscopic studies on herpes virus infections*. Jpn. J. Ophthalmol. 16: 233, 1972), and also on the structure and function of the ocular surface. His works have been summarized in his JOS Award Lecture to the 90th Congress of the JOS. (*Ocular surface - physiological and pathological properties*. J. Jpn. Ophthalmol. Soc. 91: 1, 1987) He has served on the Editorial Board of Ophthalmology (Ganka) (1973-1991). He continues to contribute to teaching young ophthalmologists at the University. (Department of Ophthalmology, Nihon University, School of Medicine, 30-1 Oyaguchi-Kamimachi Itabshi-ku, Tokyo 173-8610, Japan. phone: +81-3-3972-8111, fax: +81-3-3554-0479)(SM)

Kitazawa, Yoshiaki (1937-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology of Gifu University. He graduated from Chiba University in 1961 and studied Ophthalmology under Prof. SUZUKI Yoshitami: he received his Doctor of Medical Sciences in 1967 (thesis: *A Clinical Study on Water-Drinking Tonography (3)- Water-Drinking Tonography in Steroid-induced Ocular Hypertension*-. Acta Soc. Ophthalmol. Jpn. (J. Jpn. Ophthalmol. Soc.) 70: 292-299, 1966). He studied for one year in 1968 at the Wilmer Ophthalmological Institute, Johns Hopkins University with Prof. Maurice E Langham (Kitazawa Y, Langham ME: *Influence of an adrenergic potentiator on the ocular response to catecholamines in primates and man*. Nature 219:1376 - 1378, 1968). He was promoted to the Assistant Professor of the University of Tokyo in 1975 and is in the present position since 1985. His professional assignments are Councillor (1975 -) and Executive Director (1996 - 1999) of the Japanese Ophthalmological Society, Executive Councillor (1986 -) and President (1998-) of Japanese Glaucoma Society, Councillor (1986 -) and Executive Councillor (1993-) of Japanese Society of Ocular Pharmacology, Executive Councillor (1991-) of Japanese Society of Ophthalmic Surgery, Executive Councillor (1997 -) of Japanese Society of Laser Medicine, Executive Councillor (1985 -) and President (1994 - 1998) of the International Society of Glaucoma of the International Congress of Ophthalmology, Executive Councillor (1988 -) and Vice President (1994 -) of the International Perimetry Society, Executive Councillor (1996 -) and President (1996-) of Asian-Oceanic Glaucoma Society. He is also a member of many other national and international societies. His editorial assignments are Editor of Jpn.J.Ophthalmol.(1985-), Folia Ophthalmol. Jpn. (1985 -), Ophthalmology (1995 -), J. Glaucoma (1992 -), Curr. Opin. Ophthalmol. (1990 -), J. Ocular Pharmacol. Ther. (1985 -), Ophthalmic Surg. Lasers (1985 -), Int. J. Ophthalmol. (1977 -). He worked as the Secretary of the First Congress of the International Society of Glaucoma of the International Congress of Ophthalmology in 1978. As the Congress President he organized the Third Congress of Japanese Glaucoma Society and the Tenth Congress of the International Perimetry Society in 1992, the 13th Congress of the Japanese Society of Ocular Pharmacology in 1993, the 19th Congress of

Japanese Society of Ophthalmic Surgery in 1996, the 2nd Congress of Asian-Oceanic Glaucoma Society and the 53rd Congress of Japanese Society of Clinical Ophthalmology in 1999. His main research interest has been in glaucoma, and he wrote "*Clinical Glaucoma*. Kanehara Publ. Co. Tokyo, 1979" and some examples of many recent publications are "*Vascular pathogenesis of normal-tension glaucoma: a possible pathogenetic factor, other than intraocular pressure, of glaucomatous optic neuropathy*; Progress in Retinal and Eye Research, 17:127-143, 1998" and "*Optic nerve and peripapillary choroidal microvasculature of the rat eye*; Invest. Ophthalmol. Vis. Sci. 40: 3084-3090, 1999". In recognition of his contribution, he received the Alcon Research Institute International Award in 1994. He was the 46th Francis I. Proctor Lecturer at University of California, San Francisco in 1994. (Department of Ophthalmology, Gifu University, 40 Tsukasa-machi, Gifu-shi, Japan 5(10-8705, Phone: 81-58-267-2272, Fax :81-58-265-9012, e-mail: yoshikit-gif@umin.ac.jp).(SM)

Kitchiner, William (1775(?)-1827) British physician of London. Kitchiner received his medical degree at Glasgow but, having a private fortune, never practiced. Kitchiner, instead, devoted himself to independent research in optics, the culinary arts, and musicology. He wrote: *The economy of the eyes: precepts for the improvement and preservation of sight* (2 parts) London 1824; *Apicius redivivus: or, the Cook´s Oracle* 1817; The *Art of Prolonging Life, by food, clothes* etc. 1822.Albert.BMC

Isamu Kiyono

Kiyono, Isamu (1848-1926) Japanese Physician, graduated from Tokyo University in 1879 was appointed the President of Okayama Medical School in 1881 and worked for 8 years to establish the education systems of the School (now Okayama University). He was then invited to be President of Osaka Medical School (now Osaka University) in 1889, but he had to retire due to an accidental injury in 1901. Subsequently he practiced medicine in the city of Osaka and founded the Osaka Medical Society. He taught Ophthalmology and his *Textbook of Ophthalmology* is now treasured at Osaka University.(SM)

Klaunig, Friedrich Moritz Hermann (1815- ?) German ophthalmologist. Klaunig was born near Oschatz, Germany, received his M.D. in 1842 at the University of Leipzig, settling in that city as ophthalmologist. He wrote: *Das künstliche Auge* Leipzig 1883 and *Compendium der Augenheilkunde* Leipzig 1871.Albert.BMC

Kleefeld, Georges (1892-1979) Belgian ophthalmologist. Kleefeld obtained his M.D. degree in Brussels and became assistant of von→Hess in Munich. Because of the first World War he had to come back to Brussels, where he was assistant of Emile→Gallemaerts during long years. As a Jew he had to escape in 1940 to Tanger and later to New York, where he settled. He wrote many papers on *improvements of ocular biomicroscopy by means of filters and of dyes*, and even on extraordinary topics as the use of a "*tono-exerciser*" for learning to judge intraocular pressure by the digital method, or the *visualisation of retinal topography by plastic replica of the evaginated visual globe* (1957). (Verriest)

Klein, Harvey Z. (1931-1991) American ophthalmologist. Klein grew up in Pittsburgh, where he received a Bachelor of Science degree from the University of Pittsburgh in 1952. Upon graduating from medical school at the University of Buffalo and completing his internship in Pittsburgh, he served in the United States Navy from 1958 to 1961. After his honorable discharge, he entered Drexel Institute of Technology, where he earned a Master of Science in Biomedical Engineering, before going to the University of Chicago for his ophthalmology residency in 1963. Seventeen years later, Dr. Klein left a successful private practice to enter academic medicine. He completed a retina fellowship at the Manhattan Eye and Ear Hospital and a glaucoma fellowship at the Duke University Eye Center before returning to Chicago in 1983, where he served on the faculties of both the University of Chicago and the University of Illinois. Although he was ill and receiving chemotherapy for most of this time, he served with distinction as a clinician and teacher. Klein was a highly intelligent, thoroughly honest man, who made significant contributions to ophthalmology through his writings and lectures. However, his retiring, humble nature was such that his stature was not widely recognized. An example is his course on gonioscopy, given with Ramesh Tripathi and M. Bruce Shields at the annual meeting of the American Academy of Ophthalmology for five years. AJO 1991,112:481

Klein, Salomon, b. (1845- 1937) Austrian ophthalmologist. Klein was born in Miskolcz, Hungary, and received his M.D. in 1870 at the University of Vienna, where he became assistant to Eduard von→Jaeger (1872-1875), lecturer, and professor of ophthalmology. He authored: *Der Augenspiegel und seine Anwendung in der praktischen Medizin*. Wien 1876; *Augenspiegelstudien bei Geisteskranken* Wien 1877; *Lehrbuch der Augenheilkunde* Wien 1879, 2nd ed.1881; *Das Auge und seine Diätetik im gesunde und kranke Zustande* Wiesbaden 1883; *Grundriss der Augenheilkunde für praktische Ärtze und Studirende*. Wien 1886 and with Dr.Sverlin: *Untersuchungen über den Einfluss des Sympathicus auf die Circulation des Augengrundes*. He also authored under the pseudonym *Klein-Behringer*, small non-medical papers which were published in the newspaper *Neue Freie Presse*.1877 Albert.Fischer.BMC.Mitteilungen der Julius-Hirschberg-Gesellschaft, Mitteilungen 2000, 1:301-309.JPW

Bertha A. Klien

Klien Bertha A. (1898-1978) American female ophthalmologist. Professor of ophthalmology at the University of Chicago. Bertha Klien was born in Burgo, Austria, and received the doctor of medicine degree from the University of Vienna in 1925. After internship at the Allgemeines Krankenhaus in Vienna, she became an assistant at the I.Augenklinik of the University of Vienna. In 1928 she became assistant professor of ophthalmology at Northwestern University and subsequently served as associate professor or ophthalmology at Rush Medical College, University of Illinois, and Northwestern University. In 1955 she became associate professor of ophthalmology at the University of Chicago and full professor in 1959. On her retirement she was named emeritus professor of ophthalmology. At various times she served as attending ophthalmologist at Presbyterian Hospital, Wesley Memorial Hospital, and the University of Chicago Medical Center. Klien specialized in correlating the ophthalmoscopic appearance of ocular lesions with their course and histologic findings. She was an outstanding teacher and artist and her scientific exhibits at the American Medical Association annual meetings were awarded gold, silver, and bronze medals. With the late Alex Krill, she provided the first and thus far the only clinical, histologic correlation of fundus flavimaculatus. She became a diplomate of the American Board of Ophthalmology in 1938. She was awarded the Honor Key of the American Academy of Ophthalmology and Otolaryngology in 1957. In 1963 she was president of both the Chicago Ophthalmological Society and the Verhoeff Society. At the time of her death she served on the editorial boards of *Ophthalmologica* and the American Journal Ophthalmology. Earlier she served as a section editor of the *Survey of Ophthalmology* and prepared reviews on the retina and optic nerve for the *Archives of Ophthalmology* in 1960,1961, and 1962. Klien remained scientifically active until her death. She reviewed fundus slides for staff members of the University of Chicago and participated in Journal editorial activities. AJO 1979, 87:431-432

Klügel, Georg Simon (1739-1812) German mathematician and physicist. Klügel was born in Hamburg and studied mathematics under→Kaestner at the University of Göttingen. He defended his thesis in 1763. Later, Klügel, became professor of mathematics and physics at the University of Halle. His most important books were his *Analytische Trigonometrie* Braunschweig 1770 and Mathematisches Wörterbuch (3 vols.) Leipzig 1803-1808 which was used throughout most of the nineteenth century. He also authored: *Analytische Dioptrik* (2 vols.) Leipzig 1778 and translated Priestleys History of Optics: *Geschichte und gegenwärtiger Zustand der Optik* Leipzig 1776. Albert.DSB.

Kluyskens, Jean (1913-) Belgian ophthalmologist, descendant of Jozef Frans Kluyskens (1771-1843) who wrote on many medical subjects including military ophthalmia (1819). Jean Kluyskens obtained his M.D. in Ghent in 1938 and specialized in ophthalmology with Marnix Van →Duyse, Henri →Coppez and Antoine →De Jaeger. He wrote a report on congenital glaucoma for the Belgian Ophthalmological Society (1950) and published interesting papers on the *visual field in neurosis and in hypnosis*.(Verriest)

Kluyskens, Jean François (1771-1843) Belgian ophthalmologist. Kluyskens was born at Alost, near Brussels, Belgium, and received his medical education at Ghent. Kluyskens, after several years of service as a military surgeon in the Austrian Army. He left the Austrian army after the battle near Jemappes (Belgium) and joined the Dutch army. After the occupation of Holland by the French, he left the army and settled in Ghent. He became chief surgeon of the city hospital and, after Belgium was annexed by the Netherlands

(1815), chief surgeon of the Dutch army. In the latter capacity he established hospitals and initiated various public-health programs and improvements in medical education; he was the founder and editor of a medical journal and the author of a number of medical studies. He wrote: *Dissertation sur l'ophthalmie contagieuse qui règne dans quelques bataillons de l'armée des Pays-Bas*. Gand 1819. Albert. v.Duyse. Hirsch.BMC.

Knapp, Arnold (1869-1956) American ophthalmologist of New York. He was born in New York in 1869, the son of the noted Herman Knapp. Graduating in arts from Harvard in 1889 and from the College of Physicians and Surgeons, Columbia University, in 1892, he filled a surgical internship at Roosevelt Hospital and then proceeded to Europe for his initial training in ophthalmology. On his return from abroad he joined his father in practice and consequent duties at the New York Ophthalmic and Aural Institute. This hospital had been established on the lower east side of New York by the elder Knapp in the year that the younger man entered medical school. It continued under Herman Knapp's direction until he resigned for ill health in 1909, and was succeeded by his son. In 1913, two years after Herman Knapp's death, the institute changed its name to the Herman Knapp Memorial Eye Hospital and moved to West 57th Street. It remained here under the direction of Arnold Knapp until its merger with the Institute of Ophthalmology of the Presbyterian Hospital in 1940. In this year Knapp established the Knapp Memorial Foundation, dedicated to teaching and research in ophthalmology. This made possible the excellent contributions of the Knapp Research Laboratory under the guidance of von Sallmann and the Knapp Laboratory of Physiological Optics under Hardy and his successors. The amount of work done by Arnold Knapp was prodigious. He was director of a hospital for more than 30 years, professor of ophthalmology at Columbia for 25 years, editor of the *Archives of Ophthalmology* (founded by his father the year Arnold was born) for 40 years. In the meantime he found time to conduct a large practice, to write more than 200 papers, to publish a classic book*, to indulge his interest in music, literature, and art, and to add to his collection of Chinese bronzes. He was chairman of the Section of Ophthalmology of the American Medical Association in 1925 and chairman of the American Ophthalmological Society in 1931. In 1946 he delivered the Bowman Lecture, entitled, "*The present state of the intracapsular cataract extraction*," the second American to be so honored. Other distinctions included an honorary doctorate in science from Columbia in 1931, the Howe Medal of the American Ophthalmological Society in 1937, and the Leslie Dana Gold Medal of the National Society for the Prevention of Blindness in 1937. Arnold Knapp was profoundly influenced by the era in which he lived and the distinguished men who made it remarkable. He was a year old when von→Graefe died, 20 years of age on the death of →Donders, and in his forties when the careers of Hutchinson and Lister ended. While he was at Harvard, Oliver Wendell Holmes was still living nearby. During his medical course at Columbia great works were pouring from the pens of Bowman, Huxley, von Helmholtz, Brown-Sequard; Virchow, Paget, and Pasteur. He was already a doctor of medicine when the first X-ray picture was taken and was in practice when Gullstrand was receiving the Nobel Prize. He knew Koch, Saemisch, the Pagenstechers, Javal, Parinaud, Holmgren, and, indeed, most of the illustrious doctors of his time. * Knapp, Arnold *Medical Ophthalmology* Philadelphia: P. Blakiston's Son & Co. 1918. AJO 1956,41:1084-1085. JPW

Knapp, August (1873-1943) Australian optician, born Manchester, England, who died Perth, Australia. Apprentice optician, Brisbane (Cert. Brit. Optical Associate 1900). Optician, Perth, 1897-1943. Associate, Royal Photographic Society, Great Britain, 1925; fellow 1930. He wrote: "*A note on the actinic value of light*." Royal Society of Western Australia. Journal., 11 (1924-25), 21-23.

Knapp, Hermann (1832-1911) American ophthalmologist of German origin. Knapp was professor of ophthalmology at the College of Physicians and Surgeons of New York. He received his M.D. at Giessen 1854. He then studied under various masters of ophthalmology in London, Utrecht, Munich, Würzburg, Paris, Berlin, Vienna and Leipzig. He qualified as Privat-Dozent (Lecturer) in Heidelberg where he founded the Eye Clinic in 1862 and became professor of ophthalmology in 1864. In1868 he paid a visit to New York and emigrated despite protests from students and colleagues in Heidelberg. He founded the New York Ophthalmic and Aural Institute which rapidly became a major center for treatment and teaching. He then founded a large private and hospital practice which he

retained until he was forced by age to resign. Knapp became professor at the New York University Medical College from 1882 to 1888 and a similar position at the College of Physicians and Surgeons from 1888 to 1903.Knapp founded with Moos, the *Archives of Ophthalmology and Otology*, the counterpart of the *(Knappsche) Archiv für Augen-und Ohrenheilkunde* which a few years later, under Julius Hirschberg split into *Archiv für Augenheilkunde* and *Archiv für Ohrenheilkunde.* Knapp wrote:"*Die Krümmung der Hornhaut des menschlichen Auges.*" Heidelberg1859. "*Die intraocularen Geschwülste; nach eigenen klinische Beobachtungen und anatomischen Untersuchungen.*" Karlsruhe 1868. "*Sechster Jahresbericht über die Augenklinik des Dr. H. Knapp ...*" Heidelberg 1868. "*Die Intraoculare Geschwülste*" Karlsruhe 1868 " *A treatise on intraocular tumors; from original clinical observations and anatomical investigations.*" New York 1869. (translation of "*Die intraocularen Geschwülste* "); *"Cocaine and its use in ophthalmic and general surgery."* New York 1885. *First monograph* on cocaine and the first monograph on *local* anesthesia; and "*Über die Vorzüge des binoculare Augenspiegels*" Heidelberger Jahrbücher 1863 (see→Giraud-Teulon). The Ophthalmoscope, 1911,p.545-547. Albert.American Encyclopedia of Ophthalmology, Vol.9, p. 6850-6859[with extended bibliography].Hirsch.

Knies, Max (1851-1917) German ophthalmologist. Knies was born at Kassel, and received his M.D. at Heidelberg in 1874. He pursued his ophthalmologic study under →Kühne and →Becker in Heidelberg, →Saemisch in Bonn, and Johann →Horner in Zürich, before settling in Freiburg as ophthalmologist (1886); Knies became professor at the University of Freiburg in 1888. He is remembered for his research on glaucoma. Knies wrote: *Grundriss der Augenheilkunde* Wiesbaden 1888; *Die Beziehungen des Sehorgans und seiner Erkrankungen zu den übrigen Krankheiten des Körpers und seine Organe* Wiesbaden 1893 American edition: *Relations of diseases of the eye to general diseases* edited by Henry D. Noyes. New York 1895; *Die verschieden Formen von frischen und alten Hornhauttrübungen* (in H.→Magnus *Augenärztliche Unterrichtstafeln*, Issue 6) Breslau 1894 and *Die gonorrhöischen Bindehauterkrankungen und deren Behandlung* (in *Sammlung Abh. Augenheilkunde* Issue 5) Haale/S. 1896. Albert. Fischer.BMC

Knighton, Willis Sackett (1896-1964) American ophthalmologist. He received the M.D. degree from Cornell University Medical School in 1924, interned at the New York Eye and Ear Infirmary, 1925-1927, and practiced in New York City from 1927 until 1962. He was honorary surgeon, New York Eye and Ear Infirmary and associate clinical professor, College of Physicians and Surgeons, Columbia University. Knighton served in the Army Medical Corps during the first world war. He was a member of the American Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, the New York Ophthalmological Society, a fellow of the American College of Surgeons and the New York Academy of Medicine. He was a member of the Board of Directors, National Society for the Prevention of Blindness, and served as chairman of that organization's Glaucoma Committee from 1948-1961. He was author of a text, *Outline of Refraction,* and of numerous scientific articles on glaucoma and other eye diseases, as well as popular material on eye health. AJO 1964,58:507-508

Choong-Je Ko

Ko, Choong-Je (1926-1991) Korean Ophthalmologist, Professor Emeritus of Hanyang University. He graduated from the School of Medicine, Seoul National University in 1952 and received training in Ophthalmology at the same university. He conducted research on neuro-ophthalmology at Minnesota University Medical School and the Mayo Clinic in 1959. He was granted the Degree of Doctor of Medical Sciences from Seoul National University in 1960, and he was appointed as Assistant Professor at Seoul National University. In 1963, he was appointed the Chairman of the Department of Ophthalmology at Seoul Red Cross Hospital in 1963. And in 1964, he reported 64 cases of clinically successful keratoplasty for the first time in Korea. He was then promoted to the Professor and the Chairman of the Department of Ophthalmology at Hanyang University in 1971. He served the Korean Ophthalmological Society as the Chairman of the Executive Director of Board(1978- 1980), the President(1980—1981) and an Advisor(1981).(SM)

Ko, Lay (1934-) Myanmar Ophthalmologist, President of the Myanmar Medical Association, Mandalay (1993). He graduated from Medical College, Rangoon in 1957, with M.B., B.S. degree. Subsequently he studied at the Institute of Ophthalmology, London (DO, 1961), at American College of Surgeons (FAGS, 1979), at the Royal College

of Ophthalmologists, London (M.R.C.Ophth. 1989), at the Royal College of Ophthalmologists, London (F.R.C.Ophth. 1990) and at the International College of Surgeons, U.S.A. (F.I.C.S. (Ophth), 1997). He holds, besides the present position as above, Vice-President of the Myanmar Medical Association (Central) (1996-), Consultant Ophthalmic Surgeon, and Examiner to postgraduate Master of Medical Science (Ophthalmology) since 1981. He served as Consultant Ophthalmic Surgeon and Lecturer in Ophthalmology, Institute of Medicine, Mandalay (1982-1992). He is Professor of Ophthalmology of the Institute (1992-1994). He has been WHO fellow in Trachoma Control and serves as the Regional Trachoma Officer and Consultant Ophthalmologist for the Prevention of Blindness and Trachoma Control Project, in Meiktila. His many publications embrace *Causes of Blindness in Burma*. Union of Burma J. Life Sci. (1968) 1: 85-87, *Trachoma Control in Burma*, Revue Internationale du Trachome, (1976) 5: 119-156, *Differences in the severity of physical signs in the right and left eyes of patients with trachoma in Syria and Burma*. Bull. World Health Org. (1972) 48: 177-183 and *Prevention of Blindness and Cataract problems in Myanmar*, The vision Care, Proc. Hoya Vision Care First International Conference: 200-208, 1998. (331, 83rd Street, Between 3lst-32nd Street, Mandalay, Myanmar, phone: + 95-2-22232) (SM)

Ko, Liang-Shi (1927-) Taiwanese Ophthalmologist, a graduate of National Taiwan University in 1950. He studied Ophthalmology under Prof. YANG Y.F. and was promoted to Associate Professor in 1963 and to Professor in 1974 and he served as the Chairman of the Department of Ophthalmology during 1983-1989. In 1961, he studied at Juntendo University in Tokyo and in 1967-1968 he studied at the Institute of Ophthalmology in London. His main interest was in refraction, contact lens and neuro-ophthalmology, and his publications include "Pesticides and myopia, a working hypothesis, Acta Ophthalmol. Suppl. 185,66:145, 1988, and "fluid exchange under scleral contact lenses in relation to wearing time. Br. J. Ophthalmol. 54, 486, 1971. He retired from the University in 1993 and entitled Professor Emeritus of the University. In recognition of his contribution to the Asia-Pacific Academy of Ophthalmology, the Academy conferred on him the Distinguished Service Award in 1985.(SM)

Ryousai Ko

Ko, Ryousai (1799-1846) Japanese Ophthalmologist in the Edo Era. He learned Dutch and Japanese Medicine and was an expert in Couching. He studied the practice of Dutch Medicine from Philipp Franz von SIEBOLD in Nagasaki during 1823-1829. He performed optic iridectomy of Joseph→Beer, using Beer's knife and iris hook. He practiced in Osaka and trained many Ophthalmologists who contributed to the evolution of modern Ophthalmology in Japan. (SM)

Koeller, Ferdinand (1834-1915) American ophthalmologist, the first physician in Pittsburgh to make a speciality of diseases of the eye. Born in Feldbach, Austria, he received his medical degree at the University of Graz in 1857. He practised then in lower Austria until 1859, when he began to serve in a general medical capacity in the war with Italy. After the war he was for a time Assistant Professor at the University of Graz.In 1865 he migrated to America, settling in Pittsburgh as an ophthalmologist. He soon had a large practice and a wide reputation. American Encyclopedia of Ophthalmology, Vol.9, p. 6865-6866

Kogure, Fumio (1930-) Japanese Ophthalmologist, Professor Emeritus of Dokkyo Medical University. Husband of KOGURE Mitsuko. He was born the son of an eminent Ophthalmologist in Tokyo and graduated from Tokyo Medical University in 1956, studied Ophthalmology in the Graduate School of the University under Prof. KUWAHARA Yasuharu and completed the course in 1962. He received his Doctor of Medical Sciences the same year by submitting a thesis (*Enzymochemical studies on the transplantation corneal heterograft. Report I*. J. Jpn. Ophthalmol. Soc. 64: 1391, 1960; *Report II*. ibid. 65: 1261, 1961; *Report III*. ibid. 66: 155, 1962; *Report IV*. ibid. 66:238, 1962). The series of these works on the cornea were recognized by the Japanese Ophthalmological Society (JOS) and he received the Shimizu Prize of the Society in 1963. He was promoted the Lecturer of the University in 1964 and extended his study for one year in 1967 at the Department of Ophthalmology of University of Strasbourg (under Prof. Jean→Nordmann). He was appointed Professor of Ophthalmology of Dokkyo University in 1978 and was then promoted to be the Chairman of the Department of Ophthalmology in 1990 and

served until his retirement in 1996. He is one of the pioneers of ocular microsurgery in Japan and he published many papers and some examples are as follows: ″*Studies on ocular photoelectric plethysmogram. The changes of dog's ocular and auricular blood flow by occlusion and releasing of vena cava superior*. Jpn. J. Ophthalmol. 15: 109, 1971″, ″*Senile Cataract: survey on cataract patients undergoing cataract surgery*″. *Dev. Ophthalmol*. 17: 38, Karger Basel, 1989 and ″*Survey of visually handicapped persons in Japan*. Arch. Publ. Health 51: 62, 1993″. His professional activities have been extensive and positions he has held are Councillor of the JOS (1975-1997), President of the Japanese Society of Ophthalmic Surgeons (1990-), President of the Japanese Society of Ocular Allergy (1992-), of the Japanese Society of Community and Prevention Ophthalmology (1992-) and Councillor of many National Societies. He is also Executive Councillor of the Japan National Society for the Prevention of Blindness (1993-) and attends the World Assembly of the International Agency for Prevention of Blindness as Japan's representative. He is also a member of the French Ophthalmological Society (1967-) and Councillor of the International Society of Geographical and Epidemiology (1982-1998). He is an Honorary Member of the JOS. He has devoted himself to the International Exchange among Asian Countries, and he has served as the Secretary General for the Japan-Korea Joint Meeting (1982-), Japan-Philippines Joint Meeting (1981-), Japan-Thailand Joint Meeting (1953-) and the Japan-Taiwan Joint Meeting (1994-). Through these activities, he made many friends in South-East Asian Countries, and travelled to Laos, Cambodia, Viet Nam and Thailand to donate intraocular lenses to these countries. He also organized the WHO Intercountry workshop for the prevention of Blindness in 1983 and 1997, for the training of eye-care personnel in the Western Pacific Countries. In recognition of his meritorious service, he received the Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology in 1997 and the Distinguished Service Award from the International Agency for the Prevention of Blindness in 1999.(Japan National Society for the Prevention of Blindness, Trio-Tower North, 4F, 261 Yamabuki-cho, Sinjyuku-ku, Tokyo, 162-0801, Japan. phone: +81-3-5261-1444, fax: +81-3-5261-1321)(SM)

Kogure, Mitsuko (1933-) Japanese female Ophthalmologist, Professor Emeritus of Tokyo Women's Medical University. Wife of KOGURE Fumio. She graduated from Tokyo Women's Medical University in 1957, studied Ophthalmology in the Postgraduate School of Medicine of the University under Prof.→KATO Kinkichi and received her Doctor of Medical Sciences in 1962 (thesis: *Serological studies of experimental uveitis. No.1*. J. Jpn. Ophthalmol. Soc. 66: 207, 1962; *No.2*. ibid. 66: 215, 1962). She was promoted to Assistant Professor in 1974 and to Professor in 1986, and served as the Head of the Department of Ophthalmology from 1992 to retirement in 1998. During her tenure, she has held many key positions of the University and of professional Societies, and they are Board of Trustees of the University Alumni Association (1976-1995), Board of Trustees of the University (1997-1998), Japanese Association of Women Physicians (1985-1991), Vice-Director of the University Hospital (1997-1998), Councillor of the Japanese Ophthalmological Society (1993-1998), of the Japanese Society of Allergy (1972-1995), and Board of Trustees of the Japanese Association of Ocular Inflammation (1998-). Her research interest has been uveitis and she worked as a member of the Behcet's Disease Project of the Ministry of Health and Welfare (1972-1995). Her publications embrace ″*Complements in Behcet's disease*. J. Jpn. Ophthalmol. Soc. 75:1260, 1971″, ″*Electron microscopic studies of the iris of patients with Behcet's disease"*. ibid. 78: 386, 1974 and ″*T-lymphocyte subsets in the peripheral blood of Behcet's disease"*, Jpn. J. Clin. Ophthalmol. 39:,121, 1985.(SM)

Koide, Ryouhei (1946-) Japanese Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Show University. He graduated from Showa University in 1973 and studied at the Postgraduate School of the University at the Department of Pharmacology under Prof.→KAMIJO Kazuya. He completed the course in 1977 and received his Doctor of Medical Sciences (thesis: *Multiplicity and enzymatic properties of MAO in bovine brain, liver and human placenta*. Journal of the Showa Medical Association. 37: 545 1977). He then started Ophthalmology training at the University under Prof. FUKADO Yoshinao in 1978, and was promoted to Lecturer of Ophthalmology in 1980. He was further promoted to Assistant Professor in 1989 and the Professor as

above since 1992. His interested is in ocular traumatology, cataract, ocular surgery etc. and some examples of his many publications are *"Analysis of ocular motility disturbance in blowout fracture, using MRI motion pictures"*. Jpn. J. Clin. Ophthalmol. 46: 251, 1992" and *"Prognosis of orbital basis fracture, studies of 200 cases"*. Jpn. J. Clin. Ophthalmol. 49:1997. He serves as a Councillor to the Japanese Ophthalmological Society, Japanese Society of Cataract Research, Japanese Society of Traumatology and Japanese Society of Ocular Pharmacology. He is also a member of the Association for Research in Vision and Ophthalmology (ARVO).(Department of Ophthalmology, Showa University, 1-5-8, Hatanodai, Shinagawa-ku, Tokyo 142-8666, Japan. phone: +81-3-3784-8553, fax: +81-3-3784-5048, e-mail: koide@med.showa-u.ac.jp)(SM)

Koku Kojima

Kojima, Koku (1905-1981) Japanese Ophthalmologist, Professor Emeritus of Nagoya University. He graduated from Nagoya University in 1930, studied Ophthalmology under Prof. CH.→OGUCHI, and received his Doctor of Medical Science from Nagoya University in 1934. He was appointed Professor and Chairman of the Department of Ophthalmology of Nagoya University in 1950 and stayed in this position until his retirement in 1969. During his tenure he served as the Director of the University Hospital in 1965-68, as the President of the 71st Congress of the Japanese Ophthalmological Society in 1967. He carried out extensive studies of Diabetic Retinopathy and the results were summarized in his special lecture " Studies of Diabetic Retinopathy" at the 70th Congress of the Society in 1966. After his retirement from Nagoya University, he received the title Professor Emeritus of the University and was invited to be Professor of Ophthalmology of the Fujita Health University. In recognition of his distinguished services, the Government conferred on him the Second Order of the Sacred Treasures in 1976.(SM)

Koller, Carl (1857-1944) American ophthalmologist born in Bohemia. He studied medicine in Vienna where he presented his thesis in 1882. He then worked as an assistant in general medicine and also at the Laboratory of general and experimental Pathology of Prof. Salomon Stricker. In summer 1884, Sigmund Freud asked him to take part in the experiments of the effects of cocaine on the nervous system. Having experienced its effects on the nerve terminals, Koller prepared a cocaine solution and tested its effect on the eye of rabbits and dogs. He published the effects of cocaine solution as surface anaesthesia of the eye in 1884 (*Vorläufige Mittheilung über locale Anästhesirung am Auge*. Ber. Ophthalmol. Ges. Heidelberg 16: 60-63, 1884). Thus, Koller is the *pioneer* of Ophthalmic anesthesia, and opened a new era in Ophthalmic Surgery. Sigmund Freud recognized Koller's priority in his paper of 1885: Freud, Sigmund: *Beitrag zur Kenntnis der Cocawirkung.* Wiener Medizinsche Wochenschrift 35, 1885, 129-133 . Koller left Vienna in 1885, and studied Ophthalmology in Utrecht under Prof. Snellen for 2 years. He then moved to the United States and settled in New York. He wrote the story of the discovery of cocain in 1928: Koller, Karl: *Historische Notiz, über die ersten Anfänge der Lokalen Anaesthesie.* Wiener Medizinische Wochenschrift 78, 1928 , 601-602. (BJO 1944; 28: 316 & Robert→Heitz) SM

Jujiro Komoto

Komoto, Jujiro (1859-1938) The first Professor of Ophthalmology in Japan, and Professor Emeritus of Tokyo Imperial University. He graduated from Tokyo University in 1883, and studied Surgery under J.→SCRIBA. When Dr. K.→UME, the Head of the Eye Clinic died in 1885, the Government was urgently in need of an Ophthalmology Professor and requested Dr. Komoto to study Ophthalmology in Germany. He left Tokyo in 1886 and went to Freiburg (W.→Manz), Wuerzburg (C.→Hess), Berlin (C. →Schweigger. J.→Hirschberg), Vienna and also to London, and he came home in 1889. In June of that year he was appointed the Professor of Ophthalmology of the Imperial University (There was only one University in Japan). Soon after his appointment, the University established departments, and he was made the Chairman of the Department of Ophthalmology. The University acquired the authority of granting Doctor Degrees for those with outstanding scientific contributions and Prof. KOMOTO was the first to receive Doctor of Medical Sciences in 1891. Prof. KOMOTO taught Ophthalmology at the University for the University graduates, but he also established a One-Year Postgraduate Course and opened it to graduates of other medical schools. This postgraduate course lasted from 1888 to 1924, and more than several hundred Ophthalmologists studied here and dispersed throughout the country. Prof. KOMOTO also had his private Komoto Eye Hospital in Tokyo, and he

accepted many assistants at the Hospital. Consequently, ophthalmologists of early times in Japan studied almost without exception under Prof. Komoto and the number of his students exceeded 1,000. Therefore, Prof. KOMOTO is regarded as the father of Ophthalmology in Japan. In 1896, Drs. Y.→OHNISHI, G.→KAWAKAMI and T.→SUDA and 14 other Ophthalmologist conferred and came to a conclusion that the Ophthalmological Society similar to that of Heidelberg was needed for the development of this profession in Japan. They then persuaded Prof. Komoto to become the President of the new Society, thus, the First Congress of the Japanese Ophthalmological Society was held in February 1897, and the Society was created with 550 founding members . Prof. KOMOTO stayed as the President of the Society until 1925. He has many publications both in the Japanese and German Languages. KOMOTO *Textbook of Ophthalmology* was perhaps the first most comprehensive textbook and was read widely throughout the Country. Since trachoma was the disease with serious attention from an hygienic point of view, he organized a teaching course for the diagnosis and treatment of this disease. He taught not only in Tokyo, but traveled throughout the Country speaking about this blinding disease. Prof. KOMOTO was a good inventor and he developed in 1891 the *Komoto Ophthalmoscope* which was very convenient and was used until the 1960s, he also made instruments for scotometry, and many surgical instruments such as fixation forceps and the *Komoto speculum*. He was a great surgeon and was very good at teaching. In 1892, Prof. J. Hirschberg visited Japan and Prof. J. KOMOTO and Dr. T.→INOUYE were the gracious hosts; Prof. J. Hirschberg wrote his experience in his book " *Um die Erde*". In 1922, Prof. Ernst→Fuchs visited Japan and Prof. KOMOTO was the gracious host and Fuchs was impressed by the warm welcome at various cities in Japan. Toward the end of 1921, a letter came to Prof. KOMOTO from Prof. J. HIRSCHBERG, asking Komoto if he can purchase the voluminous Library that Hirschberg collected to write the *History of Ophthalmology*. Hirschberg was having a hard time after the World War I and wanted to sell his treasure to his good friend KOMOTO for 40,000 yen. Prof. KOMOTO decided to buy his Library and remitted money in 4 parts: unfortunately Hirschberg passed away when the last payment arrived. Therefore Prof. KOMOTO sent the money by telegram and completed the payment. Prof. S. KAGOSHIMA was in Europe and he met Prof. HIRSCHBERG and packed the voluminous Library and shipped it from Hamburg. The Great Earthquake that occurred in September 1923 destroying a large part of the city of Tokyo, but the arrival of Hirschberg Library was delayed and the Library survived the Great Earthquake. The Library was classified in order and a New Catalogue was completed in 1935. The Library is now named "KOMOTO LIBRARY" and is maintained by the Central Library of Tokyo University. (The detailed story of the transfer of this Hirschberg Library to Tokyo was described by KIRISAWA Naganori: "*The Komoto Library (formerly the Hirschberg Library),* Jpn. J. Ophthalmol. 21: 528, 1977". Prof. KOMOTO stayed as Professor of Tokyo University for 33 years, he retired in 1922 and was given the title Professor Emeritus of Tokyo University. He then served as the President of the Tokyo Ophthalmologists Association. In recognition of his great service, the Government conferred upon him the First Order of the Sacred Treasures.(SM)

Komoto, Michiji (1932-) Japanese Ophthalmologist, Professor Emeritus of Toho University. He graduated from Keio University in 1958, studied Ophthalmology at the University under Prof. UEMURA Misao and Prof. KUWAHARA Yasuharu. He submitted a thesis (*Studies of pentose oxidative phosphorylation in the cornea, No. 1*. J. Jpn. Ophthalmol. Soc. 69: 771, 1965; *No. 2*. ibid. 70: 124, 1966) to Keio University and received his Doctor of Medical Sciences in 1966. He served as the Professor and Chairman of the Department of Ophthalmology of Toho University from 1982 to retirement in 1997. He served as a Councillor to the Japanese Ophthalmological Society (JOS), Japanese Society for Cataract Research and as Secretary to the Japan Lens Research Association. He worked extensively on the lens, aqueous humor dynamics, biochemistry of the eye, and he delivered a special lecture "*Studies of aqueous humor dynamics*" at 59th Congress of the Toho Medical Association (1972) and "*Aging changes of the crystalline lens*" at the 8th Congress of Kanto Ophthalmological Society (1991). His publications include "*Studies of aqueous humor dynamics – effects of drugs*. Toho Journal of Medicine: 20: 13, 1973" and "*Cataract and acid-base equilibrium in the aqueous humor*. J. Jpn. Ophthalmol. Soc. 77: 165, 1973".(SM)

Kondo, Takehisa (1938-) Japanese Ophthalmologist, Head of the Department of Ophthalmology, Kobe Central City Hospital. He graduated from Tokyo Medical University in 1963, and studied Ophthalmology at Kyoto University under Prof. ASAYAMA Ryoji, and received his Doctor of Medicine in 1975 (thesis: *Morphological studies of regeneration of the corneal nerves*. J. Jpn. Ophthalmol. Soc. No. 1. 76: 1176, 1972; No.2. ibid. 77:66, 1973, No. 3. ibid. 77:428, 1973). He has been in the present position since 1975, and conjointly serves as a Visiting Clinical Professor to Kyoto University (1977-) and Kobe University (1998-). He works on glaucoma and aqueous humor circulation, and is a Councillor of the Japan Glaucoma Society and is the President of the 11th Congress of the Society. Some examples of his publications are "*Measurement method of the anterior chamber volume by image analysis*. Br. J. Ophthalmol.70: 668,1986", "*A method of measuring pupil-blocking force I the human eye*. v. Graefe's Arch. Clin. exp. Ophthalmol. 225: 361, 1987" and "*Ultrasound biomicroscopic findings in humans with shallow anterior chamber and increased intraocular pressure after the prone provocation test*. Am. J. Ophthalmol. 124: 632, 1997". (Department of Ophthalmology, Kobe City Central Hospital. Minato-shima Naka-machi 4-6, Chuo-ku, Kobe, 650-0046, Japan. phone: +81-7-8302-4321, e-mail: rf3t@asahi-net.or.jp)(SM)

Kondoh, Hisato (1949-) Japanese Molecular Biologist, Professor of Molecular and Developmental Biology, Director of the Institute for Molecular and Cellular Biology of Osaka University. He graduated from Kyoto University in 1971 with B.Sc. and studied in the Postgraduate School of Science of the University under Prof. OZEKI Haruo. He submitted the thesis (*Molecular genetics of flagellar morphogenesis in E. coli*) and received his Ph.D. in 1976. During 1976 and 1978, he conducted research as a Postdoctoral Fellow at University of Wisconsin-Madison (U.S.A.) under Prof.Julius ADLER (subject: *Genetic and biochemical mechanisms of bacterial chemotaxis*). He was then appointed the Assistant Professor to Prof. OKADADA Tokindo at Kyoto University and studied the mechanism of crystalline gene regulation. He served as the Professor of Molecular and Developmental Biology of Nagoya University (1988-1993). Since 1992 he has been the Professor of Osaka University and serves as the Director of the Institute as above since 1998. His research in the field of Vision Science was initiated by the investigation of the phenomenon of transdifferentiation of retinal tissue into Lens (*Transdifferentiation of putative neuronal cells of neural retina into lens: a demonstration by chick-quail chimeric cultures*. Roux's Arch. Dev. Bio. 192:256, 1983). Subsequently, he succeeded in the cloning of chicken delta crystalline gene with his colleagues. Utilizing the cloned crystalline gene, he started his major research on the mechanism of tissue-specific gene regulation (*Tissue specific expression of a cloned chick d-crystalline gene in mouse cells*. Nature 301:440, 1983). This is the *first* report published almost at the same time showing that cloned genes are regulated correctly with their own specificities in gene-transferred cells. Taking advantage of these experimental systems, he identified the enhancer located in the third intron which defines the lens-specificity of the delta-crystalline gene expression (*Lens-specific enhancer in the third intron regulates expression of the chicken d-crystalline gene*. Genes Dev. 1: 818, 1987). He further identified transcription factors responsible for differentiation of lens cells, i.e. a group of highly similar proteins, SOX1, SOX2 and SOX3. He confirmed that SOX2/3 expression is induced by contact of retina primordium to the ectoderm, and this expression of SOX2/3 then activates crystalline expression and lens differentiation (*Involvement of SOX 1, 2 and 3 in the early and subsequent molecular events of lens induction*. Development 125: 1521, 1998). On the basis of these discoveries, he is further promoting research projects to elucidate the molecular mechanism of lens-specific gene regulation and of lens cell differentiation (*Transcription factors for lens development assessed in vivo*. Curr. Opin. Genet. Dev. 9: 301, 1999) (Institute for Molecular and Cellular Biology, Osaka University, 1-3 Yamadaoka, Suita, Osaka 565-0871, Japan. phone: +81-6-6879-7963, fax: +81-6-6877-1738, e-mail: j61056@center.osaka-u.ac.jp)(SM)

Königshöfer, Oskar (1852-1911) German ophthalmologist, founder of the "Charlotten Heilanstalt für Augenkranke, " at Stuttgart, and for many years editor of *Die Ophthalmologische* Klinik. He was Director of the Charlotten Heilanstalt for twenty eight years, was for a long time Professor of Veterinary Ophthalmology at Stuttgart.American Encyclopedia of Ophthalmology, Vol.9, p. 6866. The Ophthalmoscope, 1911,p.466.

Königstein, Leopold (1850-1924) Austrian ophthalmologist. Königstein was born at Bzenec, Czechoslovakia. He received his M.D. in 1873 at the University of Vienna, where he studied under →Arlt, →Jaeger, →Stellwag, and →Brücke. Königstein was lecturer from 1881 to 1900 and became professor of ophthalmology in 1900. His writings deal with anatomical, physiological and clinical aspects of ophthalmology. Königstein was particularly interested in the physiology and pathology of the lens. He wrote: *Die Behandlung der häufigsten und wichtigsten Augenkrankheiten*. (4 small volumes) Wien 1889-1893.*Die Anomalien der der Refraktion und Accommodation* Wien 1883, 2nd.edition 1895 in Russian; *Praktische Anleitung zum Gebrauche des Augenspiegels* Wien 1889; Albert.Fischer.

Reisaku Kono

Kono, Reisaku (1915-1985) Japanese Virologist, Emeritus Member of the National Institute of Health Japan (N.I.H.Japan), Grandson of KONO Tasuku. He discovered the new Enterovirus Type 70 that causes Acute Hemorrhagic Conjunctivitis. He graduated from Tokyo University in 1940 and worked at the Institute of Infectious Diseases of Tokyo University until 1952. From July of that year to September 1953, he studied at the Johns Hopkins University, as a Fellow of Rockefeller Institute, and received the degree, Master of Public Health (M.P.H.). He was invited in 1958 to be the Professor of Kyoto University, Director of the Immunological Department of the Institute of Virus Research: during his tenure he served as the Director of the Institute (1961-1963). He left the University in 1963 to take the position of the Director, Central Virus Diagnostic Laboratories of the N.I.H. Japan and served until retirement in 1981. He served as the key person of many important projects or committees during his tenure. They were Short-term Consultant to the West Pacific Regional Office of WHO (1966), Short-term Consultant of the South-East Asia Regional Office of WHO (1974), Chairman of the SMON Research Committee of the Ministry of Health and Welfare, Member (1971-1976) and Chairman (1977-1981) of the Japan-US Cooperative Science Program Panel of Viral Diseases, Chairman of SMON Research Project of the Ministry of Health and Welfare (1972-1974), Chairman of Pathogen Division of the Project (1974-1979) and Consultant to the Project (1980-1985). He also served as the Chairman of the Conference on Clinical Potentials of Interferons in Viral Diseases and Malignant Tumors in 1980. Among many professional activities, he served as the President of the Japanese Society of Virology (1970), Executive Director of the Society (1971-1975), President of the Japanese Society of Clinical Virology (1963), Executive Director of the Society (1964-1982) and the Councillor of the Japanese Society of Infectious Diseases (1963-1984). He discovered new Enterovirus Type 70 as being the cause of Acute Hemorrhagic Conjunctivitis in 1972 (Pandemic of new type of conjunctivitis. Lancet 1: 1191, 1972, and The etiologic agent of pandemic acute haemorrhagic conjunctivitis. Bull. W.H.O.49: 341, 1973). He was a member of American Society of Microbiology (1978-1984). In recognition of his outstanding contributions, the Noguchi Hideyo Foundation granted him the 21st Noguchi Medical Award in 1977. After retirement from the National Institute, he served as the Professor at Saitama Medical College until his death.(SM)

Tasuku Kono

Kono, Tasuku (1855-1932) Japanese Ophthalmologist, a graduate of Tokyo University in 1881, studied Ophthalmology from I.→INOUYE, T. SUDA, J.→SCRIBA and K.UME, and he was appointed Assistant Professor of Tokyo University in 1883 and worked as Chairman of the Eye Clinic of Tokyo University until 1889. Thereafter he was made Chairman of the Eye Clinic of the Second Hospital of Tokyo University and was promoted to be Professor of Ophthalmology in 1902. He retired from the University in 1905 and practiced in Tokyo. He was elected to be the first President of Tokyo Ophthalmologist's Association in 1914. Kohno's *Textbook of Ophthalmology* was widely used in the early period of modern Ophthalmology in Japan.(SM)

Konyama, Kazuichi (1928-) Japanese Ophthalmologist, Member of the WHO Prevention of Blindness Programmes Advisory Group, and Expert Panel for the Control of Trachoma, Associate Professor of Ophthalmology of Juntendo University, Tokyo and Visiting Professor to the Department of Ophthalmology, Ramathibodi Hospital, Mahidol University, Bangkok. He graduated from the Faculty of Medicine and Siriraj Hospital of Mahidol University in 1955 with a MD degree, and studied Ophthalmology at Juntendo University under Prof. SATO Tsutomu and received his Doctor of Medical Sciences in 1960. He extended his study on Public Health at the School of Hygiene and Public Health

of Johns Hopkins University and received his Master Degree in 1982. He has a National License to practice Medicine both in Japan and Thailand. He has made a brilliant career in promotion of the Blindness Prevention Programmes of WHO and also on bilateral co-operative basis of Countries, and he has covered all Asian and the Western Pacific Countries in his activities in the area of blindness prevention and eye care system development. The works he has been engaged on are Colombo Plan Expert of JICA(Jpn. Government) to Buriram Province, Thailand (1966-1969), to Mahidol University (1969-1974), Advisor to the Ministry of Public Health of Thailand for the preparation of National programmes for the Prevention of Blindness and Control of Visual Impairment (PBCVI) (1978-1979), and continues to serve as a senior adviser on the Central Co-ordination Council to the national programmes. He also served as the short-term Consultant WHO/SEARO to assess for the first time the Indian National Plan of PBCVI (1978-1979) with similar missions to Bangladesh (1979), to Member States (WHO) of America, the Western Pacific and the Southeast Asia (1980-1981), Consultant to the National Rehabilitation Centre Japan (1979-1983), and served as a Staff Member of WHO Headquarters (1981-1988) in the Programmes for the Prevention of Blindness. In this period he promoted blindness prevention based on a Primary Health Care Strategy and Primary Eye Care approach. Assisted many Member States in the two Regions, launching national plans for the prevention of blindness and eye health promotion. Currently, besides his teaching duty at Juntendo and Mahidol University, he works as short-term Consultant and Advisor for the Governmental Programmes of the PBCVI in the WHO Regions of the Southeast Asia and the Western Pacific. He covers Thailand, China, Korea, Philippines, Malaysia, Viet Nam, Laos, Cambodia, the South Pacific Islands and Mongolia. He has organised many courses for Project Leaders of PBCVI in conjunction with WHO, the Japan National Society for the Prevention of Blindness and the Lions International Sight First project. In recognition of the outstanding success of his devoted service, he has received many Awards, e.g. Rear Admiral Medal from the Government of Thailand (1978), Ohyama Health Award (1978), Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology (1981), The Plate Award from the International Agency for Prevention of Blindness (1994), The Jewelled Badge from the Royal Society for the Welfare for Visually Handicapped, Thailand (1997), The Plate Award, Ministry of Health, Thailand(1997), The Red Star Badge of the Red Cross of Viet Nam (1997) and The International Prevention of Blindness Award from the American Academy of Ophthalmology (1997). (Department of Ophthalmology, Juntendo University, 3-1-3 Hongo, Bunkyo-ku, Tokyo 113-0033, phone:+81-3-5802-1092, fax: +81-3-3817-0260, e-mail: juntenop@iris.dti.ne.jp)(SM)

Koo, Bon Sool (1925-) Korean Ophthalmologist, Professor Emeritus of Choong Ang University, Seoul, and President of the Korea Foundation for Prevention of Blindness. He graduated from Seoul National University in 1948 and received Ophthalmology training at the University. He also worked at the Letterman Army General Hospital San Francisco, U.S.A. in 1956. He was appointed the Professor of Ophthalmology of the Catholic Medical College Seoul in 1967 and then from 1971 to 1990 as the Professor of Ophthalmology of Choong Ang University. He continued to serve as the Professor of Ophthalmology of Inha University Hospital and since 1992 he is the Director of Ophthalmology Department of Sung-Ae Hospital Seoul. His main interest has been in Eye Pathology and Public Health Ophthalmology. He organized many Seminars and Workshops in Korea since 1963 on the Eye Care of the Public, Eye Care for school children, for elderly and for low vision. He worked as WHO consultant for many years. He served as the President of the Korean Ophthalmological Society in 1972 and also of the First Korea-Japan Joint Meeting of Ophthalmology in 1982. Since 1997 he has served as the President of Korea Foundation for Prevention of Blindness. He is a recipient of many awards, e.g. National merit of Civic Service (1977) and Distinguished Service Award of the Asia-Pacific Academy of Ophthalmology. He delivered an honored lecture, i.e. Holmes Lecture of the Academy in 1989. His many articles include ″ *Behcet's disease – Ocular pathology*. Survey Ophthalmol.12: 324, 1967″ and ″*Survey of causes of blindness in Korea*. J. Korea Ophthalmol. Soc. 14:86, 1973″. (Department of Ophthalmology, Sung Ae Hospital, 451-5 Sinkil 1-Don, Yongdungpo-Ku, Seoul, Korea 150-051, Phone: 82-2-840-7251, Fax: 82-2-840-7252, e-mail: eyecare@thrunet.com)(SM)

Kopff, Albert (? - 1908) French ophthalmologist.He was formerly director of the eye clinic under →Xavier Galezowski and a foundation member of the Paris Ophthalmological Society. He was ophthalmologist at the St.Joseph hospital in Paris.

Kortum, Karl Georg Theodor (1765-1847) German ophthalmologist born in Dortmund, Westfalia, Germany. Kortum received his M.D. in 1785 at Göttingen with the thesis *Dissertationem inauguralem de apoplexia nervosapublice tuebitur auctor C.G.T.K* Goettingae 1785 , and served as district physician at Stolberg, near Aachen, for most of his life. He wrote a number of articles and books on general surgical and medical topics, and one on ophthalmology: *Medicinisch-chirurgisches Handbuch der Augenkrankheiten*.(2 vols.) Lemgo 1791-1793.*Abhandlung von den Scrofeln* (2 vols.) 1793. *Handbuch der praktischen Arztneiwissenschaft* Göttingen 1796; *De apoplexia Nervosa* in C.F. Ludwig *Scriptores Neurologici* , vol.4, 1791 and countless papers in *Hufeland´s Journal* between 1797and 1826. Albert.Hirsch.BMC. American Encyclopedia of Ophthalmology, Vol.9, p. 6867.

Kosaki, H. *see* **Kozaki Hiroshi**

Yosizo Koyanagi

Koyanagi, Yosizo (1880-1954) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Kyoto University in 1908, and studied Ophthalmology under Prof. I. →ASAYAMA. He studied in Europe during 1917-1918. On his homecoming he was appointed the first Professor of Ophthalmology and the Department Chairman of Tohoku University. He served in this position for 25 years and retired in 1942. His main interest was ocular pathology, and was named one of the Symposists at the 15th International Congress of Ophthalmology in Cairo 1940 and gave a lecture "*Studies of histopathology of retina in hypertension*". He served as the President of the 43rd Congress of the Japanese Ophthalmological Society in 1939 and delivered a special lecture "*The eye and hypertension*" at the 46th Congress in 1942. He reported a rare case of "*uveitis with whitening and loss of hairs*" in 1914 and he further compiled similar cases and published "*Dysakusis, Alopecia und Poliosis bei schwerer Uveitis nicht traumatischen Ursprungs*" in Klin, Mbl. Augenheilkd. 82. Since Alfred Vogt reported a similar case in 1906, that was included in 10 cases of Koyanagi, this disease has been called *Vogt-Koyanagi* disease. Today, this disease and Harada's disease are regarded as the same disease with the expression of inflammatory changes in the anterior segment of the eye in Vogt-Koyanagi's disease and in the posterior segment of the eye in Harada's disease. These diseases as a whole are now called "Vogt-Koyanagi-Harada Disease". In recognition of his outstanding contribution, the Government conferred on him the posthumous Decoration of the Second Order of the Sacred Treasures.(SM)

Koyle, Frank Harcourt (1865-1911) Canadian-American ophthalmologist. Born at Athens, Canada, he received his medical degree at Queen's University, Kingston, Ontario. For a time he engaged in general practice at Lowell, Mass., but after a considerable period of study of the eye, ear, nose and throat in the New York hospitals, he settled as ophthalmologist and oto-laryngologist at Brockville, Ont. In 1894, however, he moved to Hornell, N. Y. American Encyclopedia of Ophthalmology, Vol.9, p. 6867-6867

Hiroshi Kozaki

Kozaki (Kosaki) Hiroshi (1926-1994) Japanese Ophthalmologist, a graduate of Osaka University in 1951, studied Ophthalmology under Prof. Y.→UYAMA and was granted his Doctor of Medical Sciences by his thesis "*Metabolism of electrolytes in glaucoma patients*". He was promoted to be the Associate Professor of Ophthalmology in 1966, but soon he moved to the Head of the Eye Clinic of Osaka Kosei-Nenkin Hospital. Two years later he started to practice as the Director of the Kozaki Eye Hospital that his father (KOZAKI Seiichi: Professor of Ophthalmology at Osaka Medical College) founded. His academic activities involved Ophthalmic Microsurgery, Glaucoma research and Intraocular Lens Implantation. He was one of the founders of the Japanese Society of Ophthalmic Surgeons and the Japan Glaucoma Society. He delivered a special lecture "*Basic principles of surgery – as viewed from history of my surgery experience*" at the 13th Congress of the Society and he was awarded the Suda Award at the First Congress of the Japan Glaucoma Society with the award lecture" *Enchanted with the visual field of glaucoma*". He proposed the Kozaki Classification of Glaucoma visual field on the basis of his long experience with the Goldmann Perimeter, and Kozaki's Classification was used as the standard classification to describe the severity of glaucomatous visual field deterioration,

before the time when the computer assisted retinal sensitivity test became popular.(SM)

Kozaki, Masaru (1929-) Japanese Ophthalmologist, Director of the Kozaki Eye Clinic, Osaka. He was born as the 3rd generation in an Ophthalmology Family, younger brother of →KOZAKI Hiroshi . He graduated from Osaka Medical University in 1953, studied Ophthalmology at the University under Prof.→MAKIUCHI Shoichi and received his Doctor of Medical Sciences in 1959 (thesis: *A study of the influence of amino acids and their amines on the metabolism of the Retina*. J. Jpn. Ophthalmol. Soc. 62: 970, 1958). He served as the Lecturer of the University (1961-1964) and the Head of the Department of Ophthalmology of the Children's Medical Center of Osaka City (1965-1986): during his tenure he served as the Director of the Center (1981-1986). He is a leading expert in the field of pediatric Ophthalmology and Child Health. He is one of the Founders of the Japanese Society of Pediatric Ophthalmology (President 1980) and Japanese Society of Strabismus and Amblyopia (Board of Trustees, 1961-). He also founded the Society of Education of Visually Handicapped in 1962 and served as the Vice-President (1962-1986). He has served the Japanese Ophthalmological Society as a Councillor (1973-), as Board of Trustees to the Japanese Society of the Japan Contact Lens Society (1972-) and to the Japanese Society of Ophthalmological Optics (1980-). Some examples of his publications are "*Vision screening of the three-year old children"*. Jpn. J. Ophthalmol.17: 60-68, 1973 and "*School physical examination and mass ophthalmic screening"* Acta Pediatr. Jpn. 27: 385-391, 1985.He is an Honorary Member of these Professional Societies. In recognition of his meritorious service for child health and visually handicapped, he received the Osaka Mayor's Prize in 1968 (for screening of metabolic anomalies of sulfated amino-acids), the First Ohyama Prize (For education of visually handicapped) in 1980, the 7th Takeo Iwahashi Prize from the World Council for the Welfare of the Blind (WCWB) in 1980 and the Hakuho Prize from the Minister of Education in 1985. (Kozaki Eye Clinic. Acty Osaka, 17F, 3-1- Umeda, Kita-ku , Osaka 530-0001, Japan. phone: +81-6-6354-2174, fax: +81-6-6345-2168).(SM)

Kraemer, Adolf (1864-1911) Swiss oculist of Switzerland and California, author of a volume of the Graefe-Saemisch *Handbuch der ges.Augeinheilkunde* (2nd ed.) entitled "*Animal Parasites of the Eye*." Born at Giessen, Germany, he received the degree of Doctor of Philosophy at Basle, Switzerland, in 1892, his dissertation being "*Parasites of Fresh Water Fishes*." 'The degree of Doctor in Medicine he received at Zürich in 1894, on which occasion his dissertation was "*Spinal Meningitis*." For the next six months he studied gynecology with Pozzi of Paris. Soon, however, he turned to ophthalmology, which he found more to his liking. For a time he was assistant in ophthalmology at the University Clinic at Basle, and afterwards, for a somewhat longer period, at Zürich. Then he practised for a number of years at Heiden, a Swiss watering-place. While there, he contributed numerous ophthalmologic articles to various German, French and English journals. From Heiden he moved to San Diego, California, U. S. A., where he practised from 1902 until the end of his life. His chief recreation was botanizing. He collected a fine herbarium of Southern California, which he presented to the University of Basle. American Encyclopedia of Ophthalmology, Vol.9, p. 6868-6869.

Kranichfeld, Friedrich Wilhelm Georg (1789-1850) German physician, of slight ophthalmologic importance. Born at Hohenfeld, Thuringia, he began to practise in Vienna about 1816, and, from 1818 till 1821 was physician to the Austrian embassy at Constantinople. In 1822 he became extraordinary professor in Berlin, and four years later established an "Ophthalmo-Policlinical Private Institute" in the University building. In 1831 he became ophthalmic physician to the city poor. In 1834 he founded the "*Hygiocomium*", a private clinic. He was a very eccentric man, full of crotchets and whimsical ideas. He attempted for a time to establish a new sort of religion which he himself had thought out. In 1868 he resigned his professorship, disappeared and nothing further is known concerning his life. Aside from numerous writings of a general medical character, he wrote: 1.*Anthropologische Übersicht der gesamten Ophthalmiatrie nebst einer anthropoligischen Zusammenstellung der Augenkrankheiten* (1841). 2. *Conspectus Publicus Morborum Ophthalmicorum qui. . . Instituto Policlinico Ophthalm.-Privato suo...ab a. 1830 Usque ad a. 1842 Tractati et Sanati, etc.* (1842).American Encyclopedia of Ophthalmology, Vol.9, p. 6869-6870.Albert.Hirsch.BMC.

Krause Arlington C. (1896-1980) American ophthalmologist born in Chicago. He earned his B.A. at Lawrence College (1918), and his M.A. (1921) and Ph.D. (1923) in chemistry at the University of Wisconsin. In 1928, he received an M.D. from Yale University. Because of his doctorates in chemistry and medicine, he was able to contribute to our knowledge of the chemistry of various portions of' the eye. He was an assistant instructor at the University of Wisconsin from 1919 until 1923. After moving to Yale University, he was an instructor and a research assistant in surgery front 1925 until 1928. He then became an instructor at Johns Hopkins University in ophthalmology from 1929 until 1935 . At the University of Chicago he began as an assistant professor in 1935 and became the Chairman of the Department of Ophthalmology before he left the university in 1956. He then went to the Veterans Administration Hospital in Memphis, Tennessee, as chief of the Department of Ophthalmology from 1956 until 1966. Krause wrote 95 articles, one monograph, and one book. His book, ″*The Biochemistry of the Eye*,″ was published by the Johns Hopkins Press in 1934. By 1945 he had written more than 50 articles on the chemistry of the eye. He then became interested in congenital malformations and wrote extensively on retrolental fibroplasia. He was involved in extensive research to find its cause. In 1946, Krause wrote his classic paper on congenital encephalo-ophthalmic dysplasia. sometimes called ″the Krause syndrome.″ AJO 1980,91:413-414.Arch Ophthalmol 1981,99:500

Krause, Karl Friedrich Theodor (1797-1868) German anatomist, internist, medical official and ophthalmologist *[Not to be confounded with his son, Wilhelm Krause, of Göttingen, who has also rendered lasting services to ophthalmology].whose name has been perpetuated in the acinous glands of the conjunctiva (discovered by him) and who also discovered the layer of ganglion cells of the retina, of the nerve cells of the *orbiculits cilinris,* and of the distinction between the supraorbital and frontal foramina on the *margo supra-orbitalis.* Born in Hanover, he studied at first in his town and was for a time a military surgeon. Released from active service, he entered Göttingen University, where he received the degree of M.D. in 1818. In 1820 he settled in Hanover as general practitioner. Here he soon became Professor of Anatomy and, in 1852, Director of the Upper Medical College. He was a remarkably able lecturer and writer. Krause's chief ophthalmologic writing is ″ *Einige Bemerkungen über die Gestalt und die Dimensionen des Menschlichen Auges*″ (*Meckel's Archiv,* 1832; *Poggendorf's Annalen der Physik,* Vol. XXXVI, XXXIX, 1833, 1836).American Encyclopedia of Ophthalmology, Vol.9, p. 6870

Krause, Wilhelm (1833-1910) German anatomist. Krause was born in Hannover, Germany. He received his M.D. at Göttingen in 1854. Later, in 1860 he became there professor of anatomy. He directed from 1892 the laboratory at the Berlin Anatomical Institute. Krause published extensively in the fields of general anatomy, neuroanatomy, and anatomy of the eye. About the eye, he wrote: *Die Brechungsindices der durchsichtigen Medien des menschlichen Auges* Hannover 1855; *Die Membrana Fenestrata der Retina* Leipzig 1868. Albert.Hirsch.

Kries, Johannes Adolf von (1853-1928) German physiologist, born near Grudziadz, Poland. Kries received his M.D. in 1876 at Leipzig University after having visited the universities of Halle and Zurich. After several years of study under Hermann v.→Helmholtz and Carl Ludwig, he became professor of physiology at Freiburg in 1880. Kries wrote: *Die Gesichts-empfindungen und ihre Analyse*. Leipzig 1882. *Studien zur Pulslehre* Freiburg 1892; *Über die materiellen Grundlagen der Bewußtseinerscheinungen* Tübingen 1901.Albert.Fischer.

Krill, Alex Eugene (1928-1972) American ophthalmologist, director of clinical research at the University of Chicago Pritzker School of Medicine, killed in the crash of a jet plane as it approached Midway Airport in Chicago, December 8, 1972. He was returning to Chicago after lecturing at the National Eye Institute, Bethesda, on the natural history of fundus flavimaculatus. He was born in Cleveland, Ohio, and attended the public schools there. He graduated in 1950 from Western Reserve University with a Bachelor of Science degree with a major in mathematics. He was a member of Phi Beta Kappa. He graduated in 1954 from Ohio State Medical School where he was a member of the honorary fraternity, Alpha Omega Alpha. He interned at Philadelphia General Hospital, and wrote the music for the annual house staff show. He served in the United States Navy as a

Krill´s famous book, of which, due to his premature death, only volume 1 was published.

physician on a troop transport from 1956 to 1958. He retired as a Lieutenant Commander from the U.S. Navy Reserve in 1963. Krill was a resident in ophthalmology at the Illinois Eye and Ear Infirmary in 1959-61. Following this, he was a special trainee of the United States Public Health Service, and divided his time between the University of Illinois and the University of Michigan. His interests were significantly influenced bv Professors William F. Hughes and Peter C.→Kronfeld at the University of Illinois. Professors Harold F. Falls and Matthew Alpern at the University of Michigan kindled his interest in genetic diseases of the eye and their evaluation by means of electrophysiologic quantification of retina function. He joined the faculty at the University Chicago as assistant professor and director of clinical research in 1961, Here, he established a retinal function testing laboratory, and emphasized the significance of the retinal pigment epithelium in a variety of fundus anomalies. His interest in ophthalmoscopy was heightened by his association with Professor Bertha A.→Klien (University Chicago) and they collaborated in the description of the histologic and histochemical characteristics of fundus flavimaculatus in 1965. Though Dr. Klien had been professor emeritus since 1963, she attended the monday afternoon retinal session, in which Dr.Krill reviewed the patients seen the previous week, their retinal function studies and outlined the management. In addition to seeing much hereditary diseases of the retina and choroid, Dr. Krill managed a large clinical practice. He began the use of the laser in photocoagulation in 1962, but returned to the xenon photocoagulation until 1970. He followed many patients with presumed histoplasmosis and early recognized new blood vessels extending from the choriocapillaris through the retinal pigment epithelium. He observed regression of new blood vessels in diabetic retinopathy after photocoagulation. Krill received the Academy´s Honor Medal in 1968. He received the Section of Ophthalmology of the American Medical Associatlon certificate of merit for the most meritorious paper presented before the Section in 1970 for the description of treatment of macular edema in branch vein occlusion by means of photocoagulation. He was a member of the American Medical Association, the Illinois Medical Society, and the Chicago Medical Society. He was a fellow of the American College of Surgeons, and a member of the American Ophthalmological Society. The first volume of *Hereditary Diseases of the Choroid and Retina* appeared in the fall of 1972 . Three volumes were projected, the second volume nearly complete at the time of his death. AJO 1973,75:530-532

Kronfeld Peter C. (1899-1980) American ophthalmologist, professor emeritus of ophthalmology at the University of Illinois Medical School. Born , in Vienna, Austria. His education was interrupted by compulsory service in the Austrian army, but in 1923 he obtained an M.D. degree from the University of Vienna. Although his initial choice for specialization was physiology, he was convinced by Professor Mueller to enter ophthalmology. He completed his residency and then joined the staff of the first eye clinic at the University of Vienna. During the great invasion of Austria by American ophthalmologists in search of postgraduate education, Kronfeld was able to communicate in excellent English. His scientific acumen and ability prompted E.V.L.Brown in 1928 to offer him a full-time position at the University of Chicago where he stayed until 1933. Invited to become chairman of the Department of ophthalmology at the Peking Union Medical College in 1933, Kronfeld was able to resume his interests in the biochemistry of the aspirated aqueous. When the Japanese invaded China the Kronfelds returned to Chicago at the invitation of Harry Gradle, where Dr. Kronfeld became the Director of Education at the Ilinois Eye and Ear Infirmary. In 1959, Kronfeld became chairman of the Department of ophthalmology at the University of Illinois Medical School. Kronfeld wrote over 130 scientific papers, principally dealing with glaucoma, seven chapters and books. Among his books we find: *The Glaucomas*, 1944; *Introduction to Ophthalmology*, Springfield 1938; *Compensated Glaucoma-Symposium*, St.Louis 1941,1944 and *The Human Eye in Anatomical Transparencies*, 1943. Innumerable medals and honors attest to his success. AJO 1980,90:268-70. Arch Ophthalmol 1980,98:924. JPW

Krönlein, Rudolph Ulrich (1847-1910). Swiss general surgeon, inventor of osteo-plastic resection of the orbit. Born in Canton Schaffhausen, Feb. 19, 1847, he studied at Zürich, Bonn, and Berlin, returning at length to receive the degree of M. D. at Zürich. In 1878-79 he filled the chair of surgery at Giessen, from 1879 till 1881 the extraordinary chair at Berlin, and in 1881 returned to Zürich to accept the full professorship in that institution, as well as the directorship of the Surgical Hospital. Both these positions he resigned in 1910, shortly before his death, which also occurred in that year.American Encyclopedia of Ophthalmology, Vol.9, p. 6871

Krukenberg, Peter (1788-1865) German physician, of a slight ophthalmologic importance because of his graduation dissertation. entitled "*De Cancro Bulbi Oculi Humani*." Born at Königslutter he received the medical degree in 1808 at Göttingen, practised and taught at Halle, and died of cancer of the palate. American Encyclopedia of Ophthalmology, Vol.9, p. 6879-6880.

Krükow,A. (1849-1908) Russian ophthalmologist. K.was Professor for Ophthalmology at the Moscou University. He was vice-president of the Ophthalmological Society and since 1904 editor of Westnik *Ophthalmologii* which was at that time the only Russian ophthalmological journal.The Ophthalmoscope,1908,p.1024.

Krutkul, Rampoei (*1935) Thai Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Udornthani Hospital, Thailand. He graduated from the University of Medical Sciences, Bangkok, in 1960 and received his M.D. degree. He received his Certificate in Ophthalmology from Mahidol University in 1970 and Diploma of the Thai Board of Ophthalmology in 1980, and he further received a Certificate of Public Health Ophthalmology from Juntendo University, Japan, in 1981. He also received intensive training in public health Ophthalmology at Camp Rachandra Pradsad Eye Center and Sittapur Eye Hospital, India. He serves as the Deputy Medical Director of Udornthani Hospital, Secretary and Committee of the 4th Region of the Thai Red Cross Eye Bank. He has been very active in Prevention of Blindness activities: he organized the Udornthani Lions Club and Thai Lions Club Cataract project in 4 successive years in 1992-1995, he served as Coordinator in the Cataract Survey Project of the Princess Mother Foundation in 5 successive years in 1989-1993, he initiated mobile eye clinics to rural area in 1988-1994. Due to his meritorious service, he received Royal Medal from the Princess Mother Foundation (1988), First Class Royal Decoration from the King of Thailand (1995) and Distinguished Service Award from the Asia-Pacific Academy of Ophthalmology (1977). (Department of Ophthalmology, Udornthani Hospital,Udornthani, Thailand 41000, phone: 662-42-347-728, 662-42-347-729) (SM)

Krwawicz, Tadeusz (1910-1988) Polish ophthalmologist born in Lwow, Poland. He entered the medical faculty at the University of Lwow, graduating in 1938. He became assistant at the eye department of the University Hospital and remained there during the second world war. During the occupation by Russia he served in the Polish Army as ophthalmic specialist in Lublin. After demobilization he became consultant ophthalmologist in the University Hospital and was promoted associate professor in 1951 and ordinary professor in 1957. He introduced the cryoextraction of cataract in 1959 and other cryo surgical techniques. He published more than 150 papers and became a member of the Polish Academy of Science in 1966. He was recipient of many awards and honours from all over the world and was the first president of the Cryo-ophthalmological Society. In 1975 the Medical Academy in Lublin and in 1976 the Semmelweis University in Budapest awarded him honorary doctorates in medicine. He was a Founder Member of the *Academia Ophthalmologica Internationalis.*BJO 1988, 478-479. (SM)

Krzowitz Wenceslaus Trnka de *see* **TRNKA DE KRZOWITZ, Wenceslaus**.

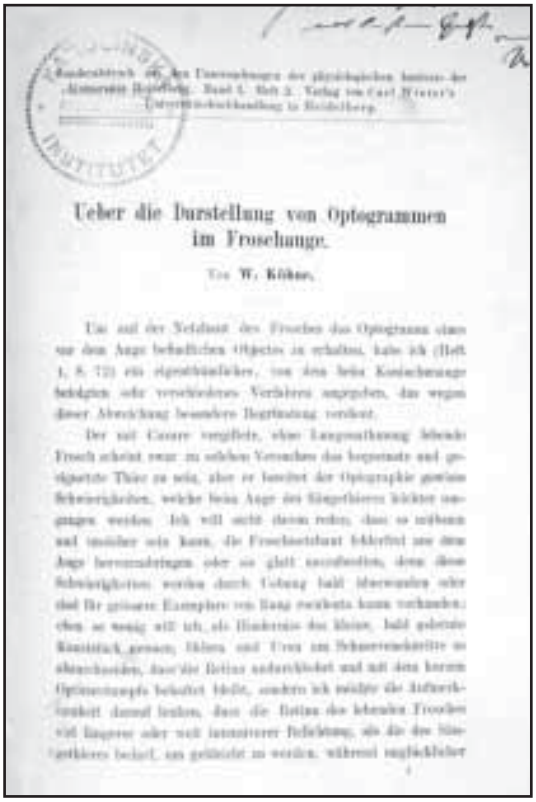
Kubota, Nobue (1936-) Japanese female Ophthalmologist, Professor of Ophthalmology of Teikyo University. She graduated from the Faculty of Medicine of Toho University in 1961, studied Ophthalmology at Tokyo University under Prof. HAGIWARA Hogara and received his Doctor of Medical Sciences in 1969 (thesis: *Studies of alternating hyperphoria. No. 1.* J. Jpn. Ophthalmol. Soc. 72: 59; *No.2* ibid. 72: 65; *No.3* ibid. 72: 145; *No.4.* ibid. 72: 279; *No. 5*, ibid. 72; 368, *No.6*, ibid. 72: 523; *No.7* ibid. 72: 647, 1968). She has been in the present position as above since 1983. She has held the following professional positions: Councillor of the Japanese Ophthalmological Society (1985-),

Auditor of the Society (1999-), Vice-President of the Japanese Association of Strabismus and Amblyopia (1998-) and Vice-President of the Japanese Association of Pediatric Ophthalmology (1989-), and she is a member of the International Society of Strabismology. She has worked worked as an Executive Board Member of the Japanese Review of Clinical Ophthalmology since 1982. Her research interest has been strabismus, amblyopia, extraocular muscle and ophthalmic plastic surgery, and many of her publications include the following: "*Treatment of dissociated vertical deviation (DVD) with conventional superior rectus recession: Results of 150 operations in 110 cases*". Binocular Vision Quarterly 4: 165. 1989 and "*Superior oblique palsy: Results of surgery in 43 cases*". Binocular Vision Quarterly 6: 143, 1991. (Department of Ophthalmology, Teikyo University, 2-11-1 Kaga Itabashi-ku, Tokyo, 173-0003, Japan. phone: +81-3-3964-1211, fax: +81-3-3963-0303)(SM)

Küchler, Heinrich (1811-1873) German ophthalmologist, the inventor of test-types. Born at Darmstadt, Germany, he studied at Giessen and Paris, and in 1835 founded an eye infirmary in his native city. In 1836 his rapidly increasing practice was completely broken up by an imprisonment of several years duration, most unjustly inflicted upon him because of his participation in certain agitations made by the student-body of the University. For the greater portion of about three years he lay in a foul, damp cell, in consequence of which exposure he suffered throughout the remainder of his life from the tortures of severe sciatica. On his release in 1839, he re-opened his Ophthalmic lnstitute, and began to rebuild his practice. In 1844 he founded "Das Mathilde Landkrankenhaus." In 1862 he became Medical Councillor, and a few years afterward Privy Upper Medical Councillor. He had an enormous practice which he well deserved, being a man of excellent judgment and a skilful operator. According to Hirschberg, he left a collection of 30,000 case histories from his private practice. We have already stated that Küchler was the inventor of test-types. The question of priority in this matter, which has been extensively investigated by Hirschberg, may be stated very briefly as follows:, Alfred Smee, of London, had nothing at all to. do with the invention in question, though by both Snellen and Landolt he is stated to have invented, or at least to have proposed, the use of rows of letters for testing purposes in 1854. Küchler, however, in 1843, described the letters which he had invented and actually employed them in his practice. Küchler's cards, it must be remembered, however, were employed only for the testing of near vision. The first to publish a complete collection of test-types was Ed.v.→Jaeger, of Vienna, in 1854. The first to state upon the card, next to each row of letters, the distance at which that row could be discerned by the normal eye, was Stellwag von →Carion, of Vienna, in 1855. Snellen, of Utrecht, finally, put the cap upon the sheaf, by the invention of letters which, from above downward and also from side to side were composed of five (in the same line equally) large blocks, or square units, each block, at the normal distance which was expressly stated for the line, subtending an angle of exactly one minute. Küchler's ophthalmologic writings are as follows: 1.*Schriftnummerprobe für Gesichtsleidende*. (Darmstadt, 1843.) 2. *Die Horngeschwülste des Augapfels*. 3. *Eine Neue Operative Heilmethode der sämtlichen Wahren Hornhautstaphylome,* etc. (Braunschweig, 1853.) 4. *Kurze Zergliederung der Schrift des Dr. G. Simon*, etc. (Darmstadt, 1858.) 5. *Die Querextraction des Grauen Staares der Erwachsenen*. (1868.) American Encyclopedia of Ophthalmology, Vol.9, p. 6880-6881

Kuhn, Hedwig Stieglitz (1895-1973) American woman ophthalmologist, born in Chicago, who graduated from Rush Medical School in 1919, and specialized with her husband, Hugh, in industrial ophthalmology. Kuhn was one of the pioneers and early advocates of more effective industrial safety programs. She led a drive to form the Hammond Safety Council and wrote a monthly newsletter concerning public and recreational safety and worked to combat accidents involving automobiles, airplanes, and boats. In 1957, she was named to President Eisenhower's Traffic Safety Commission and served on a presidential subcommittee concerned with employing the physically handicapped. In 1970, Dr. Kuhn received the highest award of the National Safety Council, the Distinguished Service to Safety Award. Kuhn was a Diplomate of the American Board of Ophthalmology, a Fellow of the American and International Colleges of Surgeons, a member of the National Society for the Prevention of Blindness, the American Medical Association, and various state and local medical societies. She wrote: *Industrial Ophthalmology*, 1944, second edition 1950. AJO 1973,76:1024-1025.JPW

Kühne, Wilhelm (Willy) (1837-1900) German physiologist, born in Hamburg. Kühne received his M.D. in 1862 following study in Göttingen, Jena, Berlin, Paris, Vienna under famous personalities such as R. Wagner, Claude Bernard, Virchow, Ludwig, Henle. He received his Dr.phil in 1856 and 1862 his medical degree (Dr.med.) He became professor of physiology at the Universities of Amsterdam from 1868 to 1871 and of Heidelberg from 1871 to 1899. Kühne was director of the Physiological Institute of Heidelberg. He made important investigations about visual purple. It was a paper about physiology of vision, published by Franz C. Boll (1849-1879) in the Mber.k.preuss.Akad.Wiss.Berlin that iniated Kühne´s interest in visual purple. It started with Kühne´s lecture, in January 1877, to the *Naturhistorish-Medicinischen Vereins zu Heidelberg* : *Zur Photochemie der Netzhaut* followed by a series of publications with his assistant August Ewald (1849-1924) about visual purple, all published in the *Untersuchungen des physiologischen Instituts der Universität Heidelberg*, Vol.1, 1877: I.*Untersuchungen über den Sehpurpur* (Ewald/Kühne), II. *Enstehung der Retinafarbe* (Ewald/Kühne), III.*Veränderungen des Sehpurpurs und der Retina im Leben* (Ewald/Kühne), IV. *Zur Chemie des Sehpurpurs*. The same year (1877) Kühne published about the same subject under his name alone:*Über der Sehpurpur*. Heidelberg 1877, *Das sehen ohne Sehpupur*, *Über die Darstellung von Optogrammen im Froschauge* and with another visiting assistant (W.C.Ayres from New Orleans): *Über Lichtbeständige Farben der Netzhaut* in : *Untersuchungen des Physiologischen Instituts der Universität Heidelberg,* 1877,Vol.1, issue 4. JPW. Albert. Hirsch



Ueber die Darstellung von Optogrammen im Froschauge.

Hermann Kuhnt

Kuhnt, Hermann (1850-1925) German ophthalmologist, born in Senftenberg (Lausitz), Germany. Kuhnt received his medical training in Bonn, Berlin and Würzburg. He served first as prosector under Merckel in Rostock and later as Becker's assistant in Heidelberg. 1880 he went as professor to Jena, then to Königsberg in 1892 before becoming professor of ophthalmology at the Bonn University as from 1907. Kuhnt specialized in the treatment of inflammations of the frontal sinus as well as in ophthalmic surgery. He authored: *Zur Kenntnis der Sehnerven und der Netzhaut* Berlin 1879. *Beiträge zur operativen Augenheilkunde* Jena 1883. *Neue Therapie bei gewissen hornhautgeschwüren Wiesbaden* 1884 *Ueber die Therapie der Conjunctivitis granulosa* Jena 1897. *Über die Verwertbarkeit der Bindehaut in der praktischen und operativen Augenheilkunde* Wiesbaden 1898.

Naoki Kumagai

Kumagai, Naoki (1885-1973) Japanese Ophthalmologist, Professor Emeritus of Niigata University. He graduated from Tokyo University in 1910, studied Ophthalmology under Prof. J.→KOMOTO. He went to Germany in 1914, but due to the outbreak of the World War II, he returned home and was invited to be Professor of Ophthalmology of Aichi Medical School (now Nagoya University). In 1917, he received his Doctor of Medical Sciences from Tokyo University and the same year he served as the President of the 21st Congress of the Japanese Ophthalmological Society. He was then invited in 1922 to be Professor and Chairman of the Department of Ophthalmology of Niigata University. He served again as the President of the 28th Congress of the Japanese Ophthalmological Society. He retired from the position in 1945 and was entitled Professor Emeritus of the University. His main interest in research was glaucoma and his work was summarized in his special lecture " *Diagnosis and treatment of glaucoma*" delivered at the 42nd Congress

of the Japanese Ophthalmological Society in 1938. In recognition of his distinguished service, the Government conferred upon him the Second Order of the Sacred Treasures in 1936. (SM)

Noboru Kunitomo

Kunitomo, Noboru (1907-1990) Japanese Ophthalmologist, Professor Emeritus of Nihon University. He was a graduate of Tokyo University in 1931, and he studied Ophthalmology under Prof. S.→ISHIHARA, and received his Doctor of Medical Sciences in 1947. In 1938, he was made the Assistant Professor of Taihoku Imperial University (now National Taiwan University), and returned home after the War. He was appointed the Professor and Chairman of the Department of Ophthalmology of Nihon University in 1946 and he stayed in this position until retirement in 1973. He served as the Director of the University Hospital in 1953-1954 and also as the President of the 68th Congress of the Japanese Ophthalmological Society in 1964. His main interest was the external eye diseases and anatomy and pathology of the anterior segment of the eye, and his works were summarized in his special lecture "*Microcirculation of the human conjuntiva*" delivered at the 76th Congress of the Japanese Ophthalmological Society in 1973. This work was published in the English Language with the same title from Igaku Shoin, Tokyo in 1974. He was also a founder of a Journal " *GANKA: Ophthalmology* " and served as the editor from 1959 until his retirement in 1973: the Journal conveyed the most up-to-date clinical knowledge to Ophthalmologists throughout the Country. (SM)

Kunt, August Adolph Eduard (1839-1894) German scientist born in Schwerin in Mecklenburg; studied at Leipzig and Berlin (1867) ; was professor of physics at Berlin University, and there followed von →Helmholtz. He made many experiments in magneto-optics, as well as original researches on light and on the velocity of sound in different gases. He died at Israeldorf, near Lübeck. American Encyclopedia of Ophthalmology, Vol.9, p. 6883-6884.

Yoshi Kurachi

Kurachi, Yoshi (1905-1982) Japanese Ophthalmologist, Professor Emeritus of Kanazawa University. He graduated from Kanazawa University, studied Ophthalmology under Prof. Minoru→NAKAJIMA, and received his Doctor of Medical Sciences from the University in 1938. He was appointed Professor and Chairman of the Department of Ophthalmology of the University in 1942 to succeed Prof. Nakajima. He stayed in this position for 29 years and retired in 1971, whereupon he was given the Professor Emeritus of the University. During his tenure, he served as the Director of the University Hospital, Dean of the Faculty of Medicine and many other important administrative positions. His research interest was the metabolism of the eye, with particular attention to the retinal metabolism, and these works were summarized in his special lecture "*Metabolism of the eye with particular attention to the retina*" at the 67th Congress of the Japanese Ophthalmological Society in 1963. In recognition of his distinguished service, the Government conferred on him the Second Order of the Sacred Treasures in 1975. (SM)

Junzo Kurosawa

Kurimoto, Shinji (1929-) Japanese Ophthalmologist, Former Professor of Ophthalmology of Yamaguchi University and of the University of Occupational and Environmental Health. He graduated from Yamaguchi University in 1955, studied Ophthalmology at Tottori University under Prof.→KANDORI Fumio and received his Doctor of Medical Sciences in 1960 (thesis: Studies upon the experimental cataracts, Part 1;"Myleran cataracts and its toxicity to the endocrine glands and internal organs" Yonago Acta Medica 3:174-180, 1959) He studied on histochemistry of the retina under Prof.Frank W.→Newell at the University of Chicago (1961-1966). He served as the Professor and Chairman of the Department of Ophthalmology, University of Occupational and Environmental Health (1978-1987) and then of Yamaguchi University (1987-1993). He served to the Japanese Ophthalmological Society as a Councillor. Some examples of his publications are "*Glyocogen syntehesis by the rat retina*". (ed.) Graymore C.: Biochemistry of the Retina: p. 31-35, Academic Press. London, 1965 and "*Eye strain in VDT (Visual Display Terminal) work*". (ed). Noro, K.: Occupational Health and Safety in Automation and Robotics. p. 110-136, Taylor & Francis, London, 1987.(SM)

Kurosawa, Junzo (1894-1966) Japanese Ophthalmologist, a graduate of Tokyo University in 1921, studied Ophthalmology under Prof. S.→ISHIHARA and received Doctor of Medical Sciences in 1927. He was appointed the first Professor of Ophthalmology at Nippon Medical College in 1926. In 1929, he left the College to practice at Ogawa Eye

Hospital, the hospital his father-in-law Kenzaburo→OGAWA founded. Dr. Kurosawa founded the Japan Ophthalmologists Association after the World War II and served as the President during 1928-1953. He served as the President of the Japan Medical Association in 1954-1955. He also served as the President of the Association for the Prevention of Trachoma Inc.(now Japan Society for the Prevention of Blindness). The Government, in recognition of his distinguished service, conferred on him the posthumous decoration of the Second Order of the Sacred Treasures.(SM)

Kurozumi, Itaru (1934-) Japanese Ophthalmologist, President of the Association for Ophthalmic Cooperation to the Asia Inc. (AOCA). He graduated from Tokushima University in 1960, studied Ophthalmology at Kobe University under Prof.→IMACHI Jo and received his Doctor of Medical Sciences in 1967 (thesis: *On the spontaneous discharges of the extraocular muscles*. J. Jpn. Ophthalmol. Soc. 71: 919, 1967). He served as the Head of the Eye Clinic of Ashiya Municipal Hospital from 1975 to 1996. His early publications are on extraocular muscles: *"On the spontaneous discharges of cat's extraocular muscles"*. Jpn. J. Ophthalmol. 11: 179, 1967 and *"Electromyograms in the early stage of complete paralysis of human extraocular muscles with special reference to the fibrillation potential and spontaneous discharge"*. Ophthalmologica. 159:233, 1969. While serving at the Ashiya Municipal Hospital, he joined the foundation of the AOCA and he contributed to the education of Nepalese Ophthalmologists, Eye care specialists and technicians and also he conducted and guided many Eye Camp activities in rural villages of Nepal. He also donated Ophthalmic Instruments and guided the management of Eye Hospitals in Nepal. For his contributions, the Asian Committee of WCWB (World Council for the Welfare of the Blind) granted him the Takeo Iwahashi Prize in 1984 and the Asia-Pacific Academy of Ophthalmology granted him the Jose Rizal Award in 1996: His Majesty the King of Nepal conferred on him the Gorkha Daksina Bahu, Nepalese National Decoration, in 1996. He has many publicatons on Nepal: *"Ophthalmic cooperation to Nepal: its results and reconsideration*. Jpn. J. Clin. Ophthalmol. 53: 521, 1999", *"Nepal: the land of gods*. Kobe News Paper Publ. Center, 1983" and *"Reports from Nepal, photographic illustrations*. Kobe New Paper Publ. Center 1985". (AOCA: 12-23-101, Futami-cho, Nishinomiya, 663-8111 Japan. phone: +81-7-9867-3821, fax: +81-7-9867-3823)(SM)

Kurtzwig, David George (1764-1834) Russian physician and medical official, of a slight ophthalmologic importance because of his graduation dissertation, *"Diss. de Morbis Palpebrarum*." Born at Riga, Russia, he received his medical degree in 1788 at Jena, settled in Riga, became Medical Inspector for the Government of Livland. American Encyclopedia of Ophthalmology, Vol.9, p.6884.

Kurz, Jaromír (1895-1965) Czech ophthalmologist. Kurz was professor of ophthalmology of the University of Prague, and recipient of the Purkinje Medal.Brit.J.Ophthal.1966,50:110.

Kussmaul, Adolf (1822-1902) German physician, who introduced the stomach pump for the treatment of diseases of the stomach, and who, as ophthalmologist, was the first to show that the retina of man and other mammals is, in the fresh condition, absolutely transparent. Born at Graben, near Carlsruhe, he studied at Heidelberg from 1840 till 1845, but, as it seems, did not receive his medical degree there. While yet a student, however, he published an original composition. entitled *"Die Farben-Erscheinungen im Grunde des Menschlichen Auges*" (Heidelberg, 1845), a work which, in spite of the immaturity of its author, was crowned by the Heidelberg faculty, and, even at the present day, evokes the admiration of so critical an authority as Hirschberg. From 1850 till 1853 Kussmaul practised as general physician in Kandern, then proceeded to Würzburg for graduate instruction, and there, in 1854, received his medical degree-whether ad *eundenb* is not positively known. The following year he qualified as privatdocent in Heidelberg, and in 1857 was made extraordinary professor in the same institution. In 1859 he removed to Erlangen in order to accept the full professorship of internal medicine in the Erlangen University. In 1863 he held the corresponding chair in Freiburg i. Br., and in 1876 that at Strassburg. He spent his last years in Heidelberg, writing a famous medical autobiography: *Jugenderinnerungen eines alten Artzes* (1899). American Encyclopedia of Ophthalmology, Vol.9, p. 6884-6885.

Toichiro Kuwabara

Kuwabara, Toichiro (1920-1991) American ophthalmologist of Japanese birth. His many contributions included studies on lipid keratopathy, diabetic retinopathy, photic damage to the retina, diabetic cataracts, genetic diseases of the eye, and a host of other ocular abnormalties. No less important was the major role he played in introducing electron microscopy and novel histochemical techniques to eye research. In the laboratory he set uncompromisingly high standards for himself and for his staff. Kuwabara was born in 1920 on the island of Shikoku, Japan, the eldest son of a prominent medical family. He received his medical school training at Kyushu University, where he graduated in 1944 and later obtained a Ph.D. degree (Metastatic Mechanism of Lung Cancer) , in preparation for a planned career in general pathology. In 1952, Kuwabara was recruited for a trial year in the Howe Laboratory of Ophthalmic Research at Harvard Medical School and the Massachusetts Eye and Ear Infirmary. He arrived in this country with little more than a satchel, a broad smile, and meager familiarity with the English language. Nevertheless, he soon became a productive member in the small family of clinical and basic scientists dedicated to eye research. Together they explored fat metabolism in the cornea where his talent for tissue processing and his uncompromising perfectionism proved him indispensable. Unfortunately, the McCarran Act required his return to Japan and a wait of several long months before he could return as a permanent resident. He did eventually return, this time with his wife and two little girls, and immediately reactivated his studies on aberrant lipogenesis. This project opened up an entirely new field not only in eye research but in atheromatosis and fatty degeneration elsewhere in the body. Then one of those serendipitous observations caused a redirection of research. A piece of retina was incidentally tryphinized along with the corneal preparation. When this retina was subsequently stained by the periodic acid Schiff, it revealed for the first time the cellular topography of retinal capillaries. Important in itself as an anatomic discovery, this finding came to have crucial significance in elucidating the pathogenesis of diabetic retinopathy; the mural cells (pericytes) of the retinal capillaries are the target cells in diabetes. The Kuwabara trypsin digestion technique became the universal procedure for studying retinal blood vessels. The foregoing lipid and retinal studies were major directions of Kuwabara's research in the Howe Laboratory but were only part of his extensive and innovative contributions, all of which established his authority in understanding the normal and pathologic eye. For all these accomplishments, he was honored with the Hektoen Silver Medal of the American Medical Association (1960), the New England Ophthalmic Society Award (1962), the Friedenwald Award (1968), the Research to Prevent Blindness Trustees' Award (1970), the Alcon Research Institution Award (1982), the Senior Investigator Award of Research to Prevent Blindness (1991), and the honor of being a much sought-after collaborator in ophthalmic research and, often, research outside of ophthalmology. Promotions at the Harvard Medical School followed in due course to the title of professor of pathology in the Department of ophthalmology (1971). In 1972, with administrative changes in the Howe Laboratory pending, Dr. Kuwabara and a group of several senior investigators left Boston to join the new National Eye Institute. For the next 17 years, Dr. Kuwabara was chief of the Laboratory of Ophthalmic Pathology at the National Eye Institute. The opportunity for collaborative research in the Institute is evident in Kuwabara's continuing publications for these years. The total number of papers authored or coauthored by Dr. Kuwabara is more than 200, covering a wide range of subjects. He accepted in 1989 the challenge to set up an ophthalmic pathology laboratory at the University of Indiana. AJO 1991, 112:107-108

Yushihiro Kuwabara

Kuwabara, Yushichiro (1865-1924) Japanese Ophthalmologist. He graduated from Niigata Medical School and passed the National Examination for Medical Practice in 1885. He studied Ophthalmology at the Postgraduate course of Tokyo University under Prof. J.→KOMOTO. He went to Germany in 1902, and in 3 years he studied in Wuerzburg (Prof. C.→Hess), in Erlangen (Prof.J.N.→Oeller) and in Munich (Prof.O. →Eversbusch), and received Doktor Medicine (Thesis: *Experimentelle und klinische Beitraege ueber die Einwirkung von Anilinfarben auf das Auge*, Arch Augenheilkd,49:157,1903). After his homecoming he practiced in Nagaoka, Niigata Prefecture and founded a Journal "*Ganka Rinsho Iho*: Japanese Review of Clinical Ophthalmology" in 1905 and he worked as the Chief Editor for 20 years. This is the 95 year-old leading Journal of Ophthalmology in Japan. He also published a 5-volume book "*Nihon Ganka no Shyoumei*: Kritik der modernen Ophthalmologie in Japan" which covered all the ophthalmological articles ever

published in many journals in Japan, and lists several thousand articles. The Chief Editor of the Japanese Review of Clinical Ophthalmology was transferred to Tomohisa TSUTUMI, Bujyu SHIKANO, Shinichi→SHIKANO, Tadashi KATO, Hirobumi MOMOSE and then to Toshio →MARUO. (SM)

Yasuharu Kuwahara

Kuwahara, Yasuharu (1908-1985) Japanese Ophthalmologist, Professor Emeritus of Keio University. He graduated from Keio University in 1932, studied Ophthalmology under Prof. S.→SUGANUMA and received his Doctor of Medical Sciences from the University in 1937. He was appointed the Professor of Ophthalmology of Tokyo Medical College in 1956. He was then invited to be Professor and Chairman of the Department of Ophthalmology of Keio University in 1962 and served in this position until retirement in 1973. His research interest was in the cornea, keratoplasty and cataract. He played the key role in enactment of the law "*Keratoplasty Act*" in 1958 and founded the Japan Eye Bank Association Inc. in 1965 and served as the President for 11 years. He was one of the symposists on keratoplasty at the 16th Congress of the Japanese Clinical Ophthalmology in 1962 (Lecture: *Heterograft in keratoplasty*), and also at the 69th Congress of the Japanese Ophthalmological Society in 1965 (Lecture: *Studies of long-term preservation of cornea for keratoplasty*). In the latter study, he developed K medium to preserve cornea for transplantation. His interest in cataract led him to develop his original ultrasound instrument to emulsify cataracts and gave a special lecture "*Phacoemulsification in cataract with nucleus*" at the 74th Congress of the Japanese Ophthalmological Society in 1970 (*Method cataract aspiration*, Igakushoin Tokyo 1970). He wrote:*Aspiration Method of a Hard Cataract: Ultrasonic vibration*, Tokyo 1972. He served as the President of the Japanese Ophthalmological Society and Japanese Society of transplantation. (SM)

Kuwajima, Jisaburo (1913-) Japanese Ophthalmologist, Professor Emeritus of Tohoku University. He graduated from Tohoku University in 1940, studied under Prof. HAYASHI Yuzo and received his Doctor of Medical Sciences in 1943 (thesis: *Experimentelle Studien ueber die allgemeine Blutdrucksteigerung bei Kaninchen mit besonderer Beruecksichtigung des Augenfundus*. Tohoku J. exp. Med. 46: 170, 1943). He served as the Professor of Ophthalmology of Tohoku University from 1968 until retirement in 1977. He carried out extensive studies of optic neuritis and pointed out the presence of multiple sclerosis in 1952 that had been thought to be very rare in Japan. He compiled many cases and confirmed the diagnosis of this disease and gave a lecture as a symposist at the 61st Congress of the Japanese Ophthalmological Society in 1957 (J. Jpn. Ophthalmol. Soc. 61: 2051, 1957). He recently published a Medical Essay "*True record of multiple sclerosis in Japan*, Nihon-Iji-Shinpo, Tokyo, 1985). He is an Honorary Member of the Japanese Ophthalmological Society, one of the founders of the Neuro-ophthalmology Japan and its Honorary Member. He received the Award from the latter Society in 1997.(SM)

Kwon, Jung-Yoon (1943-) Korean Ophthalmologist, Professor and Chairman of the Department of Ophthalmology, Kyungpook National University, Taegu. He graduated from Kyungpook National University School of Medicine, with an M.D. degree, in 1970. Subsequently, he studied Ophthalmology in the Graduate School of the University and completed the course with a Ph.D. Degree in 1980 (thesis: *Fluorescein fundus angiographic findings in Korean diabetics*. Kyungpook Univ. Med. J. 20: 444, 1979). He further extended his experience as a visiting physician at Osaka Children's Hospital in 1981 and at the Wilmer Ophthalmological Institute in 1985-1986. He was appointed the Professor of Ophthalmology of Kyungpook University in 1989 and has served as the Chairman of the Department as above since 1996. He has served as the Chairman of the Korean Pediatric Ophthalmology and Strabismus Society (1997-1998), the Chairman of the Korean Board of Ophthalmology of the Korean Ophthalmological Society (KOS) (1997-1998) and is on the Editorial Board of the Journal of the KOS since 1996. He has many publications in the field of electrophysiology of vision and pediatric Ophthalmology, e.g. "*Photic electroretinogram in adult diabetics*. J. Kr. Ophthalmol. Soc. 40: 121, 1999", "*Clinical studies of accommodative esotropia*. J. Kr. Ophthalmol. Soc. 38, 1997" and "*Positional changes of reattachment site after superior rectus recession in rabbit*. *Advances in Strabismology*. (ed.) Lennerstran, G., p.385, Aeolus Press. 1998". He has written two books on Ophthalmology in the Korean Language. (Department of Ophthalmology, Kyungpook National University, Hospital, 50, 2-Ga, Samduck-Dong, Taegu, Korea 700-712; Phone : +82-53-420-5812 ; Fax. No. : 82-53-426-6552; e-mail: jykwon@kyungpook.ac.kr)(SM)

(END OF PART ONE)