

THE GENEALOGY OF OPHTHALMIC TEACHING IN SWITZERLAND

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Introduction

In 1957, MARC AMSLER published a „*Genealogical Tree*” of the five university departments of ophthalmology in Switzerland. In 1962, he wrote a history of ophthalmology in Switzerland which dealt with the events preceding the establishment of the university departments. It seemed to me of interest to take up this thread and to complete the „*Genealogical Tree*” by continuing it into our times and by giving a more detailed history of the five university departments.

At the root of our genealogical tree we find our common ancestor ALBRECHT VON GRAEFE (1828 – 1870) of Berlin. He exerted a great influence on the first generation of professors of ophthalmology in Switzerland. This influence was exerted either directly or indirectly via his intermediary, his favored pupil, FRIEDRICH HORNER. Before VON GRAEFE there were only a few teachers in ophthalmology who prepared the soil for the development of our specialty.

On the „*Genealogical Tree*” the dates beneath the name correspond to the birth and death of the individuals. The dates beneath that line correspond to the begin-

* Translated by Frederick C. Blodi

ning and the end of their tenure as professors. The arrows drawn in a full line indicate a direct influence; whereas, the arrows in a dotted line indicate the change from one university chair to another or an appointment of somebody who came from the outside (what Amsler referred to as a „*mutation*”).

It is obvious that when giving a more detailed account of the five academic ophthalmic departments in Switzerland, there will be an overlap and inevitable repetition of the publication by AMSLER. We beg you to excuse these.

Finally, we find on that „*Genealogical Tree*” some names which are not encased. These are the pupils of von GRAEFE and HORNER who did not become full professors but who did play an important role in the history of Swiss ophthalmology. Some of them became famous in foreign countries, especially in France.

We see here BARDE, pupil of HORNER and Director of Ophthalmology at the Rotschild Hospital in Geneva. He was the teacher of DAVID GOURFEIN; we find LANDOLT, a pupil of VON GRAEFE and HORNER, who left for Paris and became the teacher of EPERON; WILLIAM NICATI, pupil of HORNER, practised later in Marseille where he was extremely successful; he was the teacher of ARMAND NICATI, well-known ophthalmologist of Neuchâtel; DAVID SULZER of Winterthur, pupil of HORNER, practised first in Geneva as of 1892, but moved six years later to Paris; he bought with VALUDE the *Annales d'Oculistique* from the heirs of WARLOMONT and ensured the continuous publication of this periodical which thereby moved from Belgium to France and was later edited mainly by VICTOR MORAX, beginning with 1898.

Zurich

We begin with the history of the department in Zurich which had as its first professor of ophthalmology, FRIEDRICH HORNER, who was the first professor of ophthalmology in all Switzerland.

The University of Zurich was founded in 1832. HEINRICH LOCHER ZWINGLI (1809 – 1865), professor of surgery, also taught ophthalmology as of 1833. Other surgeons, such as HANS LOCHER BALBER (1797 – 1873) from 1833 – 34, JOSEPH KONRAD HEINRICH GIESKER (1808 – 1858) as of 1835 and L. VON MURALT as of 1835 also gave instructions in ophthalmology. The general practitioner OTTO WERDEMÜLLER (1818 – 1886) from Uster published in 1848 a textbook on ophthalmology for the use of physicians and medical students (244 pages). It was apparently only of mediocre value.

In 1856, the instruction in ophthalmology became an official course. This was the time when JOHANN FRIEDRICH HORNER (1831 – 1886) was appointed Privatdozent. In 1862, he was promoted to extraordinary professor and ophthalmology was finally established as an independent department and separated from general surgery. HORNER became a full professor in 1872.

JOHANN FRIEDRICH HORNER was born March 27, 1831 in Zurich where he also studied medicine. He graduated in 1852 and left soon for Munich. He was later in Vienna working with FRIEDRICH JAEGER. He traveled to Prague and Leipzig and then remained in Berlin as of October 1854. There he found another Swiss physician, THEODORE BÄNZIGER, working at ALBRECHT VON GRAEFE's clinic. HORNER was first only a preceptor, but in November 1854 he became an assistant to VON GRAEFE. He stayed, however, only a short time in Berlin where he also met DONDERS. HORNER then went to Mainz where he found WILHELM HESS, who also was a pupil of VON GRAEFE and became a good friend of HORNER. He then traveled to Brussels and Ghent where he worked with DESMARRES. VON GRAEFE considered DESMARRES as a superb clinician and HORNER admired him as an incomparable surgeon (especially cataract surgeon). DESMARRES appreciated HORNER's work. HORNER became a most welcome guest at the policlinic and was even allowed to operate there.

HORNER's grandfather offered him a trip to London to see WILLIAM BOWMAN. However, he preferred to return to Zurich for Christmas 1855. At the beginning of 1856 he opened an office as a general practitioner and ophthalmologist and later during the spring of the same year he started to teach ophthalmology at the college of medicine.

HORNER was probably one of the first who claimed that the progress of medicine makes it absolutely necessary to educate specialists. He was an indefatigable worker, an excellent surgeon, a conscientious scientific investigator and an extraordinarily gifted teacher (E. LANDOLT).

He was one of the founders of the *Ophthalmological Society of Heidelberg*, the cradle of modern ophthalmology, where he met DONDERS, VON GRAEFE, PAGENSTECHER (the inventor of the yellow mercury oxide ointment), AD. WEBER (the first to use an artificial cornea), and KUSSMAUL (who studied the influence of carotid ligation on the eye).

When the French army of Bourbaki invaded Switzerland (1870), he helped the fight of his country by his medical experience. He paid for it personally by becoming a victim of the terrible cholera epidemic in Zurich. He later participated actively in the political and social life of Zurich.

The reputation of FRIEDRICH HORNER was considerable: his pupils came from everywhere, but especially from Switzerland. This is the reason why most of the chairmen of ophthalmologic departments in Switzerland are pupils of ALBRECHT VON GRAEFE or of FRIEDRICH HORNER.

E. LANDOLT remarked that it is certainly strange that a man so rich in ideas published so little. This is even more astounding when we keep in mind how much time this most critical mind dedicated to scientific lectures. And indeed during 29 years of teaching. HORNER published only 37 papers, among which is an important study on eye diseases of children. He supervised the theses of 38 students.

He attended the Congress of Heidelberg in September 1885 though he had been seriously ill for several months (probably a nephrosclerosis). He resigned from his position in January 1886 and died from a stroke on December 20, 1886.

It is probably justified to spend more time on the biography of FRIEDRICH HORNER who as a pupil and friend of ALBRECHT VON GRAEFE, the father of modern ophthalmology, taught nearly all the Swiss professors of ophthalmology the basis of our modern science.

His successor was OTTO HAAB (1886) who had been a pupil (August 1876 – Spring 1886) of HORNER and his assistant for one year.

HAAB was born in 1850 close to Winterthur as the prodigy of an old Zurich family. He studied medicine in Zurich and then spent some time with ARLT, SATTLER and then with EDUARD VON JAEGER in Vienna. He then went to Utrecht and worked with CRITCHETT and HUTCHINSON. He became Privatdozent in 1878 and was appointed professor and chairman of the department in 1886. HAAB became extremely active not only as director of the clinic (newly constructed according to his plans in 1895), but also as surgeon, teacher and especially as scientist. He had numerous pupils some of whom became well known (S. TÜRK, E. AMMANN, K. STARGARDT, W. R. HESS, the well-known physiologist, SIDLER-HUGUENIN, his successor, STÄHLI, LUTZ in Havana and J. J. STREIFF in Genoa).

He published 103 papers among which are his ophthalmoscopic investigation using the direct method (with his own newly developed ophthalmoscope). He collected his studies and pictures in the „*Atlas of Ophthalmoscopy*” (1895), which went through five editions. His name is connected with that of Dimmer for the description of the *lattice degeneration* of the cornea. He worked on the extraction of magnetic foreign bodies and developed a giant magnet which carries his name. He wrote in the GRAEFE-SAEMISCH Handbook a chapter on the surgical treatment of intraocular foreign bodies. In 1898, he published his „*Atlas on external diseases of the eye*” and in 1904 an atlas on ocular operations. These three atlantes had considerable success. In 1902, he published a monograph on glaucoma and its treatment. He also published a chapter on the pathologic anatomy of the eye.

He always made precise observations and reported them exactly and honestly. But he was also a connoisseur of art and a collector. He was a friend of the writer GOTTFRIED KELLER, of the poet SPITTELER, of the painters ARNOLD BÖCKLIN, RUDOLPH KOLLER and others. He retired from the university position in 1919 and died at the age of 82 in 1931.

ERNST SIDLER-HUGUENIN was a pupil and the brother-in-law of OTTO HAAB. He succeeded to the chair in 1919. He was born in Zug in 1869 and studied in Zurich, Vienna, Berlin, London and Paris. In 1901, he became Privatdozent and was appointed chief ophthalmologist of the outpatient clinic in 1903, associate professor in 1916 and full professor in 1919.

ERNST SIDLER-HUGUENIN was an excellent teacher with considerable didactic talent. His interest lay mainly in ocular trauma. He published 24 papers and supervised the theses of 20 students during his short period of chairmanship (3 years). He died at the age of 53 on December 1, 1922.

ALFRED VOGT was appointed the successor to the chair in 1923. A short biographical note will be found below under the discussion of the department in Basel. VOGT had been nominated associate professor of the eye department in Basel where he succeeded CARL MELLINGER in 1918.

During his time in Zurich, VOGT was extremely prolific. In addition to numerous papers (he published 247 during his activities in Aarau, Basel and Zurich), he devoted much time to his atlas on biomicroscopy: the three volumes were and still are extremely important and they have been republished in spite of the progress which color photography has made. VOGT followed the technique of GONIN in the surgical treatment of retinal detachment and published a book on that subject. He was much interested in the aging process of the eye and in genetics in general. He published a scholarly study on the role of genetics in the aging process.

He was an astute observer and his interest lay mainly in morphologic aspects of ophthalmology. He did not occupy himself often with the correlations between ophthalmology and general medicine. His instruction courses were extremely popular and he was a superb teacher.

During his period as chairman, he appointed only one privat-docent, HANS WAGNER, who became later professor and was his devoted collaborator.

ALFRED VOGT died in 1943. After his death, the College of Medicine of the University of Zurich recommended to the Minister of Health, PROFESSOR ADOLPHE FRANCESCHETTI of Geneva as successor. It was generally believed that he would accept under the proposed conditions as he was a former assistant of VOGT and a citizen of the Canton of Zurich where his mother, a woman of old Zurich stock, practised ophthalmology.

But the conditions offered to FRANCESCHETTI were less favorable than those which VOGT had enjoyed. On the other hand, FRANCESCHETTI already had an international reputation in Geneva and he rejected the offer, though Zurich was still the first of the Swiss universities and every professor tried to obtain an appointment there.

Geneva made, in the meantime, substantial and advantageous arrangements to keep FRANCESCHETTI. The Head of the Department of Education of the Canton of Zurich appealed again to FRANCESCHETTI and telephoned him personally. FRANCESCHETTI, however, answered in his typical Swiss-German: „*I have said no and I will not go even if you come and beg me on your knees.*” (This was the actual answer as I was personally present during that historic telephone conversation.)

The authorities of Zurich now turned to MARC AMSLER from the University of Lausanne where he had recently been appointed as chairman. AMSLER accepted the offer and took over as chief in Zurich at the end of 1943 having been nine years professor in Lausanne where he had been born and where he was a citizen.

This was indeed a remarkable feat because AMSLER changed with an astounding facility from teaching in French to teaching in German. He could express himself with ease and use all the intricate idioms of that language. This was probably due to his Germanic genes (the family came from Schinznach, Aargau). His didactic gifts, his distinguished allocution and his Latin charm made him a beloved chief, respected and imitated.

He continued his interest in retinal detachment, keratoconus (on which he worked up to the time of his death), uveitis, aqueous humor and its physiology (report to the *French Ophthalmological Society* in 1954 with FLORIAN VERREY and ALFRED HUBER), and the macula. He supervised in Zurich the theses of 40 students and wrote there more than 30 papers. He contributed to the publication of the *Lexicon ophthalmologicum* and to the Swiss Textbook on Ophthalmology in 1961 (Karger).

AMSLER was an excellent organizer, a systematic worker, a remarkable speaker, a born teacher and a surgeon of the first class. In 1948, he received the *Bowman Medal* in London. He died at the age of 77 on May 6, 1968 in Sierre (Valais) where he had retired in 1961.

He was succeeded by RUDOLF WITMER, born in 1919, a pupil of HANS GOLDMANN (Berne).

Berne

The medical school in Berne was established in 1805 with three chairmen: anatomy, materia medica with pathology, surgery with obstetrics. RUDOLF SCHIFFERLI was the chairman of the Department of Surgery. He published his thesis in Jena in 1798: „*De Cataracta*”. In Berne he was a pupil of FRIEDRICH JUTZELER, physician in Vevey, who came to Berne in order to be the director of the asylum for the blind where he operated on a great number of cataract patients.

The first attempt to teach ophthalmology was made by the professor of surgery of the medical academy in 1825, DAVID RUDOLF ISENSCHMID (born in 1783). His plan, however, was rejected by the government.

In 1834 the academy became a full-fledged university. WILHELM RAU, born in Gießen in 1779, the son of a homeopathic physician, studied first in Erlangen, then in Tübingen, Gießen und Heidelberg. He became Privatdocent and was promoted to associate professor of ophthalmology and pediatrics at the University of Berne in 1834. He requested that an ophthalmologic department be established, but

the authorities again refused this request. For 27 years therefore RAU had to content himself working in a polyclinic. He became a full professor in 1855 and published 13 papers on various subjects. He was the dean of the medical faculty and died in 1861 nearly blind due to chronic nephritis.

His successor was CARL WILHELM VON ZEHENDER, who was born in 1819 in Bremen from Bernese stock. He belonged to a patrician family and one ancestor (Hans Ulrich) had been governor of Chillon. He studied medicine in Bremen, then in Göttingen, Jena and Kiel. As a practising physician, he went to Paris where he became the pupil of DESMARRES. Then he traveled to Prague where he worked with F. VON ARLT and then to Vienna to study with FR. VON JAEGER. He later became a pupil and friend of VON GRAEFE in Berlin and taught dioptrics at GRAEFE's clinic. He became with VON GRAEFE, VON ARLT, WEBER, HORNER, PAGENstecher, H. SCHIESS and KUSSMAUL one of the founders of the *Heidelberg Ophthalmologische Gesellschaft*, which in 1920 became the *German Ophthalmological Society* (see the comments about HORNER in Zurich). VON ZEHENDER was also one of the founders of the „*Klinische Monatsblätter für Augenheilkunde*”. He practiced in Rostock when the University of Berne offered him in 1862 the chairmanship of ophthalmology with the title of full professor.

Like RAU, he demanded that he could establish a separate department of ophthalmology. The authorities in Berne refused and therefore he accepted an offer from Rostock in 1866 where he remained till 1899. Then he worked in Munich till 1907, but returned to Rostock where he died in 1916 nearly 100 years old. He published about 125 papers and concerned himself especially with medico-legal problems.

When CARL WILHELM VON ZEHENDER left Berne in 1866, HENRY DOR was named his successor. He came from a Huguenot family and was born in Vevey in 1835. After the Edict of Nantes, his family left for Wetzlar. One of his ancestors settled in Lausanne and his father was pastor in Vevey. HENRY DOR studied medicine in Zurich, then in Würzburg, in Vienna with VON JAEGER, and in Prague with VON ARLT. In Berlin he became a pupil of VON GRAEFE and worked there for one year and a half. He then was with DONDERS in Utrecht, with SICHEL and his pupil DESMARRES in Paris and finally with BOWMAN in London and with W. MACKENZIE in Edinburgh.

After these long and diverse years of study and preceptorship, DOR established himself in Vevey in 1860. In 1867, he was appointed to the chair in Berne. He worked in three different locations: one hospital was for children, one for female and one for male patients. ERNST PFLÜGER became his assistant. He made another request to obtain an independent eye department, but this was again refused by the authorities. The conditions were so unfavorable that HENRI DOR left Berne and settled in Lyon in 1876 where he founded a local ophthalmological school. He was one of the founders of the *French Ophthalmological Society* (1883) and published with EDMOND MEYER the *French General Review of Ophthalmology*.

He published about 75 papers on various subjects. He followed LUDWIG ZAMENHOF and became convinced that *Esperanto* was the language of the future. ZAMENHOF was an ophthalmologist in Bialystock in Poland (1859 – 1917) who invented Esperanto as a universal language.

When DOR left for Lyon in 1876, his pupil, ERNST PFLÜGER, became his successor. PFLÜGER was born in Buren on the Aar in 1846. He studied in Berne with DOR, then worked with DONDERS in Utrecht and with VON ARLT in Vienna. He was appointed associate professor in 1876 and full professor in 1884.

His scientific interests concentrated on *refraction* (direct ophthalmoscopy as a method for refraction, 1882), on *retinoscopy* (he developed the retinoscope of CUIGNET) and on the *keratometer* of JAVAL. He designed (1882 – 1896) the optotypes which still bear his name and are still used in our days. He wrote also on myopia, the light sense and color vision. PFLÜGER emphasized the important relationship between systemic diseases and ocular conditions. He published more than 100 papers.

The state finally gave him a modest department with 20 beds. He also ran a private hospital with 30 beds, but without an operating room and without an outpatient clinic.

PFLÜGER died in 1903 at the age of 57.

At the time we find in Berne also EMIL EMMERT (born in 1844 in Berne, died in 1911), a pupil of VON GRAEFE, VON ARLT, DONDERS and SNELLEN. He settled in Berne in 1870 and became Privatdocent and later associate professor. He published numerous papers and was considered as successor to HENRI DOR.

The successor to ERNST PFLÜGER was AUGUST SIEGRIST. He was born in Basel in 1865 and studied in Berne, Würzburg, with MARC DUFOUR in Lausanne and later with ERNST FUCHS in Vienna. He was first a general practitioner in Basel, but worked in anatomy and pathology of the eye in a private laboratory.

In 1904, he was appointed to the chairmanship in Berne. His main interest remained the pathology of the eye (optic nerve, retina, uveitis, etc.). He published a monograph on phlyctenular eye disease. He paid special attention to keratoconus and was one of the first to analyze the problems of contact lenses. He studied in detail the anomalies of refraction with STEIGER, as well as the problems of accommodation. He initiated eye examinations in the schools. He dedicated a monograph to the cataract problem. With TROUSSEAU and TRUC of Paris, he presented a report on blindness and the blind in France to the *French Ophthalmological Society*.

According to HANS GOLDMANN, AUGUST SIEGRIST was the first Swiss ophthalmologist to perform a corneal transplant.

SIEGRIST was one of the founders of the *Swiss Ophthalmological Society* in 1908. He died in 1947.

When SIEGRIST retired in 1935, his successor was his pupil, HANS GOLDMANN.

GOLDMANN was born in 1899 in Bohemia and studied medicine at the German University of Prague where two teachers influenced his medical future: the physiologist TSCHERMAK VON SEYSENEGG and the ophthalmologist ANTON ELSCHNIG, gifted surgeon and one of the pioneers in keratoplasty. GOLDMANN became an assistant of SIEGRIST and in 1928 began his long series of scientific publications. There is hardly a field in ophthalmology to which he has not contributed.

His work on cataract and the effect of radiation on the lens remain classic. He constructed a slit lamp, a jewel of precision, which allowed with certain accessories also the examination of the chamber angle, the vitreous and the fundus, even its extreme periphery. GOLDMANN is a designer and a mathematician to whom everything is possible. With WECKERS (of Liege, Belgium), he constructed a perimeter, an adaptometer and several other instruments. His research was concerned with glaucoma, the aqueous humor (where he described the aqueous veins), and the chamber angle. He designed the applanation tonometer. GOLDMANN was the first to point out that retrolental fibroplasia could be due to an overexposure to high concentrations of oxygen.

GOLDMANN was appointed a member of the *Federal Commission on Illumination* and gave courses on physiologic optics at the *Federal Technical Institute*.

Precision was always GOLDMANN's first role in life. He received among others the *Proctor Medal*, the *Vogt prize* in 1946, the *Gonin Medal* in 1962, the *Donders Medal* and the *Gullstrand Medal*.

He published more than 200 papers covering a wide field. In 1968, GOLDMANN retired and moved to Tessin, but continued his investigative work at the eye department in Berne.

His pupil, Professor PETER NIESEL, born 1923, became his successor.

Basel

In 1818, the College of Medicine in Basel consisted of four departments of mainly clinical character.

The first teacher in ophthalmology was CARL STRECKEISEN. He was born in 1811 and studied in Basel, Heidelberg, Berlin, Vienna and Paris. In Heidelberg he was a pupil of CHELIUS, in Berlin he studied surgery and ophthalmology with CARL VON GRAEFE, in Vienna he worked with JAEGER and ROSAS. He worked as a general practitioner in Basel and taught ophthalmology as of 1838. Later he specialized in pediatrics. He died in 1868.

Next to STRECKEISEN, we find IGNAZ HOPPE. He was born in 1811 in Westphalia and studied in Berlin. Later he became an assistant in surgery and then in ophthalmology in Bonn where he was Privatdocent for six years. He was appointed in 1852 as associate professor in Basel. He was an excellent clinician, but his request to become chairman was rejected. He died in 1892.

Between 1823 and 1863, several physicians taught ophthalmology (CARL GUSTAV JUNG, reformer of the Medical College, WILHELM WESSELHÖFT, BERND SOCIN, FRIEDRICH MEISSNER, LUDWIG DE WETTE); this was also done by general surgeons like A. BURCKHARDT, a pupil of VON GRAEFE and of DESMARRES, and by A. SOCCIN.

Only in 1863 was an official course in ophthalmology established with HEINRICH SCHIESS, Privatdocent, as instructor. He was born January 3, 1833 in Heiden (Appenzell). SCHIESS studied medicine in Basel, Würzburg, Munich and Vienna where he learned ophthalmoscopy with EDUARD JÄGER. He was also a pupil of STELLWAG VON CARION.

He was a general practitioner in Grabs (Appenzell), but dedicated more and more of his time to ophthalmology. He then settled in Reute, close to Heiden. This is where ALBRECHT VON GRAEFE frequently spent several weeks taking care of his poor health. GRAEFE was followed there by his patients and his assistants and SCHIESS put his examination rooms at his disposal.

In 1858, VON GRAEFE invited SCHIESS to come as his preceptor to Berlin, where he worked with VIRCHOW and met BAENZIGER and HORNER.

In 1861, SCHIESS opened a practice in Basel and in 1863 he became Privatdocent. In 1864, he was permitted to organize a private eye hospital. This was a charity hospital under the direction of a group of businessmen and clergy. The hospital had six beds and in 1865 he established an outpatient clinic. In 1867, the College of Medicine appointed SCHIESS as associate professor and in 1876 as a full professor. The instruction courses in ophthalmology were still held at his private hospital.

In 1877 the government of Basel decided to support the hospital and made in the official university department allocating an annual budget.

SCHIESS had as chief residents sometimes foreign physicians, such as GALLENGA (1893), and BOSSALINO (1895) of Turin, recommended by Professor REYMOND.

SCHIESS had specialized in ocular histopathology while working with VIRCHOW and he received specimens from Switzerland and foreign countries. However, he never was an investigator, but an excellent teacher and clinician. He published about 64 papers on clinical and histopathologic topics. He directed the theses of 26 students. In 1896, at the age of 62, he resigned due to poor vision caused by high myopia. He died September 12, 1914 at the age of 82 practically blind (retinal detachment, aphakia, myopic macular degeneration) from a stroke.

His successor was CARL MELLINGER, previously assistant and first resident of SCHIESS.

MELLINGER was born in 1858 in Mainz where he started his education. He then continued in Zurich where he began his medical studies which he finished in Basel in 1883. He became an assistant to HORNER in Zurich and then worked with STELLWAG VON CARION in Vienna. In 1885 he was the first and only assistant of the department in Basel. He wrote his thesis on the magnet extraction of foreign bodies at the Basel Hospital in 1887.

In 1888, he became a citizen of the Canton of Basel and began his practice as ophthalmologist. He was appointed Privatdocent in 1889 and became chief of the outpatient clinic sometimes substituting for Professor SCHIESS, whom he succeeded in 1896, when he became chief of the department and associate professor. He inspired a great number of scientific papers and concerned himself especially with the training of his assistants, especially ALFRED VOGT and PAUL KNAPP.

In 1898, the department could be enlarged with the financial help of the state. MELLINGER succeeded in 1904–05 in designating the ophthalmology lectures as mandatory for medical education by the state as had been done previously in Zurich and in Berne.

In 1904, he published his research about the ring-shaped electromagnet which bears his name.

MELLINGER enjoyed life and frequently spent his evening hours with his friends. He died at the age of 59 on May 20, 1917 from a stroke.

MELLINGER had a number of pupils who became famous in Swiss ophthalmology: OTTO HALLAUER, ERNST WÖLFFLIN, PAUL KNAPP, all of whom became Privatdocents; KARL HEGNER (who was also assistant of UHTHOFF in Breslau, and of STOCK in Jena), Privatdocent, and later associate professor, E. WERDENBERG (high altitude clinic at Davos); A. BADER, J. BOURQUIN, O. KNÜSEL, F. KOBAYASHI, AUGUST SIEGRIST (appointed chief in Berne in 1903) and ALFRED VOGT, appointed chief in Zurich. He published about 30 scientific papers.

ALFRED VOGT was the successor to CARL MELLINGER on January 1, 1918. VOGT was born October 31, 1879 in Menziken (Aargau), the son of a teacher. He was first interested in the natural sciences, but later studied medicine first in Zurich and then in Basel. He became an assistant to MELLINGER (1902–1904). For six months he worked with CARLO REYMOND, the excellent clinician in Turin.

VOGT began his practice in 1906 in Aarau and was in 1909 appointed chief of the eye service at the Cantonal Hospital. Here he began his scientific investigations on the effect of ultraviolet and infrared radiation on the lens, and the fundus examination in red-free light. In 1917 he had already published 44 papers.

The authorities of the Canton of Basel appointed him in December 1917 as chief ophthalmologist of the department and as associate professor. This was done against the advice of the hospital board and the medical faculty, both of which had proposed the Privatdocent PAUL KNAPP, who was a citizen of the Canton and VOGT was not. VOGT was at that time 38 years old.

During his five years as chairman in Basel, VOGT enlarged the eye department considerably. His publications were mainly concerned with the examination of the eye by slit lamp microscopy which he had learned after working with ALVAR GULLSTRAND of Sweden, the only Nobel laureate who was an ophthalmologist. In 1921, he published his first atlas on biomicroscopy of the eye. During his lustrum in Basel, he published 60 papers and his assistants published 20. He had some well-known pupils at that time such as BIRKHÄUSER (Basel), SCHNYDER (Soleur), KLAINGUTI (Tessin), KOBAYASHI (Basel) who became acting chairman when Vogt left.

After the death of SIDLER-HUGUENIN (1923), Vogt was appointed chairman of the department in Zurich.

The government of the Canton appointed as his successor in April 1923, ARTHUR BRÜCKNER, who was at that time professor and chairman in Jena. He was born in 1877 in Dorpat on the Baltic. After his medical studies, he became assistant to the physiologist EWALD HERING in Leipzig and then to CARL VON HESS in Würzburg and to EMIL KRÜCKMANN, professor of ophthalmology in Königsberg. He became privat-docent in 1906 and followed KRÜCKMANN when the latter was appointed professor in Berlin.

In Basel he had among his assistants ADOLPHE FRANCESCHETTI who had come from Zurich (VOGT) in 1925, H. K. MÜLLER (Nürnberg) who later became professor in Bonn, F. RINTELEN of Basel, who later became his successor, E. BÜRCKI, his son ROLAND BRÜCKNER and ZUCCOLI, who later practiced in Tessin.

ARTHUR BRÜCKNER's publications were mainly concerned with clinical ophthalmology, physiologic optics, psychophysics and sensory physiology. He was one of the rare and last experts in this field of ophthalmology. He participated with SCHIECK in the publication of the short handbook of ophthalmology which appeared in German in seven volumes. He was also one of the editors of „*Ophthalmologica*“ (the Swiss review which appears at Karger), and later coeditor and prime mover of the *Textbook of Ophthalmology* by the five Swiss professors. Brückner was a remarkable clinician with an encyclopedic knowledge.

When BRÜCKNER was 60, ophthalmology in Basel finally obtained legal recognition as an independent department. In 1933, Brückner became a Swiss citizen. He retired in 1948 and was succeeded by FRIEDRICH RINTELEN who was of German origin, but a fervent Swiss citizen.

ARTHUR BRÜCKNER died in 1975 at the age of 98.

Geneva

Up to 1873, when the College of Medicine was founded, ophthalmology was taught in a course given by the medical faculty of the Calvin Academy which was founded in 1559. The professor of anatomy, who was at the same time a surgeon and ophthalmologist, was JEAN-PIERRE MAUNOIR.

Born in Geneva on October 13, 1768, he studied there and later in Paris. He became a pupil of DESAULT, chief surgeon of the *Hôtel Dieu*. After his graduation, MAUNOIR stayed for a while in England and was in 1809 appointed professor of anatomy of the *Imperial Academy of Geneva*. He taught until 1835, but continued his surgical and ophthalmic practice till his death in 1861.

MAUNOIR published about 20 papers concerned with ophthalmology and the most important ones were about cataract extraction and the operation for an artificial pupil.

Between 1861 and 1869, ophthalmology was not officially taught until AUGUST BARDE arrived. BARDE was born August 6, 1841 and had studied in Geneva. Later he went to Berlin to work with ALBRECHT VON GRAEFE and then to Paris where he was with MEYER and specialized in ophthalmology. He returned to Geneva in 1869 and opened a private clinic. In 1874, ADOLPHE DE ROTHSCHILD founded a hospital and an outpatient clinic for eye diseases and BARDE was its first chief and remained the only physician there until 1902.

When in 1876 the teaching of ophthalmology was officially initiated, BARDE could not accept the chairmanship because the Rothschild Hospital was strictly private. He published several papers about his clinical activities and died in 1914 at the age of 73.

The official instruction in ophthalmology began in Geneva in 1891 with GEORGES HALTENHOFF, the first professor in Geneva. He was born on June 8, 1843 in Geneva and studied there medicine specializing in ophthalmology. He took some training with ARLT in Prague, with LIEBREICH in Paris, with ALBRECHT VON GRAEFE in Berlin and with HORNER in Zurich. In 1874, he became Privat-docent and gave instruction courses in his private clinic. In 1903, he was appointed full professor and the authorities gave him an outpatient clinic, but not any beds for inpatients. This he obtained in 1910 at the place where today we still find the building of the university eye clinic which has since then been remodeled several times.

HALTENHOFF published about 70 papers and died April 25, 1915 at the age of seventy-two.

DAVID ELI GOURFEIN was then appointed chairman of ophthalmology. He was born 1859 in Russia and came to Geneva in 1889 where he studied medicine. He became assistant to BARDE at the Rothschild Hospital where he specialized in

ophthalmology. In 1910, he was appointed Privatdocent and professor in 1915. In 1918 the government finally authorized the construction of an independent eye department with 50 beds and an outpatient clinic. GOURFEIN dedicated a great deal of his time to this construction.

He published several papers about ocular bacteriology, immunity, infectious diseases and congenital anomalies.

His great merit was the revival of the *Revue générale d'ophtalmologie* which had been founded in 1882 by DOR of Lyon and MEYER of Paris. The publication had ceased in 1914 when the first World War started. GOURFEIN published the *Revue* with Professor EPERON of Lausanne, JULES GONIN and ALFRED VOGT. He was assisted by his pupil, Dr. F. H. ALISSON. In 1937 the *Revue* merged with the *Archives d'ophtalmologie* of Paris.

During his university appointment he was assisted by his wife, Madame GOURFEIN-WELT, a pupil of OTTO HAAB and Privatdocent. He retired in 1932 and died in 1940 at the age of 83.

In 1933, the University of Geneva appointed as his successor, ADOLPHE FRANCESCHETTI, who had been chief of the outpatient clinic in Basel under BRÜCKNER. FRANCESCHETTI was born in Zurich in 1896. His father was Italian and his mother from Zurich. He studied in Zurich and became an assistant of HAAB, of SIDLER-HUGUENIN and of VOGT during the years 1921 – 1925. Then BRÜCKNER offered him the position as chief of the outpatient clinic in Basel. From the beginning his unusual dynamic personality, his enthusiasm, his dedication to work and to research were evident.

When he arrived in Geneva, he found a beautiful institute to work in with a rather recently built clinic. However, he had only three foreign assistants and one female Swiss physician. He developed this clinic into an international ophthalmological center for students and physicians from many countries. Soon the name FRANCESCHETTI was known all over the world. One was proud to be his pupil and to participate in his work. He had a propensity to work which was unmatched: instruction courses for students, examination of patients with the most modern techniques, operations, lectures, research endeavors, preparation of manuscripts (not only his own, but also those of his pupils), private patients, etc. He participated in most national and international congresses. Soon he was in the forefront of international ophthalmology. Everything seemed to point to such a position: his intelligence, his unusual memory, his drive to work, his active personality, his enthusiasm and his facility to express himself in four languages.

He founded the *Institute of Medical Genetics* which was later headed by DAVID KLEIN, his pupil and collaborator. He founded the first journal on genetics in French. He became the expert of heredity in ophthalmology: with WAARDENBURG (The Netherlands) and KLEIN he published two volumes on that topic and

with JULES FRANCOIS (of Ghent, another giant of international ophthalmology) and JEAN BABEL the report of the *French Ophthalmological Society* on chorioretinal heredodegenerations.

A specialist of various syndromes, he was interested in everything that had any connection with ophthalmology (neurology, dermatology, pediatrics, etc.). He introduced and improved the technique of keratoplasty with his instruments; he modernized the operation for the formation of a new pupil, which as we have seen above, was introduced by MAUNOIR in 1841.

FRANCESCHETTI published more than 450 papers, 40 of which appeared during his two years of retirement.

Whenever he was present of one of the congresses, he was immediately noticed and seemed to dominate the situation.

He received many honors, but he always remained a great physician. He was always kind and he did not hesitate to put his heart and his entire scientific knowledge at the disposal of the poorest patient. He loved life and humanity. He collected a private library of ophthalmology, which must be the most comprehensive in the world. Among the numerous students of his in Switzerland and in foreign countries, we would like to mention his successor, JEAN BABEL (born 1910) who became chairman of the department in 1966 and retired in 1980, and B. STREIFF, the successor of MARC AMSLER in Lausanne in 1944 who retired in 1978.

ANDRE ROTH (born 1933) of Besançon succeeded Jean Babel in 1980.

Lausanne

The first hospital for eye patients was built in 1844 on the avenue de France where there originally had been an asylum for the blind. This hospital was founded thanks to Dr. FREDERIC RECORDON and to two philanthropists, WILLIAM HALDIMAN and Mademoiselle DE CERJAT.

FREDERIC RECORDON was born August 4, 1811 in Rances in the Swiss Jura. He began his education in Lausanne and later studied medicine in Heidelberg and started his ophthalmology training with CHELIUS. He went to Paris where he became an assistant to SICHEL.

He returned to Lausanne and opened in 1837 a small outpatient clinic for eye patients. The ophthalmic hospital of 1844 had 20 beds and 200 patients were operated on during the course of a year. RECORDON acquired soon a tremendous reputation. In 1866, when he was also chief of public health, he requested as his first assistant MARC DUFOUR.

The latter was born in Villeneuve in 1843 and studied in Lausanne, Berne and Zurich. From 1865 to 1869 he was an assistant of LIEBREICH and of CLAUDE

BERNARD in Paris. In Berlin he worked with ALBRECHT VON GRAEFE and in Zurich with FRIEDRICH HORNER.

When in 1869 MARC DUFOUR arrived at the ophthalmic hospital in Lausanne, there were 24 beds and an outpatient clinic with a considerable number of consultations.

In 1873, a new building with 40 beds was constructed following the advice of HORNER of Zurich. There were two nurses and the assistant was occasionally also the director of the asylum for the blind and not a physician!

In 1872, MARC DUFOUR had the idea of extracting a metallic foreign body from the vitreous with an electromagnet. He did not report this operation until 1883; therefore, this procedure is generally attributed to HIRSCHBERG of Berlin (1879). MELLINGER wrote a thesis of this topic in 1887 and HAAB introduced his method in 1892.

FREDERIC RECORDON retired in 1881 and MARC DUFOUR succeeded him. RECORDON died in December 1889.

In 1885, MARC DUFOUR finally was joined by an assistant, Dr. LOUIS VERREY (father of ARNOLD and grandfather of FLORIAN), a previous assistant of F. HORNER.

MARC DUFOUR played an important role in the foundation and development of the University of Lausanne. He was a member of the committee which studied the possibility of developing a medical school in Lausanne. Only anatomy and physiology had previously been represented in the committee. Finally, the Academie of 1536 became the College of Medicine in 1888 and MARC DUFOUR was appointed chairman of the ophthalmology department in 1890. The department was still housed in the ophthalmic hospital, the previous asylum for the blind.

MARC DUFOUR was also from 1890 – 1892 the first dean of the young College of Medicine and president of the university from 1894 – 1896.

In 1892, a second physician was appointed to the faculty, AUGUSTE DUFOUR, son of LOUIS, the brother of MARC. In 1901 another faculty member was appointed, JULES GONIN, who had been an assistant since 1896.

MARC DUFOUR was extraordinarily active: he had his patients in the eye hospital, he gave courses to the students, he worked scientifically, he participated in the organization of the *International Congress of Ophthalmology* over which he presided in 1904 in Lucerne. His reputation extended all over the world. He published a great number of papers mainly concerned with medical treatment and surgical procedures. With JULES GONIN he wrote the chapter on retinal diseases and the one on optic nerve pathology in the *French Ophthalmic Encyclopedia*.

He died July 29, 1910 suddenly after an intracranial hemorrhage.

From 1910 to 1920 the old eye hospital did not fulfill anymore the functions of a university clinic. The government wanted to appoint a foreign professor as director of the asylum for the blind, but SAMUEL EPERON, the Privatdocent, who was born in 1857 and was a pupil of E. LANDOLT, was appointed professor. He had to content himself with 20 eye beds in the Cantonal Hospital without an outpatient clinic and without any material for teaching students. The students heard a course given by the Privatdocent, JULES GONIN, in the old eye hospital.

When SAMUEL EPERON died in 1920, JULES GONIN was appointed professor. He was assisted by OTHMAR DUFOUR, the son of MARC, and by MARC AMSLER who had become Privatdocent in 1928. The eye department of the university returned to the asylum for the blind.

JULES GONIN was born August 10, 1870 in Lausanne where he studied medicine with the exception of one semester in Berne. In 1896, he became assistant to MARC DUFOUR whom he helped write two chapters in the *French Encyclopedia of Ophthalmology*, one on the retina and the other one on the optic nerve.

Since 1900, GONIN had been interested in retinal detachment; he presented the results of his investigations before the *International Congress in Lucerne* in 1904. Since then, guided by his teacher MARC DUFOUR, he concentrated his efforts on the etiology and treatment of retinal detachment. In 1921 he became convinced that closing a retinal hole, which is the cause of the detachment, would be the only way of curing it.

It was not until 1933 in Madrid at the *International Congress* that his theory became generally accepted and patients from all over the world flocked to GONIN to be operated on.

One of his first pupils was his junior staff member, MARC AMSLER, others were HERMENEGILDO ARRUGA of Barcelona and WEVE of Utrecht.

He received the *William Mackenzie Medal* in Glasgow and an honorary degree from the University of Strasbourg. He was considered for the *Nobel Prize* when he died after a prolonged and severe attack of migraine on June 7, 1935. Just before that he had participated in the May congress of the *French Ophthalmological Society* in Paris.

Posthumously, The *German Ophthalmological Society* awarded him the *Albrecht von Graefe Medal*. In order to honor his memory, the *Swiss Ophthalmological Society* and the University of Lausanne decided to award a gold medal every four years on the occasion of the International Congress to an ophthalmologist of outstanding merits. Between 1940 and 1978 the following received the Gonin Medal: VOGT of Zurich (1941), BAILLIART of Paris (1945), ARRUGA of Barcelona (1950); SIR STEWART DUKE-ELDER of London (1954), A. WOODS of Baltimore (1958), H. GOLDMANN of Berne (1962), J. FRANCOIS of Ghent (1966), G. MEYER-SCHWICKERATH of Essen (1970), D. COGAN of Bethesda (1974), and N. ASHTON of London (1978).

The International *Club Jules Gonin* was founded in 1959 with the purpose to study the treatment of retinal and choroidal diseases. A memorial plaque has been erected over the entrance of the asylum for the blind and another one can be found at the entrance to the Montbenon Park which is crossed by a street which carries the name of Jules Gonin.

When GONIN died, OTHMAR DUFOUR was appointed chief ophthalmologist of the hospital. He died August 10, 1940 at the age of 64.

Privatdocent MARC AMSLER was appointed successor of Jules Gonin. He had become associate professor in 1935 and chief ophthalmologist of the hospital in 1940.

MARC AMSLER was born February 15, 1891 in Vevey. He studied in Lausanne and became assistant to OTTO HAAB in Zurich, later to EPERON in Lausanne and finally worked with JULES GONIN. In 1928 he was promoted to Privatdocent.

He was professor in Lausanne for nine years and published 94 papers, a monograph on the aqueous humor and studies on retinal detachment and keratoconus. Following his investigations on macular function. This was a modification of the test used by LANDOLT.

In 1944 he was appointed full professor, but then moved to Zurich as the successor of Alfred VOGT.

In Lausanne, AMSLER had among his students JEAN RUMPF, RENÉ DUFOUR, the grandson of MARC DUFOUR, FLORIAN VERRY, the son of ARNOLD and the grandson of LOUIS, all were also assistants in the eye hospital. FLORIAN VERREY went with his teacher to Zurich. There he became Privatdocent and associate professor. His health prevented him from attempting to follow his teacher and he died in 1976.

JEAN RUMPF remained on the faculty until he retired. He devoted much of his time to administrative matters of the eye hospital.

RENÉ DUFOUR was Privatdocent and then associate professor. He helped the successor of MARC AMSLER, E. B. STREIFF, with great devotion, intelligence and an enormous capacity to work. Thanks to this cooperation the eye department in Lausanne kept its high international standards.

The successor of MARC AMSLER, E. B. STREIFF, was a foreigner to the canton Vaud. He was appointed in 1944 and remained chairman for 35 years until he retired in 1978. He had many Swiss and foreign students and among them were: EDDY ROSSELET, Privatdocent, JEAN-FRANCOIS CUENDET, Privatdocent and then associate professor, CARLO STUCCHI, Privatdocent, and director of the ophthalmology service in Mendrisio and in Lugano, and finally CLAUDE GAILLOUD, born in 1930, Privatdocent, who was appointed to the chair of ophthalmology in 1978 when it returned to a native of the canton Vaud.

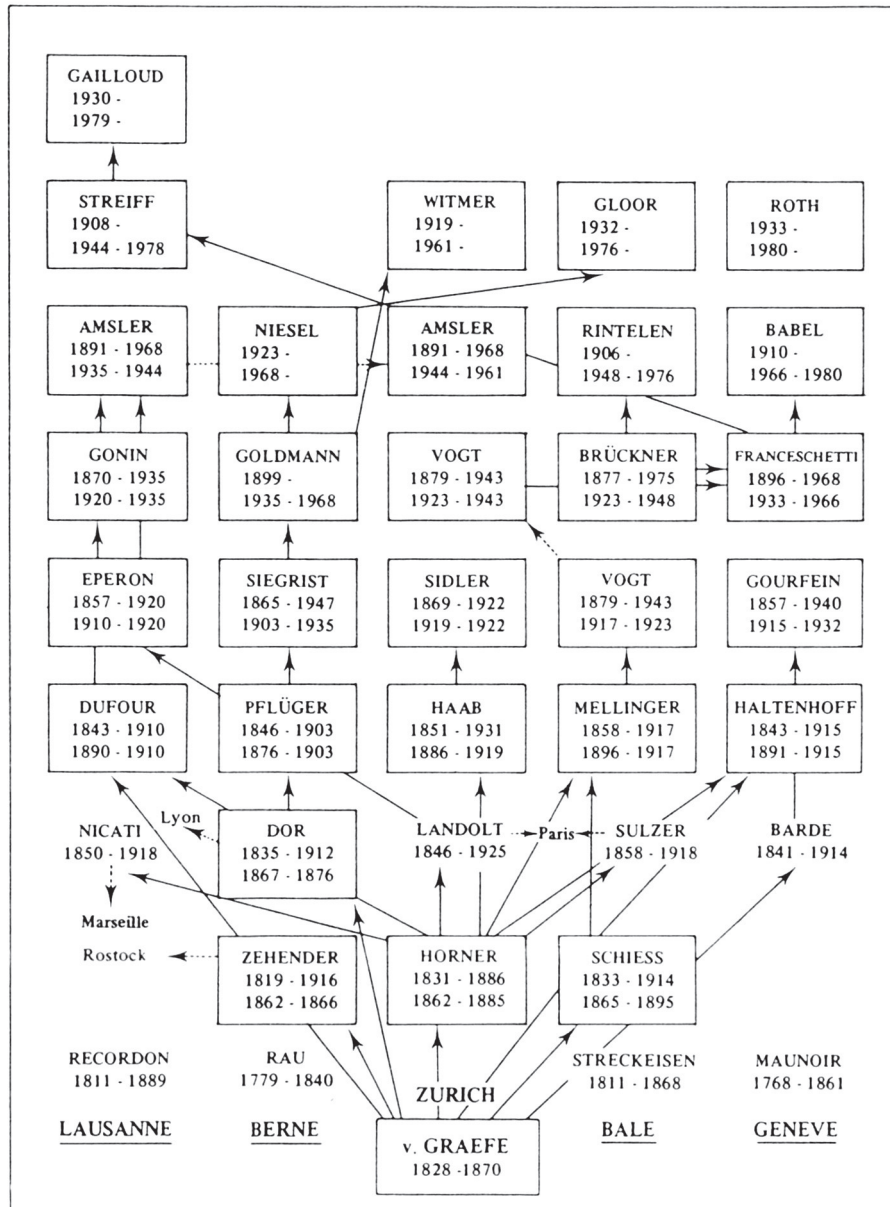


Fig. 1: Genealogical Tree of the Swiss Professors of Ophthalmology

Conclusion

ALBRECHT VON GRAEFE and his pupil FRIEDRICH HORNER were the teachers of the first chairmen of ophthalmology in Switzerland at the time when new universities and medical colleges were founded. In this way a certain unity was established among the Swiss ophthalmological departments. They could understand each other and there was a certain parallelism in their method of work.

We owe to these innovators of modern ophthalmology our ophthalmologic and our intellectual development. This has continued into our times. This was the reason why the 237 participants of the 9th International Congress in Utrecht in 1899 asked the Swiss to organize the 10th International Congress in 1904. At that time international congresses were held every five years.

The Organizing Committee of the 10th International Congress consisted of: MARC DUFOUR, president, E. PFLÜGER, vice-president, MELLINGER, secretary and treasurer, HAAB, SIEGRIST, BARDE, STOCKER (Lucerne), GONIN and LANDOLT (Paris). E. SNELLEN, Sr. was the honorary president. Lucerne was chosen as the site for the congress which apparently was a great success. Four hundred forty members participated, representing 25 countries.

In 1927, at The Haage, 43 delegates from 24 countries organized the *International Federation of Ophthalmic societies* and constituted the first *International Council of Ophthalmology*.

In 1908, the *Swiss Ophthalmological Society* was founded and among the organizers were MARC DUFOUR, JULES GONIN, OTTO HAAB, GEORGES HALTENHOFF, AUGUSTE BARDE, CARL MELLINGER and AUGUST SIEGRIST. The latter was the first president and JULES GONIN was the secretary.

Since its foundation, the Swiss society holds an annual congress.

Summary

The author reports the history of the ophthalmological clinics in Zürich, Bern, Basle, Geneva and Lausanne. Albrecht von Graefe and his pupil Friedrich Horner were the common teachers of the first professors of Ophthalmology in Switzerland, so that one could establish a pedigree, of which the „great-grandfather” was von Graefe.

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STREIFF, E. B. – La genealogie de l'enseignement ophtalmologique en Suisse**Resumé**

L'auteur rapporte l'histoire des cliniques ophtalmologiques de Zurich, Berne, Bale, Genève et Lausanne. C'est Albrecht von Graefe et son élève Friedrich Horner qui ont été les maîtres communs des premiers professeurs d'Ophtalmologie en Suisse, de sorte qu'on a pu établir un arbre généalogique dont l'„arrière grand-père" est Von Graefe.

STREIFF, E. B. – Eine Genealogie der ophthalmologischen Ausbildung in der Schweiz**Zusammenfassung**

Der Autor berichtet über die Geschichte der Augenkliniken in Zürich, Bern, Basel, Genf und Lausanne. Es waren Albrecht von Graefe und sein Schüler Friedrich Horner, die die Lehrer der ersten Generation Schweizer Professoren der Augenheilkunde waren. Daher ist es möglich, einen Stammbaum der Schweizer Ophthalmologie aufzustellen, dessen Ahnherr Albrecht von Graefe ist.

STREIFF, E. B. – La Genealogia de la ensenanza oftalmologica en Suiza**Resumen**

El autor nos cuenta la historia de las clínicas oftalmológicas de Zurich, Berna, Basilea, Ginebra y Lausana. Fueron Albrecht von Graefe y su discípulo Friedrich Horner los maestros comunes de los primeros profesores de Oftalmología en Suiza, de manera que se ha podido establecer un árbol genealógico en el cual el bisabuelo es Von Graefe.

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