

## Prof. Eber Landau, the very first chief of Histology and Embryology Department at the University of Lithuania

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**Summary.** The article deals with the scientific activities of professor Eber Landau carried out in Estonia, Lithuania and Switzerland. Professor E. Landau was born November 8, 1878, in a merchant's family in Rezekne, Latvia. On leaving a classical high school in Riga, E. Landau studied at the Medical Faculty of Tartu University, graduating it in 1902. Later he improved his qualification in histology and anatomy at Villafrenk Zoology station, at the Histology Laboratory in Munich, and in St. Petersburg under the guidance of professor P. Leshaft. In 1906–1912 Landau worked as a prosector assistant at the Anatomy Institute, headed by professor A. Rauber, Tartu University. In 1912 he was elected a director of the Anthropology Institute, Tartu. On the outbreak of the First World War, E. Landau, as a Russian citizen, was called to the army and served as a neurologist and psychiatrist in Paris military hospitals. In 1918, E. Landau returned to Bern and for 5 years worked at the Anatomy Institute headed by prof. H. Strasner. In December 1, 1923, E. Landau moved to Kaunas University. Here he established the Department of Histology and Embryology and headed the Department till 1932. From 1932 till 1950 Eber Landau worked as a professor at the University of Lausanne. Professor E. Landau retired in 1950, but he still continued his research work in the field of neurohistology. Professor E. Landau died October 30, 1959. He left behind him an ample scientific heritage: 175 scientific publications and 12 doctoral theses done under his guidance.

Eber Landau (Abraam Eber Girshovitch Landau) was born October 26, 1878, in Rozhitze (at present Rezekne). In his curriculum vitae E. Landau points out that “by my birth place I am a Latvian” (in his official documents it is also written: nationality – Latvian, citizen – of Latvia). In his own life story Landau writes: “I come of an old Jewish family, which was already known for its kindheartedness even in the 14<sup>th</sup> century in Pfälce (Bavaria). My surname is derived from the name of a local town Landau, which is in Kurpfälce (Bavaria)”. This finding was confirmed by investigations done by prof. Nadeis, manager of Landau Town museum (1, 2).

E. Landau's parents were merchants. They had 4 children in the family and Eber was the eldest of them. At first he was educated in Rezekne, and some time later attended a classical gymnasium in Riga. His parents wanted him to be a businessman, but their efforts failed because Eber had no interest in doing business. He was fond of observing nature and things of art.

On graduating a classical high school in Riga, Eber succumbed to innate practicality of his family and decided to take up a course of medical studies at the Medical Faculty of Dorpat University (in those days it was called Emperor Yuryev University or at present Tartu University). On finishing the course of medical studies in 1902, he received physician's diploma, allowing him to practice medicine. While being a student, E. Landau wrote an interesting research work on “Moral and Political views of Evrinid”. For this work he was awarded a silver medal by the University.

E. Landau improved his qualification working at the Villafrenk Zoological Station where he did investigations of the nervous system of Ctenophora and studied artificial insemination of marine hedgehogs. In 1903, E. Landau had a course at the histology laboratory in Munich and in 1903–1904 he worked as an assistant at the Anatomy Institute under the guidance of prof. P. Leshaft in St. Petersburg.

In the autumn of 1904, Eber Landau returned to Dorpat University and prepared his doctorate thesis

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**Fig. 1. Prof. Eber Landau at the Department of Histology and Embryology of the University of Lithuania**

on microscopic anatomy, physiology and pathology of the suprarenal glands. He did this work under the guidance of prof. V. A. Afanasjev (1, 2, 4).

In 1906–1912, E. Landau worked as a prosector assistant at the Anatomy Institute, headed by a famous professor A. Rauber, whom E. Landau called to be his long-standing tutor and adviser. Under his guidance and influence, E. Landau grew ripe as a young scientist and educator, constantly acquiring rich knowledge and improving his practical skills both in teaching methodology and in doing scientific research work.

On passing examinations May 29, 1907, E. Landau maintained his doctorate thesis and was conferred a scientific degree of Doctor of Medicine. In 1909, E. Landau was elected an associate professor at Dorpat Yuryev University, and in 1912 he was appointed director of the Anthropology Museum of Dorpat University (3). In 1909, E. Landau got married. His wife's name was Gemahlin. In 1913, E. Landau left Dorpat University and became an associated professor at the University of Bern. Two years later, in 1915, E. Landau was appointed an Extraordinary Professor of Anatomy and Somatic Anthropology at the University of Bern. In 1920, he was Editor of the Department of Man and Nature of the University Journal "Revue de Biologie Sociale" (1, 2).

During the First World War (1915–1918) E. Landau was working as a military physician. As a citizen of Russia, Eber Landau was called up to the Russian Army by the Russian Embassy in Bern. He was sent to France where he was appointed to serve in a military hospital. He worked there as a neurologist at the Charlot Clinical Hospital for 18 months. The Hospital was headed by professor J. Dejerine (3). While working there, E. Landau acquired rich information and collected copious neurological materials (over 8000 of cases) for his future research work. Collaborating with prof. J. Dejerine and his wife, E. Landau wrote an extensive article on the connections in the development of the skull and the brain. In 1917, he discovered a new type of reflexes in the upper extremities, the so-called radiopronator superius reflex, or Landau reflex (3).

On the death of prof. J. Dejerine, Eber Landau moved to work in the Val-de-Grace military hospital. There he worked at the Psychiatry Department headed by doctor Brian. Some time later E. Landau was appointed an assistant to the Chief of the First Sanitary Department of Russian Army in France. During the final period of his military service in the Russian Army, E. Landau was made Chief of the Second Evacuation Commission. In 1918, on his own request, he was dismissed from the service in the Army and he returned to the University of Bern in Switzerland (1, 2).

During the war, prof. E. Landau had a good chance to improve his qualification not only in Paris, but he also stayed for a short time in Munich with prof. S. Mollier, dr. A. Bohm, and in Zurich at the Anthropology Institute he was working with prof. C. V. Monakow. He also visited some other universities in Western Europe (3).

On returning to the University of Bern, E. Landau worked as an extraordinary professor at the Institute of Anatomy, headed by prof. H. Strasser.

Switzerland, particularly Bern, became his new homeland, where he earned the citizenship of Switzerland. His scientific activity and ample relations with scientists of other countries greatly expanded. Prof. E. Landau was elected a corresponding member of the Medico-Psychological Society of Paris, and a Member of the Society of Anthropology in Rome (1, 2).

In May 1923, prof. E. Landau was invited to come to Kaunas to take the position of professor and chief of the Department of Histology and Embryology at the University of Lithuania. On receiving his consent, the Board of the Medical Faculty elected prof. E. Landau a chief of the Department of Histology October 25, 1923. At the age of 45, in the prime of life, prof. E. Landau arrived in Kaunas November 28, 1923.

He started performing his duties as a head of the Department of Histology and Embryology December 1, 1923 (8, 9).

All organizational chores of establishing a new Department fell upon his shoulders. He had only one person to help him in the work. It was a young physician Juzė Bubėnaitė who had formerly worked at the Department of Anatomy, headed by prof. J. Žilinskas. Doctor J. Bubėnaitė was appointed to assist prof. E. Landau in establishing the Department of Histology and Embryology.

Initially, the Department of Histology and Embryology had only one room in the building housing the Faculty of Medicine. The building was located on the corner of two streets: K. Donelaičio and Gedimino. At that time prof. E. Landau and his assistants had to prepare specimens for demonstration of samples, they also carried out experiments there and held classes with students in the same room. However, very soon other four rooms located in the same building were assigned to the needs of the Department. A large laboratory was established there and equipped with all necessary devices and other two rooms were made ready for students to have practical classes there. One small room was assigned as a study room for chief of the Department to work there. Some time later, prof. E. Landau worked out a new project for constructing a larger and more convenient layout of the Department. Realization of the plan started only in 1931, soon before prof. E. Landau left Lithuania for Switzerland.

In the period of 1923–1926, the personnel of the Department of Histology and Embryology consisted only of two persons (Chief of the Department prof. E. Landau, and a senior assistant J. Bubėnaitė). One more person, Dominyka Kesiūnaitė, was appointed as a junior assistant to the Department July 1, 1931, and October 1, 1931, a medical student Juozas Masevičius was also appointed as a senior prosector to the Department of Histology and Embryology. Prof. E. Landau was working with these specialists to the very last moment of his departure from Lithuania (2).

At the outset, the Department had very few devices and apparatuses. From the Department of Anatomy they managed to get only a few laboratory instruments and devices necessary for laboratory works in histology. But it was almost impossible to make experiments and prepare proper specimens with such outdated instruments. They were in dire need of new and modern laboratory devices and microscopes. They were also short of dyes, chemical substances and other things. Some time later, they borrowed 2 microscopes from the Department of Anatomy, and one microscope was



**Fig. 2. Prof. Eber Landau with research workers at the Department of Histology and Embryology of the University of Lithuania**

The left to right J. Masevičius, J. Bubėnaitė, D. Kesiūnaitė, prof. E. Landau.

presented as a gift by dr. E. Bliūdžiūtė. Therefore, the very first measures were taken to provide the Department with the most important instruments and devices necessary for developing scientific and educational work. However, lack of money hindered the progress of research and education. Sometimes they were compelled to purchase some outdated, inefficient and low-quality microscopes in order to create some better conditions for carrying out laboratory works with students. However, with time, they managed to provide two students with one microscope.

Professor E. Landau bought some new instruments himself and brought them from abroad. Soon the Department obtained 3 small microtomes, one large microtome for brain dissections, 2 thermostats, 2 sets of samples depicting embryo development, lots of films and slides with subtitles in the Lithuanian language. Attempts were made to establish a photolaboratory and a specialized library at the Department. Thanks to all these organizational efforts, the Departments of Histology and Embryology was significantly enlarged and enriched.

At the outset of his activities in Kaunas, prof. E. Landau was allowed to deliver lectures in Russian language in a two-year course, giving him a chance to improve the skills of his Lithuanian language. But he managed to learn the Lithuanian language sooner than in two years. It is known that in those days the Department had no visual aids to demonstrate histological specimens, everything had to be drawn on the blackboard using chalk of different colors. Prof. E. Landau did his best in organizing such activities at the Depart-



**Fig. 3. Professor of the Faculty of Vytautas Magnus University in 1930**

In the front row: E. Landau, P. Raudonikis, K. Buinevičius, V. Tumėnienė, J. Koruža, J. Bagdonas, dean V. Lašas.  
The back row: J. Žilinkas, J. Blažys, P. Mažylis, P. Avižonis, A. Jurgeliūnas, P. Vinteleris.

ment, providing it with clear and methodical principles used even at the present time. Prof. E. Landau had a rich working experience, because he had seen and worked in many other medical schools in various modern universities in Europe. His methodical experience and practical activity were readily used by the teaching personnel of other departments who were interested in histological techniques. For example, Austra Bebis, a laboratory assistant from Riga University, when attending qualification courses at the Department of Histology in Kaunas created a new method for staining muscle tissues.

Prof. E. Landau was a prominent figure in education. He used to deliver very interesting lectures to students; he was also good at drawing histological pictures on the blackboard. When he was at home, he used to paint pictures. One of such pictures he presented as a gift to the Department. Prof. E. Landau was fond of playing chess and violin. He also distinguished himself as a writer: he wrote two volumes of short-stories called “Doctor’s stories”. Prof. E. Landau was always neatly dressed, he used to dance with elegance and he willingly attended social gatherings of students.

Prof. E. Landau was also a prominent scientist. During his working period in Kaunas lasting 8.5 years,

he wrote scientific articles mainly on neurohistology and histological techniques. At that time prof. E. Landau was particularly interested in anatomical structure of the cerebellum. He also discovered a new type of cells in the granular layer of the cerebellum, called the synamotic cells. Prof. E. Landau was always searching for some new ways of fixation and staining. In his attempts to dye the cellular nucleus, he produced a dying substance derived from the needs of sunherbs growing in his garden and called it by the name of the plant “Sunherb” (6). Prof. E. Landau invented some new ways of fixation, dying, and impregnating histological tissues, and he wrote the very first manual on histological techniques in the Lithuanian language (7).

Every year prof. E. Landau arranged demonstrations of some new and important scientific inventions and preparations for medical personnel. He delivered scientific reports in Kaunas University and in some universities abroad. In 1925–1929, prof. E. Landau carried out ideological seminars and discussions with proponents of Darwinism (professors P. Avižonis, V. Lašas, T. Ivanauskas, dr. J. Šliūpas et al.), defending his theory of vitalistic biological relativity propagated in his lectures and articles (5).

In 1930, prof. E. Landau attended an International

Conference on medical synthesis in Riga, presenting a report there, and in 1931, he delivered a report at the conference of neuropathologists in Bern. Prof. E. Landau used to deliver public lectures on medical and biological questions.

As a man and chief of the Department, prof. E. Landau was a true gentleman, reserved, tactful in behavior with professors, colleagues, students and his opponents in disputes. E. Landau had private practice as a specialist of nervous diseases as well.

On resigning from duties April 21, 1932, prof. E. Landau, his wife and two daughters left Kaunas (2). He arrived in Lausanne as a highly qualified specialist and a well-known scientist. With all his vigor and energy prof. E. Landau plunged into the scientific work and educational activities at the University of Lausanne. From the very beginning of his career in Lausanne, he greatly missed his colleagues left in Kaunas. For a long time he maintained contacts with Kaunas specialists, sending them his newest reprints of scientific works and letters describing his achievements. Unfortunately, soon the Second World War broke out, disrupting almost all mutual contacts.

Prof. Landau's personality was recalled in Kaunas in 1948 when at the session of all-Union Agricultural Academy in Moscow, academician T. D. Lysenko launched a biting attack on the followers of Veisman and

Morgan, thus condemning them and Soviet biologists for showing interest in genetics instead of focusing their attention on Michurinist biology in order to solve agricultural and cattle-breeding problems of socialist farming. Such remarks meant condemnation and doing away with genetics and those who advocated it. This blow put an end to the development of investigations in genetics in the Soviet Union at best for two decades.

Some time later, in October 1948, a joint session of the Lithuanian Academy of Sciences and of the USSR Ministry of High Education took place in Vilnius. The session was devoted to the development of biological sciences in Lithuania. At the session Landau's theory of biological relativity and its Lithuanian proponents were subjected to criticism and condemnation (10).

On arriving in Lausanne, prof. E. Landau continued his research work on the morphology of the cerebellum, initiated at Kaunas University. Later he shifted his attention to the study of some other neurohistology themes: he investigated the autonomic nervous system, peripheral nerves, cytoarchitectonics and myeloarchitectonics of different areas in the brain, at the same time continuing his investigations into histological techniques. He was also interested in some other histological themes, such as the parathyroid gland, the alimentary tract, including investigations of the brain anatomy. Prof. E. Landau was an academic supervisor of 12 dis-



**Fig. 4. Teaching staff and students of the University of Lithuania came to see prof. E. Landau off leaving for Lausanne in 1932**

sertations and he took an active part in scientific conferences and international congresses. When attending the congress of anatomists in Berlin in 1934, he recommended prof. Vera Danchiakova to the Department of Histology and Embryology of Kaunas University.

His health growing weaker, in 1950 prof. E. Landau resigned from his duties at the University of Lausanne, staying there as an honorary professor till the very last

day of work in neurohistology (3).

Professor E. Landau died of a heart attack October 30, 1959. He left behind him an ample scientific heritage: 173 publications and 12 doctoral dissertations done under his guidance. Most of his works were written in French and German languages, but there were lots of articles written by him in English, Russian, Lithuanian, Italian, Polish, and Latvian languages.

## Prof. Eber Landau – pirmasis Lietuvos universiteto Histologijos ir embriologijos katedros vedėjas

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**Raktažodžiai:** histologija, embriologija, medicinos istorija, Landau refleksas.

**Santrauka.** Straipsnyje aprašoma pirmojo Histologijos ir embriologijos katedros vedėjo prof. Eber Landau mokslinė veikla, kuri susijusi su Estija, Lietuva ir Šveicarija.

Eber Landau (Abraam-Eber Giršovič Landau) gimė 1878 m. spalio 26 d. Latvijoje, Rožice mieste (dabartinėje Rezeknėje), pirklių šeimoje. Baigęs Rygos gimnaziją, E. Landau įstojo į Dorpato universiteto (tuomet vadinamo Imperatoriškuoju Jurjevo universitetu, dabar – Tartu universitetu) Medicinos fakultetą. Išklaušęs kursą ir išlaikęs baigiamuosius egzaminus, 1902 m. gavo gydytojo diplomą. Baigęs universitetą, tobulinosi dirbdamas Vilafranko zoologijos stotyje, Miuncheno histologijos institute bei pas prof. P. F. Leshaft Anatomijos institute Petrapilyje. 1912 m. E. Landau buvo paskirtas Dorpato (Jurjevo) universiteto Antropologijos muziejaus direktoriumi. Pirmojo pasaulinio karo metu E. Landau, kaip Rusijos pilietis, dirbo kariuomenės gydytoju Karo ligoninėje Paryžiuje. 1918 m. grįžo į Berno universitetą ir penkerius metus dirbo ekstraordinatoriniu profesoriumi Anatomijos institute vadovaujant prof. H. Strasser. 1923 m. gruodžio 1 d. prof. E. Landau pradėjo dirbti Kaune Lietuvos universiteto ordinariniu profesoriumi bei Histologijos ir embriologijos katedros vedėju iki 1932 m. balandžio 21 d. Nuo 1932 iki 1950 m. prof. E. Landau dirbo profesoriumi Lozanos universitete. 1950 m. prof. E. Landau atsisakė šių pareigų Lozanos universitete, liko Garbės profesoriumi ir iki paskutinės dienos dirbo neurohistologijoje.

Prof. E. Landau mirė nuo širdies smūgio 1959 m. spalio 30 d. Jis paliko gausų mokslinių darbų palikimą – 173 spausdintus darbus ir 12 vadovautų disertacijų.

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