



History and development of teaching Anatomy in Masaryk University - Brno



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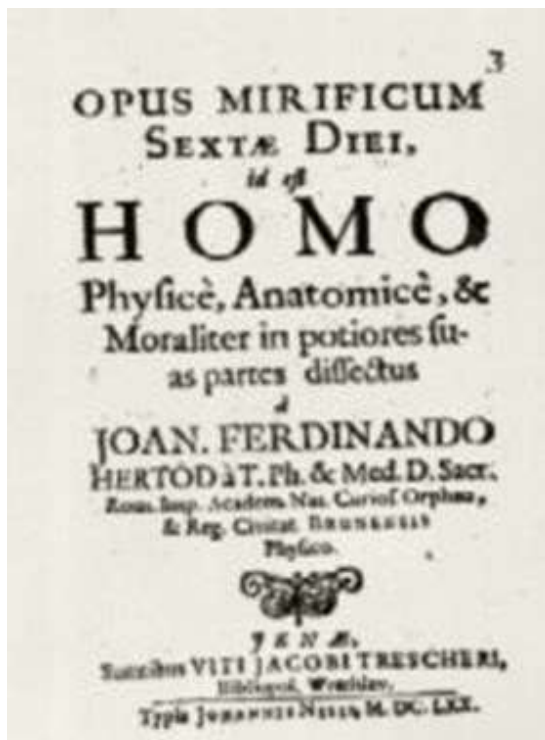
Masaryk University School of Medicine

History and development of teaching Anatomy

Anatomy has been practised in Brno at least since the end of the 16th century. In 1594, Jiří Ludwig, an alderman, made a record in municipal chronicle about an autopsy carried out on the corpse of an executed woman by doctor Simon Grynaeus on 28 November 1594.

After graduating in Heilberg, Doctor Grynaeus studied with the prominent anatomist Gaspard Bauhin in Basel and later settled down as a municipal medical doctor in Brno. In 1600, he moved to Olomouc as the second provincial medical doctor. One of Grynaeus published works has been preserved, in which a Caesarean section on a dying mother is described (“Esectio vivi foteus a Bauhino”, Frankfurt 1601).

Adrian van den Spieghel (Spighelius) (1578-1625) who later became a prominent anatomist, worked in Brno as a provincial medical doctor during 1615-1616. He came during very insecure times, when the dispute between the Catholics and Protestants was approaching its climax. Therefore, he accepted the opportunity to go to Padua to practice anatomy. Alongside Vesalius, Eustachius, Casserius and Riolanus, he ranks among the best anatomists of his time. One of the liver’s lobes, lobus Spighelii (lobus caudatus), bears his name, as is the linea semilunaris Spighelii. He correctly pointed out that the diaphragm and intercostal muscles cause thoracic movements during breathing.



Another anatomists in Brno was Medicinæ et Theologiæ Doctor Jan Ferdinand Hertodt of Todtenfeld. He was a provincial doctor in Brno, and later he became the personal doctor of Emperor Leopold I. From 1699, he was a member of the “Imperial Society of the Natural

Sciences" in Nurnberg. In 1671, he published the anatomical study known as "Opus mirificum sextae diei"- The amazing work of the sixth day (about mechanical composition of the human body). The level of anatomy in this interesting Baroque textbook corresponds to the period in which it was published as it contains more philosophical views and opinions rather than real anatomy. Nevertheless, Hertodt's book still remains the first anatomy book published by an author from Brno.

Another important evidence of practicing anatomy in Brno is an old coat of arms of the surgeons and bath house owners/barber's guild in Brno. The bath house owners/barbers of those times could also perform small medical procedures. The lapis-blue rectangular coat of arms depicts an autopsy table with a female cadaver. There is also a man bending over her with an anatomical knife in his hand. Saints Cosmas and Damian, the patrons of medicine, are standing at the sides of the table. This old coat of arms was approved by Leopold I. in 1691.



In the 18th century, under the reign of Maria Theresa, there were attempts to reorganize and improve medical care. The empress' personal physician van Swieten proposed to establish provincial commissions and drafted a detailed reform of teaching at faculties of medicine. Due to his position, he presided over all examination boards and particularly emphasized the importance of comprehensive knowledge of anatomy.

In its communication dated from the 12th of February 1753, the Provincial Medical Commission in Brno provided a detailed justification of the proposal for establishing a facility for anatomy education in Brno aiming to ensure education of qualified surgeons and bath house owners/barbers. The empress immediately accepted the request and on the 24th of March 1753 she established the "Collegium anatomicum" in Brno with the purpose to train surgeons. Carl Lintz (1711-1788), a prominent Brno townsman and regional medical doctor, became the head of this institution and was named a professor of anatomy.



As early as May 1753, Professor Lintz submitted a detailed plan for teaching anatomy. Theoretical teaching (with lectures twice a week) was to be organised over the period of ten months in a following manner: the first three months were devoted to bones, cartilages, muscles and veins, another two months to blood and limbs, and the remaining five months to skin, mucous membranes and viscera. The winter months were supposed to be used for practical teaching, and particular for dissection. Professor Lintz planned to give lectures in his flat temporarily and dissection were to take place in the Hospital of the Merciful Brethren. He also proposed in his plan that during the dissection of a female body, an anatomy lecture for midwives would be given. Lintz suggested that the so called “Schelleberg’s House” be bought for the Collegium Anatomicum (interestingly, the owner of the house at that time, Karel Emanuel Schellenberg, was a Brno townsman who worked as a professor of anatomy at the University in Vienna between 1742 and 1754). The financing of the entire project was, however, an irresolvable problem. In the end, the attempt to establish the Collegium Anatomicum as the first educational institution for anatomy teaching in Brno failed due to financial reasons and a lack of interest from relevant officials and authorities.

Another attempt to introduce anatomy teaching in Brno was connected to a reform in the teaching of midwives. As a part of their training, the medical requirements also prescribed lectures on anatomy and dissection of a female body. In 1763, Doctor Dittmann, a provincial medical doctor in Brno was named a professor of obstetrics. However, this project, too, failed as it came up against insurmountable financial difficulties and absolute disinterest from the side of the local authorities.

In 1777, Gottlieb (Amadeus) Feichter (1747-1801), a Vienna healer and obstetrician, was called to Brno based on the recommendation of the University in Vienna and entrusted with teaching obstetrics. In autumn of the year 1778, the university was moved from Olomouc to Brno and a department of healing and obstetrics was established as a part of the university. Feichter became an external teacher of anatomy, surgery, and obstetrics. He had similar problems with the local authorities regarding the organization of anatomy teaching as had had his predecessors. The building of the Jesuit college was the site anticipated to be devoted to anatomy. The building was unfit for use, but an ambitious project was prepared for constructing a department of

anatomy that would have been very modern for its time. Unfortunately, this plan, too, was not executed. The difficulties with finding a location for the department lasted three years and Professor Feichter had to reduce anatomy teaching to theoretical lectures that he held in his flat. Not a single dissection took place during that time. A suitable placement for the department was finally settled upon by the superior authorities' decision to build the "University House". In cellar spaces, in a part originally planned for a university prison, two rooms were devoted to the teaching of anatomy.



It appeared that nothing could hinder the initiation of full-fledged teaching in November 1782. However, on the 12th of September 1782, by the decree of Emperor Joseph II the university was returned to Olomouc. Naturally, the college of surgery was transferred to Olomouc as well, so the short period of anatomy teaching in Brno ended in 1782.

In the second half of the 19th century, attempts to open the second Czech university grew and cadres of new teaching staff were being prepared, in particular at Charles University in Prague.



Among them was the anatomist Otomar Völker. Professor Völker was born in Votice in 1871. He studied at the Faculty of Medicine of Charles University and while studying he also worked with Professor Janošík at the Department of Anatomy. In 1905, he habilitated in the field of general and comparative anatomy. In 1911, he was appointed an external professor and at the same time was entrusted with teaching anatomy of domesticated animals at the Technical Universities in Prague. His teaching activity was interrupted by the First World War, during which he worked as a successful military surgeon. When the war ended, he returned in 1918 to the Department of Anatomy in Prague.

In 1919, Masaryk University and the Veterinary University were opened in Brno. In the same year, Professor Völker was appointed a full-time professor and at the same time he was entrusted with running the departments of anatomy for both universities. He put down solid foundations for the departments, he equipped them, gave lectures, and ran anatomy examinations for both medical students and future veterinary doctors.



The Department of Anatomy of Masaryk University was temporarily situated in the former militia barracks at Údolní Street (today no. 53). It also housed the Department of Anatomy of the Veterinary University. After Professor Studnicka, the head of the Department of Histology and Embryology, returned to Prague in 1934, Professor Völker for a short time took up teaching histology and embryology (until Professor Florian joined the Department in 1936).

In addition to his work at the departments of anatomy, Professor Völker contributed to both of the universities with achieving high academic positions. Between 1920 and 1921, he was the dean of the Faculty of Medicine of Masaryk University and from 1921 to 1922 he was the rector of the Veterinary University. This school showed its appreciation for his contribution to veterinary medicine by awarding him an honorary doctorate in 1923. In 1927, he ended his activity at the Veterinary University, handed over its anatomy department to docent Kolda, his student, and devoted his attention solely to the Department of Anatomy of the faculty of Medicine at Masaryk University. Between 1928 and 1929, professor Völker worked as the rector of Masaryk University.

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Professor Völker was fully occupied with building the two departments of anatomy, equipping them, building dissecting rooms and libraries while at the same time lecturing on anatomy at both schools. He no longer had time and energy available to publish (he arrived to Brno when he was 48 years old). Most of his works were published by the beginning of the First World War in Prague. During his time in Brno, he was able only to complete his largest and most significant work on embryology, "Normentafeln zur Entwicklungsgeschichte des Ziels (Spermophilus citillus)", which was published in 1922 and met with wide acclaim within the academic circles. In the 1930s, he began to work on an anatomy textbook together with professor Hora, his student. It is a pity that circumstances did not allow him to complete the book. In 1939, only the first volume, *Nauka o kostech* (The Science of Bones), was published.



In March 1939, Professor Völker retired and Professor Karel Hora (1901-1942), his student, took over the Department. However, Professor Hora had no time to prove himself as the head

of the Department, because the Czech universities were closed. Professor Hora was arrested for his resistance activity and in 1942 he was executed at Mauthausen.

When the Second World War ended, the life's work of Professor Völker was in ruins. Professor Hora had died in a concentration camp and the Department of Anatomy of the Faculty of Medicine of Masaryk University practically did not exist. After the Faculty of Medicine's reopened, Professor Völker returned to work at age 74 to participate in organization of teaching. At the same time, he was entrusted with executing the position of the Faculty's dean. However, his advanced age and declining health did not allow him to be fully engaged in the work. Upon taking up his office as the duly elected dean, therefore, Professor Völker turned immediately to resolving the situation of the Department of Anatomy. At the request of the Faculty of Medicine leadership, a Prague professor, Karel Žlábek, joined the department. After the new head took up his responsibilities, Professor Völker retired in 1945 once and for all, although he still actively participated in selected anatomy lectures until 1950. In 1950, Professor Völker retired from public life, and he died in 1955 in Svitávka na Moravě.



Professor Karel Žlábek was born in 1902 in Hrdlořezy near Třeboň. He graduated from Faculty of Medicine at Charles University. In 1925, he became a laboratory teaching assistant at the Department of Anatomy and after graduation he worked as an assistant to Professor Weigner. A great interest in natural sciences brought doctor Žlábek to the Faculty of Natural Sciences at Masaryk University, where he studied anthropology and zoology. In 1933, he was habilitated in general anatomy. In 1945, he was called to the Faculty of Medicine at Masaryk University and entrusted with the management of practically non-existent Department of Anatomy, and Department of Histology and Embryology.

It was necessary to rebuild both of the departments. During the WW2 occupation, the staff had left for various other jobs and anatomical specimens from the museum had been transported to the Department of Anatomy of the German Faculty of Medicine in Prague (Professor Gösser). The library had been taken over by the University Library in Brno. Moreover, after the end of the war, the theoretical departments could not return to the original building. Upon agreement with the administration of the Technical University, Professor Josef Podlaha (the dean of Faculty of Medicine) exchanged the buildings on Úvoz street for the buildings of the former German Technical University. Professor Žlábek chose the ground floor in the building at Komenského náměstí 2 for the Department of Anatomy (at that time, the space was occupied by the Czechoslovak army until August).



At beginning, Professor Žlábek focused on lecturing for a huge number of interested students whose studies had been suspended during the pre-war years, and on doctoral examinations. During August and September, the army released the premises at Komenského náměstí, which were gradually adapted to the needs of the department. The Museum of Anatomy (using the original specimens from Professor Völker's department) and the library, to which books from the University Library depositories were returned, were rebuilt. The adaptation of the department was completed in spring 1947. Renewal of the Department of Anatomy did not, however, end the organizational problems for Professor Žlábek. In parallel, he was establishing a new Department of Histology and Embryology. Žlábek's duties in this new department ended in spring 1953, when doctor Karel Mazanec joined the department and took over its management.

Re-establishing both departments and teaching all morphological subjects required enormous amounts of effort and time on the side of Professor Žlábek. In a relatively short period and despite all difficulties, he managed to build exemplary pedagogical and scientific centres. Among other tasks, there was an urgent need in the post-war period to provide appropriate educational literature for hundreds of students. Professor Žlábek executed even this task

successfully. His *Overview of Human Anatomy*, *Introduction to Topological Anatomy*, *Dissection Exercises*, *Histology*, and *Embryology* became important textbooks for generations of students.

Professor Žlábek was the head of the Department of Anatomy until his 60th birthday in 1962, when he turned the Department over to Professor Přemysl Poláček. Professor Žlábek died in 1986 in Brno.



Professor Poláček was born in 1921 in Děčín. He graduated from the Faculty of Medicine at Masaryk University, and he started to work at the Department of Anatomy at the Military Academy of Medicine in Hradec Králové in 1951, where he habilitated in 1960. In 1961, he left for the Department of Anatomy at our Faculty of Medicine and in 1962 he was entrusted with its management. He was particularly instrumental in laying the foundations for the laboratory of electron microscopy and establishing the museum of X-ray anatomy. Due to his political affiliations he was removed from the position of the head of the Department in 1970 by the communist regime, and in 1972, at the age of 51, he was forced to leave the Department of Anatomy. Until his untimely death in 1980. He worked as a technician at the Department of Pathology of the Faculty of Medicine at Masaryk University where he was also prohibited to publish any findings.



Professor Lubomír Malinovský (1931-1997) took over the management of the Department in 1972. He was born in Šelešovice by Kroměříž. He held medical degree from the Faculty of Medicine at Masaryk University and became an assistant at the Department of Anatomy in 1956. Professor Malinovský lead the Department for 20 years. He built a modern laboratory of electron microscopy and wrote complete educational texts on anatomy. Thanks to his strong political affiliation to the regime, the Department developed to an acceptable level under the management of Professor Malinovský. After the revolution in 1989, he became undesirable for the Faculty. In 1990, he was demoted from the managerial position at the Department of Anatomy. He retired in 1991, and during the following years he worked at the Catholic University in Rome. Professor Malinovský died in 1997.



In 1990, Professor MUDr. Libor Páč, CSc. (1941-2020) took over the leadership of the Department of Anatomy. After graduating from the Faculty of Medicine at Masaryk University,

he joined the Department of Anatomy in 1964 and gradually passed through all teaching positions. He studied the ultrastructure of sensitive nerve structures, the ultrastructure of individual optical environments of the eye, the problematics of the existence of smooth muscle cells in the wall of large glandular outlets and the variability of muscles and blood vessels. He is also an author of a number of textbooks for medical students.

Professor Páč headed the Department of Anatomy until September 2006, when its management was entrusted to prof. RNDr. Petr Dubový, CSc (1952).



Prof. Dubový studied biology at the Faculty of Science, Masaryk University in Brno. He joined the Department of Anatomy of the Medical Faculty at Masaryk University in 1978 as an assistant and gradually went through further pedagogical positions. He received his habilitation (1994) and was appointed a professor (2000) in the field of normal anatomy at the Faculty of Medicine, Masaryk University. From 1994 to the present, he is also the head of the Cellular and Molecular Neurobiology research group. In his research projects, he deals with cellular and molecular interactions between the neurons and glial cells during development, regeneration of the nervous system, and the development of neuropathic pain using light and electron microscopy, histochemistry, immunohistochemistry, and molecular biology. For three years, he worked at the Anatomical Institute Karolinska Institutet in Stockholm and BMC in Uppsala (1993-1996).



In September 2019, doc. MUDr. Marek Joukal, Ph.D. (1987) was commissioned to lead the Department of Anatomy. He graduated with honors from the Medical Faculty at Masaryk University in 2013 and was also awarded the Rector's Award for the best students in the master's program. During his studies under the guidance of Professor Dubový, he researched the barriers of the nervous system and the spread of neuroinflammation after peripheral nerve damage to higher levels of the nervous system. In 2017, he received a prestigious Prospek-Fulbright scholarship for a research internship at the University of Minnesota in the USA, where he conducted electrophysiological study of opioid receptors in the skin under the guidance of Professor Christopher N. Honda. Upon his return, he built an electrophysiological laboratory in the Department of Anatomy. The research in this laboratory now combines the methods of molecular biology and electrophysiology. In his research, he also works closely with forensic physicians. Together with clinicians, he organizes professional courses for pregraduate and postgraduate students focused on clinical anatomy.

For the majority of its existence, the Department of Anatomy had been housed in premises that were temporary, and therefore quite unsatisfactory. Under the leadership of Professor Völker, the Department was located in barracks for a provisional period of 20 years. Under the leadership of Professor Žlábek until the year 1998, the staff was forced to work in unsatisfactory temporary conditions of the former German Technical University. In 1998, the Department of Anatomy moved to Bohunice, to the premises of the former Research Department of Medical Technology. The Department's activity continued to be carried out in temporary conditions until September 2001, when a brand new modern facility opened. This facility fully corresponded to the requirements at the beginning of the new millennium. At the same time, it became the first part of the newly constructed Masaryk University campus that was completed in 2006.