

History of the department

1949 - 1987

History of the institute has begun in **1949** when as part of a branch of Medical faculty of Comenius University Institute of medical chemistry was formed. Institute was located on the first floor of the building in Kuzmány street. **Anton Neuwirth, M.D.** was appointed the first head of the Institute for medical chemistry who was later succeeded by **assoc. prof. Dezider Tomkuljak**.

The Institute was divided into two departments on June 22, 1952 by the decree of Faculty council: **Department of medical chemistry** and **Department of Biochemistry**. Department of Biochemistry was relocated into the premises of Department of Forensic Medicine and Department of Pharmacology.

The head of the Department of Medical Chemistry as a part of Department of Chemistry and Physics was **assoc. prof. Dezider Tomkuljak** since 15.2.1954 till 1.9.1957, who contributed to the development of the department by equipping and adapting laboratories for chemistry. On September 9. 1957, **prof. Konštantín Barna, Ph.D., M.D.**

The Department of Biochemistry was conducted by **assoc. prof. Timotej Turský, Ph.D., M.D.** between 1954 – 1957, later succeeded by **assoc. prof. Pavol Mäsiar, Ph.D., M.D.** between 1957 – 1969. In 1962 the Department of Biochemistry was relocated from temporary premises to a new building of theoretical institutes of Medical Faculty at Šrobár Street (currently part of Institute of chemistry, Faculty of Science, P.J. Šafárik University in Košice). Department of Biochemistry has begun to develop in both research and pedagogical activities. When **assoc. prof. Pavol Mäsiar, Ph.D., M.D.** left for his long-term stay in Australia he appointed two of the employees responsible for pedagogical and research, respectively – **assoc. prof. Ján Jacina, Ph.D., M.D.** and **Jozef Adam, Ph.D., M.D.**

Consequences of Russian occupation of Czechoslovakia led to reunification of both institutes under the **Department of Medical Chemistry** in 1971. **prof. Konštantín Barna, Ph.D., M.D.** was appointed the new head of the joint department. The original Department of Medical Chemistry was relocated to the same building of theoretical institutes where the Department of Biochemistry already resided. Newly formed department also got the control of Central isotope laboratory, and thus a large complex of chemical departments with resources to ensure development of chemical and biochemical research in the whole East Slovakia region was established.



Konštantín Barna

During this period the department covered teaching of Medical Chemistry in 1st year and Biochemistry in 2nd year of study in two study programs; general and dental medicine. Independent teaching of both subjects for dental medicine students begun in 1974. Professor Barna was author of the first book about medical chemistry published in slovak language named: “Úvod do lekárskej chémie” (Introduction to Medical Chemistry) comprising 950 pages (Fig. 1a)

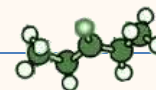


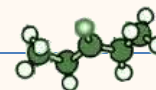
Fig. 1 a) First published book about Medical Chemistry; b) Employees of the department in early 1980s.

Research activities of the Institute were established during years in the main fields: effects of environment on living organism, connections between metabolism and diseases, xenobiochemistry, application of fluorescence in study of living systems, and others. The institute also offers its facilities for Ph.D. students, diploma theses and various other student research activities. Research activities also contributed to increasing knowledge of the teachers of the department (Fig. 1b).

Pedagogical activities of the department developed even further in 1986 after another relocation to the newly built building of the theoretical departments of Faculty of Medicine at Trieda SNP 1 where it is located to this date. An important improvement were the new laboratories for practical exercises. As a part of national rationalization voluntary work novel equipment was produced and later used in the teaching process (Fig. 2). **Assoc. prof. Eva Barnová, Ph.D.** from the Department of Medical Chemistry was part of this work group. With the help of Video centre of the Faculty of Medicine the department produced their own instruction videos for practical exercises. Through the collaboration on national level a new book for students named "Lékařská chemie a biochemie" (Medical chemistry and biochemistry) was published in addition to the separate book for the practical exercises.



Fig. 2 prof. Nemečková, prof. Musil, assoc. prof. Barnová and assoc. prof. Mézešová on a meeting of national rationalization voluntary work.



1987 - 2004

In 1987 **assoc. prof. Jozef Adam, Ph.D., M.D.** was appointed head of the department and stayed in office till 1991. During this period the name of the department changed to **Department of medical chemistry and biochemistry** while it covered subjects of medical chemistry and biochemistry. According to the motion of the faculty board department was also entrusted with lectures from clinical biochemistry for the students of 6th year. Research activities of the department have been divided into three teams led by assoc. prof. Jozef Adam, Ph.D., M.D., assoc. prof. Eva Barnová, Ph.D. and Dr. Jozef Kušník, Ph.D. Advantage of team work was that research continued in previously established work groups, however none of these groups was strong enough to compete with other departments of the faculty or on the national level. First attempts to join the groups brought only partial success.



Jozef Adam

In 1989, the democracy movement opened new possibilities for the department as well as individual employees. On October 1 1991 the management of the department was taken over by **assoc. prof. Jaroslav Kušník, Ph.D.** In the new social environment there was a need for new priorities; better opportunities for self-realization of individuals, responsible work in research to achieve results of international level leading to an increase of self-confidence of the department. To increase quality of pedagogical process and improve the position of chemical disciplines on the faculty the subjects were extended by 28 hours per semester dedicated mostly to applied organ and clinical biochemistry.



Jaroslav Kušník

In 1997, the initiative of employees of the department led to reopening of the branch of Slovak society for biochemistry and molecular biology of Slovak academy of science in Košice. Due to the number of its members from the department and organization activities, the department became centre of this branch. This step increased importance of the department on both regional and national level.

An important advance of the department was the possibility to further educate our own young graduates in Ph.D. study programme of biochemistry which was established in 1996 and continued in cooperation with Faculty of Science until a separate study programme of clinical biochemistry was created. Two doctoral candidates successfully defended their thesis as a part of the above-mentioned cooperation.

International collaboration of the department also significantly increased in this period, leading to visits of professors from abroad as well as stays of our employees on foreign universities (USA, Norway, Austria, Germany, Hungary, Czechia). Department organized conference named **"Biochemistry and medicine"** for teachers of chemical and biochemical subjects from Slovak and Czech faculties of medicine in Danišovce on 22. – 23. 5. 2003. There were 24 lectures in pedagogical section and 19 in research section. A comparison of the curricula and associated time schedule of subjects taught on the respective faculties in Slovakia, Czechia and in Europe reported by prof. Bergendy (Fig. 3)

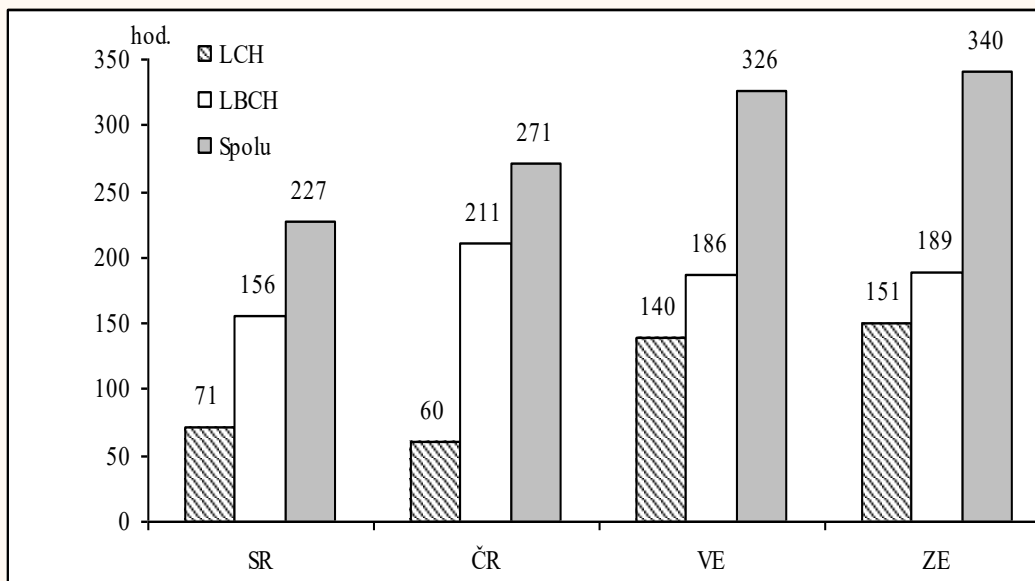
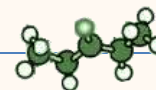


Fig. 3 Teaching of medical chemistry and biochemistry at faculties of medicine in 2003. (LCH – medical chemistry, LBCH – medical biochemistry, ČR – Czechia, SR – Slovakia, VE – East Europe, ZE – West Europe)

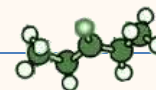
2004 - 2012

On February 2 2004, **prof. Juraj Guzy, Ph.D.** was appointed new head of department. Under his supervision, **doctoral study programme 7.1.25 Clinical biochemistry** for third degree of higher education was accredited. This fact contributed to further improvement of research activities, while young postgraduates have become new members of the department. Doctoral candidates were educated not only under supervision of the employees of the Department of medical and clinical biochemistry, but also of other departments (assoc. prof. J. Sabo, Ph.D., assoc. prof. J. Veselá, DVM, Ph.D., Dr. A. Bomba, Sc.D.) with a support of research projects (VEGA and APVV). Members of the department also took part in KEGA projects for pedagogical activities and the quality of the equipment of the department was increased thanks to the structural funds of EU (CEMIO, CEEPM) and two scientific centres (PROBIOTECH and DIAGONKO).



According to the decree of Academic senate of FM UPJŠ and based on the agreement to form educational base, on March 16 2006 a new **Department of medical chemistry, biochemistry, clinical biochemistry and Labmed, a.s.** was formed by fusion of the department of medical and clinical biochemistry with Labmed, a.s. company.

Pedagogical activities of the department encompassed the broadest spectrum of covered subjects, while in addition to study programmes of general and dental medicine, also bachelor study programmes of nursing, midwifery, physiotherapy, public healthcare and laboratory diagnostic methods (LVM). The department was responsible for the most important subjects of LVM study programme including Laboratory methods in clinical biochemistry, Analytical chemistry and Clinical biochemistry. During this period there was also a number of diploma theses supervised by the department, mostly in the study programme LVM.



2012 – present day

Based on recommendation of the dean and declaration of the Academic senate FM UPJŠ on September 15 2011, the name of the department was changed to **Department of medical and clinical biochemistry and Labmed a.s.** Following the selection process, **prof. Mária Mareková, Ph.D.** on March 1 2012 was appointed head of the department.



The most important achievements of the members of the department include successful realization of projects supported by structural funds of EU (CEMIO – HepaMeta, CEEMP, PROBIOTECH and DIAGONKO), renovation of laboratories of medical chemistry and biochemistry and reaccreditation of study programme **7.1.25 Clinical biochemistry**, where in addition the Ph.D. studies also habilitation (4 successful candidates) and inauguration process takes place. There are currently 17 students of the doctoral studies (38 have successfully defended their theses) in internal and external form of study. List of the former doctoral candidates along with their professions is available at the department website.

On April 1 2014, Labmed a.s. company became part of MEDIREX a.s. which also took over all its commitments. Therefore the name of the department was changed back to **Department of medical and clinical biochemistry**. The cooperation lasting for over 10 years of have not ended, it has only advanced into a different level. Highly specialized laboratories of MEDIREX became part of a separate educational base and the cooperation expanded from pedagogical to research activities.



Members of the department successfully organized **15. conference** for teachers of biochemical subjects on faculties of medicine in Slovakia and Czechia, which took place at UPJŠ in Košice on May 21. - 23. 2015. Representatives of 10 faculties of medicine were present at the conference, including doctoral candidates.

The quality of the pedagogical process is ensured by regular revision and innovation of study materials as well as e-books which are available for the students not only on the Portal of UPJŠ FM in both Slovak and English language, but also in Wikiscript and Mefanet.

Currently the teachers of department (1 professor, 6 associate professors, 6 assistant professors and two research associates) cover the subjects of Medical chemistry, Medical biochemistry and Clinical biochemistry for students of general and dental medicine in Slovak and English language, Basic biochemistry for the bachelor study programmes (nursing, physiotherapy and public healthcare) as well as Laboratory diagnostic methods for students of public healthcare. Members of the department are also responsible for supervision of diploma theses of general and dental medicine students and research theses of students (ŠVOČ). Information on doctoral studies, including list of supervisors, and topics of both current and previous dissertation theses are presented on the department website.



History

Department of Medical and Clinical Biochemistry



Research activities of the department are supported by projects focused on fluorescence spectral characterization of complex solutions, application of molecule biology methods in diagnostics of diseases and study of the effect of foreign compounds at subcellular level. Research is currently financially supported by 4 VEGA projects led by members of the department and the department is also participating on 3 VEGA additional projects and 2 APVV projects. Recent research activities of the department and publication of the results in CC journals shows that the department belong to the most active departments at Faculty of medicine. Regular reports about research activities can be found on the department website.

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