

A BRIEF HISTORY OF THE DEPARTMENT OF BIOCHEMISTRY AND FOOD TECHNOLOGY¹

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Abstract

A short review is given by the author about the history of the Department since its foundation till today's jubilee symposium held to celebrate the 75-th anniversary of its foundation.

The Chemistry Division of the 214 year old Technical University in Budapest made a decision in 1905 about the foundation of the Department of Agricultural Chemical Technology and at the same time invited Dr. Elek Sigmond, the world-famous and internationally acknowledged soil chemist, to act as head of the department. Professor Sigmond started his activity as head of the new department. In 1908. the program of the department included lectures: 'Investigation of food products', 'Wine chemistry', 'Production of spirit, beer, and vinegar'. In 1912 Professor Sigmond introduced in the teaching plan laboratory exercises in food analysis.

After 1910 the idea of the foundation of new departments at the Chemistry Division was raised several times. Finally, in 1920, after the chair became vacant in the Department of Animal Science, the Chemistry Division decided about important changes in the teaching activity, bearing in mind the agricultural character of the country and the good perspectives for the development of industries connected with agriculture. The professors expressed their views concerning the necessity 'to give better education in the topics of agricultural-chemical technology and food chemistry'. In the proposal introduced by Professor Sigmond the following arguments were included:

'Evaluating the possibilities of reconstruction and further development of our country, it is clear that first of all the more effective use of soil for production of agricultural goods, and the maximally efficient process-

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ing of raw materials and food products are stone corners of the renewing of Hungarian economy. The prerequisite of the realization of the aims mentioned above is the establishment of strong contacts between agricultural production and up-to-date techniques. To make these contacts it is necessary to assure for all technicians working in the agricultural production and food processing a continuous basic education in related sciences at the Technical University. There is a need not only for chemical engineers but for engineers involved in soil improvement and also for mechanical engineers working in the field of mechanization of agricultural production. Concerning teaching programs of chemical engineers, under our conditions, there is a need for enlarging teaching programs in the field of soil science, fertilization, animal feeding, and, in addition, in agricultural chemical technology, food chemistry and other aspects of processing in food industry'.

The Chemistry Division, based on propositions recommended – to avoid budgeting difficulties – the reorganization of the former Department of Animal Science to the Department of Food Chemistry. This recommendation was accepted also by the University Council and approved by the Ministry of Culture, and Professor Mihály Vuk was nominated as first head of this department.

Mihály Vuk was born in Budapest in 1876. He graduated from the University of Zürich (Switzerland) in 1898 as a chemical engineer, and received his Ph. D. degree at the same university in 1899. In 1901 he moved to the Technical University in Budapest and acted as lecturer under the leadership of Professor Vince Wartha at the Department of Chemical Technology. In the years 1902–1903 he was employed by the Research Station of the ministry of Agriculture in Mosonmagyaróvár together with the well-known Hungarian scientist Tamás Kosutány. In 1903–1904 he was director of a casein factory in Budapest and added practical experience to his theoretical knowledge. In 1905 the State Institute for Chemistry was the place of his activity where he achieved good results in wine chemistry. For a short time he was also the head of the Experimental Station in Kassa. His scientific activity was awarded in 1911 with the Kossuth-prize by the Hungarian Engineers' Association. In the same year he became 'private' professor at the Technical University in the topic: 'Control of the food falsification'. Here I should like to mention for young scientists, however, the scientific degrees known today were not granted by the Academy. Scientific degrees were donated by universities. The first degree was the dr. univ. and the higher one the 'private' professorship. This was not only a title giving high authority to the person awarded, but also a right to include a lecture in the teaching program of the university and an obligation of the university to assure a teaching/lecture room. Only one higher degree existed at this time, the title of extraordinary professor. This title did not mean fur-

ther rights, nevertheless it was an advantage in decision about nominations of heads of departments.

Mihly Vuk, starting with his nomination, during his 30 years of professorship realized a pioneering activity in the education of specialists for food industry. He had lectures in 'Food Chemistry', 'Food Technology', 'Food Analysis', 'Wine Chemistry' and 'Nutrition'. He organized laboratory exercises in food analysis, and in a two year period also in chemical technology. Beginning from 1938–1939, the number of lectures was reduced and the obligatory topics were Food Chemistry I-II.' and the laboratory practice in food analysis.

As facultative subject remained 'Wine Chemistry'. Later (1932) a new topic was introduced, 'Technical microscopy', with a new senior lecturer Zoltán Sándor, who received the 'private' professor degree in 1937 and worked more than 20 years at the department. Later he was nominated to head of Department of Agricultural Chemical Technology. In the topic of food science (vitamins) also Gábor Vastagh received the 'private' professor degree in 1944.

Mihály Vuk published many papers in Hungarian and foreign journals. His books played a pioneering role in the Hungarian scientific literature on food science. His 'Composition of Hungarian flours' (1929), 'Food Chemistry' (Published in 1934 together with Zoltán Sándor) enriched not only the Hungarian scientific literature, but also were highly evaluated internationally. It should be noted that at this time very few books were published and students generally used handwritten material prepared based on lecture notes.

Mihály Vuk acted also as dean of the faculty in 1928–1929. In 1950 he was elected by the Hungarian Academy of Sciences to chairman of the Committee for History, and in 1952 he received the scientific degree of 'doctor of chemical sciences'.

At the beginning, the Department of Food Chemistry was located in the 'Chemistry building (together with the Department of Agricultural Chemical Technology) and it was transferred to the 'Central building' to its present place only 11 years later. At this time the staff of the department was small, in 1936 1 professor, 1 senior lecturer and 1 lecturer were acting, and next year an additional one. Since the fall of 1942 one 'half-time' lecturer came to the staff. The number of technical staff was 3.

I wish to mention some people whose scientific activity started at the department. Here acted as lecturer Pál Spanyol later head of division in the Central Research Institute of Food Industry, Jenő Tóth, who was a lecturer of the Department of Agricultural Chemical Technology, in the years 1941–1943 Károly Vas (later director of the Central Research Institute for Food Industry), a member of staff was, in 1941–1942 Jolán Mészáros who later

acted as toxicologist at the University of Zürich, and myself being the successor of J. Mészáros, and working 54 years at the department.

In the winter 1944–1945 the events of war caused great damage to the university. Buildings and laboratories were ruined. The staff, led by the professor started reconstruction immediately after the war ended, not waiting for external help. After some months we succeeded in reconstructing some rooms and a laboratory, and in the summer of 1945 it was possible to start teaching. The staff also made some reparations of instruments. General reconstruction started later and was finished in 1949.

At the beginning the number of students varied between 50 to 70. Later a gradual decrease occurred and during the economical world crisis in 1931 only 6, in 1932 only 4 students were registered. This number later increased to 90 at the end of war. A decrease occurred after the war and in the forties about 70 students were registered. Mihály Vuk retired in January 1948, however, till the nomination of his successor he continued his lectures in Food Chemistry, and was active in research until his death (25 November 1952).

On 1. November 1950 László Telegdy Kováts became the new head of the department. He was born in Galgóc (Nyitra county), obtained his M.Sc. degree in chemical engineering in 1925, and his Ph.D. degree in 1927 from the Technical University of Budapest. In 1926–1927 he acted as lecturer at the Department of Agricultural Chemical Technology. In 1927 he moved to the State Chemical Institute, and in 1942 he was nominated to technical director of sugar industry. Since 1949 he was the head of the sugar industry division of the Ministry of Light Industry. On April 25, 1946 he received the title of 'private professor' from the University of Agriculture. In 1952 he obtained the scientific degree 'doctor of chemical sciences'. He was a member of several Hungarian and, international scientific organizations.

The nomination of Telegdy Kováts opened the way for further development of the department. In 1951 four, and in the following year two new lecturers joined the staff. With the support of the Hungarian Academy of Sciences, a researcher and a technician were also employed. In addition, with the financial help of the Hungarian Academy of Sciences the instrumentation of the department started.

Together with the development of staff and economic conditions, an extension of the teaching activity was realized. In 1968 'Biochemistry' was introduced as an obligatory subject, and 'Preservation of foods', 'Food rheology', 'Food packaging' and 'Bioactive food constituents' as new facultative lectures. Starting in 1956, the department became involved also in the education of mechanical engineers (lecture in Food Chemistry and Food Microbiology).

Many textbooks were published, among them the new books on food chemistry and technology [1, 2]. The department took part in the post-graduate training of engineers, organizing different short and long (with certificate) courses. In 1969 a second professor was nominated to the department, Radomir Lásztity. Radomir Lásztity was born in 1929 in Deszk. He received his M. Sc. degree at the Technical University of Budapest in chemical engineering and his Ph. D. degree in 1961 at the same university. He began his activity at the university as lecturer in 1951, in 1959 he became senior lecturer, and in 1963 was nominated to assistant professor. In 1968 he received the scientific degree 'doctor of chemical sciences' from the Hungarian Academy of Sciences. In 1969 he was nominated to professor. Radomir Lásztity acted as vice dean of the Faculty of Chemical Engineering in the years 1966–1970, and as vice rector of the University in Budapest in the period 1970–1976. The period in the seventies was a period of further development of the department, increasing international cooperation in teaching and research. A number of new textbooks and some monographs [3, 4, 5] and handbooks [6, 7] were published.

The duty of the head of the department was taken over from Radomir Lásztity by András Salgó. András Salgó was born in Budapest in 1951. He received his M. Sc. degree at the Technical University of Budapest in chemical- and bioengineering in 1974. In the same year he started his activity at the department as lecturer. He obtained his Ph. D. degree in 1981. András Salgó was nominated to professor in 1993, and in the same year to head of the department. Since 1993 he has been acting as vice dean of the Faculty of Chemical and Bioengineering.

References

1. and 2. TELEGDY KOVÁTS, L. – HOLLÓ, J.: Élelmezési Iparok I-II. Food Industries Vol. I-II. Tankönyvkiadó, Budapest, 1952-1957.
3. LÁSZTITY, R.: The Chemistry of Cereal Proteins, 1-st ed. 1984 and 2-nd ed. 1996. CRC Press Inc. Boca Raton.
4. LÁSZTITY, R. – HIDVÉGI, M.: Aminoacid Composition and Biological Value of Cereal Proteins, Reidel Publ. Co. Dordrecht, 1985.
5. LÁSZTITY, R. – HALÁSZ, A.: Use of Yeast Biomass in Food Production, CRC Press Inc., Boca Raton, 1991.
6. LÁSZTITY, R. – GASZTONYI, K.: Élelmiszerkémia 1-2. Food Chemistry Vol. 1-2, Mezőgazda Kiadó, Budapest, 1993.
7. LÁSZTITY, R. – TÖRLEY, D.: Élelmiszeranalitika I-II, Food Analysis Vol. I-II. Mezőgazda Kiadó, Budapest, 1987.