

## Dr. Ing. Štefan Bauer, DrSc., a Prominent Personality in the Slovak Chemistry – 70 Years of Age

The jubilarian was born on May 10, 1922 in Klátova Nová Ves; he graduated from the Slovak Technical University in Bratislava in 1946, in 1953 he got the Ph.D. degree, in 1959 and 1969 the CSc. and DrSc. academic degrees, respectively. He received the Humboldt stipend enabling him a one-year stay in the Institute of Organic Chemistry at the University of Münster headed by Professor *Michael*. He also passed some short-term stays in Hungary, Switzerland, Poland, Germany, and Sweden.

He started his scientific carrier in the State Research Institute for Agriculture, where he became head of the Department of Chemical Control. In 1951, he changed for the Research Institute for Pharmacy and Biochemistry in Bratislava, the basis for the newly formed Institute of Chemistry of the Slovak Academy of Sciences founded in 1953; from 1958 to 1962 he was the deputy director and from 1964 to 1974 director of this academic institute. Although retired in 1988, he has remained active as a consultant.

Results of his research activities are presented in more than 130 original papers published in specialized journals at home and abroad. He was first interested in the chemistry of cardioglycosides and described their isolation from various domesticated medicinal plants. The cardioglycoside helveticoside was clinically tested and also successfully applied in human medicine. Another territory of his interest was the chemistry of polysaccharides from natural resources; he studied their structures and biological activities. He investigated immunochemical effects of mannans isolated from yeasts of *Saccharomyces sp.* and their stimulation of the production of interferon. He examined the structure and biosynthesis of polysaccharides from yeasts; electron microscope was the tool for monitoring formation of cell walls and secretion of glycoproteins from these cells of the above-mentioned microorganisms.

Although preferring scientific projects, he did not forget to realize his results in practice. Thus, in 1952–1958 he worked out original procedures for production of (-)-ephedrine from (-)-phenylacetyl-carbinol. He stimulated the foundation of a pilot-plant at the Institute of Chemistry producing series of carbohydrates; for the time being, it is the sole producer of rare saccharides. From the practical point of view he investigated enzymic saccharification of lignocellulose material (straw, waste paper) aiming to prepare valuable feed-stuff. Many of his research results are patented.

He supervised tens of postgraduate students, passed them much of his wealthy experience and, due to his scientific name and contacts, he enabled young scientists a long-term training abroad. Many of them are now excellent scientists. He participated in many international symposia on the chemistry of saccharides and presided over that held in Bratislava. He was a very active organizer of scientific life in Czecho-Slovakia and held many honorary posts; he is member of the Board of examiners in organic chemistry, biochemistry and organic technology and Editorial Board of the journal *Biológia*.

Dr. Bauer was also awarded – as a recognition of his prominent scientific personality – J. Heyrovský Golden Medal for merits in the progress of chemical sciences, D. Štúr Golden Medal for merits in natural sciences and further first-order medals (Faculty of Pharmacy, Slovak Chemical Society, Research Institute of Petroleum and Hydrocarbon Gases, etc.).

Considering his most productive years were 1951–1988 without being politically organized, his achievements are extraordinary. Those having opportunity to collaborate or consult him can appreciate not only his remarkable knowledge but also his kind access to them. At the occasion of his seventieth we wish him good health and content in his further life.

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