



## PERSONALIA

### PROFESSOR OLDŘICH NEČAS

#### AND THE POST-WAR HISTORY OF THE DEPARTMENT OF BIOLOGY, FACULTY OF MEDICINE, BRNO

The Department of Biology was established, together with most of the departments, at the Faculty of Medicine at Masaryk University in 1919. Its founders were the physiologist *Edward Babák* and histologist *František Studnička*. However, the true maker of the department was *Jan Bělehrádek* who worked there in the period of 1924 to 1934. After him, the department was, for a short time, chaired first by *Vilém Laufberger* and then *Ludvík Drastich*. In 1936, *Ferdinand Herčík* became head of the department and, with the exception of the war time, remained in the chair until the appointment of *Oldřich Nečas* in 1961. Professor Nečas held the post till 1992 and since then has been involved in department activities as Emeritus Professor.

The well-known name of the department before World War II was cultivated by Professor Jan Bělehrádek famous for his research into the effects of temperature on the living matter. After the war, Professor Herčík laid foundations to the research areas of radiobiology and biophysics. He was surrounded by a large group of studious young men who later became professors of biology,

biochemistry, biophysics, physiology, microbiology, renowned molecular biologists and also successful clinicians. Oldřich Nečas was one of these. In 1945, he came to the Department as a first year medical student. In 1947, Professor Herčík set him the first scientific task – to repeat experiments with the development of yeast cells from crystals published by V. Jonáš. This "remarkable" discovery was in conformity with the theory on the origin of cells from non-cellular forms coined by O.B. Lepešinskaja. Oldřich Nečas failed to confirm the results reported by Jonáš; at that time of dogmatism in science, such a failure involved a certain personal threat and a possible bad impact on the whole department. However, the presentation of exact results and their defence regardless of the consequences won Professor Nečas a high reputation among researchers.

In mid-1950s, a new scientific programme based on investigation into regeneration of cells was constituted. A research team of students gathered around Oldřich Nečas, as did around Herčík years before. They studied cell regeneration in yeasts, fungi, algae and protozoa and, in top European cytological and microbiological journals, soon published several original findings on regeneration of cell surfaces, on the role of the cell wall in cell division and sexual mating and on the secretory pathway in yeast cells. In later years, attention was directed to the structure of cytoskeletal components and their function in the cell cycles and life cycles of unicellular eukaryotes, and to gaining insight into the involvement of the cytoskeleton in cell response to physical stressors. Professor Nečas in the lead of his team not only planned the strategy of experimental work, but also used partial results to draw general conclusions on the cell cycle, cell differentiation, morphogenesis, the cytoskeleton and molecular motors. He has also made significant contributions to the methods of electron microscopy and freeze-fracturing.

Recently, Professor Nečas has been involved in more general issues concerning the cognitive abilities of living systems, biological determination of social phenomena, some features of cellular stress, etc. To specify all his activities associated with science management, grant agencies, academic posts and scientific societies would make a long list. However, closest to his heart is the Czechoslovak Biological Society which, under his chairmanship in several terms of office, has turned into an open scientific forum reflecting all areas of the present-day experimental biology.

Professor Nečas is a scientist as well as a dedicated teacher. Education of his students has never been inferior for him and he has devoted much time and energy to both his lectures and practical lessons and the writing and editing of good textbooks. In addition to many series of handouts, Professor Nečas became famous for his textbook on Biology, which had its 6<sup>th</sup> edition in 2000.

Dear Professor Nečas, on the occasion of your 75th birthday, all your colleagues, students and the members of the Czechoslovak Biological Society

thank you for your life-long scientific and pedagogical work and wish you good health and peace of mind for years of rewarding activities still to come.

Augustin Svoboda

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