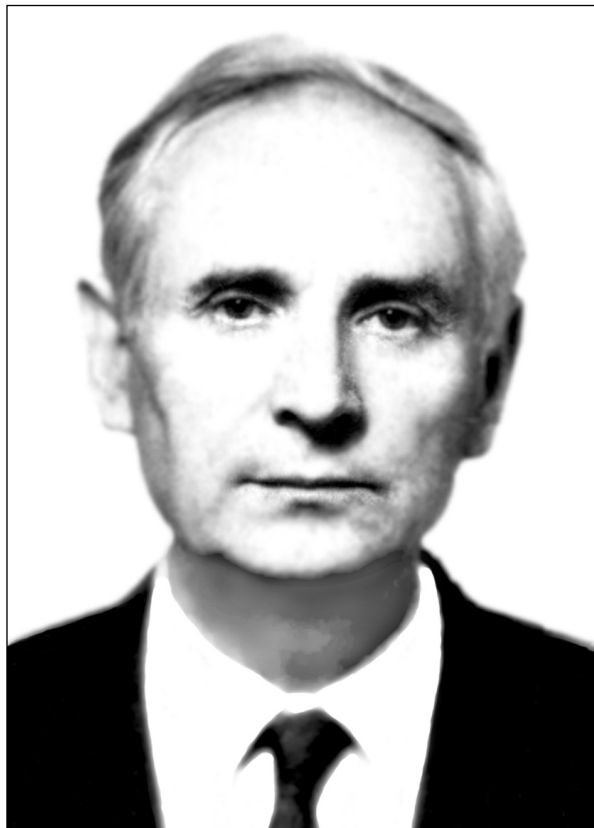


## In Memory of Boris Fedorovich Poglazov (1930-2001)



March 23, 2005 is 75th anniversary of the birth of Boris F. Poglazov, outstanding Russian biochemist and Corresponding Member of the Russian Academy of Sciences.

Boris Fyodorovich Poglazov was born in 1930 in the village of Verkholsk in the Irkutsk Region of Russia. In 1949, he entered Lomonosov Moscow State University, Faculty of Biology; after graduation from the University in 1954, he became a postgraduate student at the Bach Institute of Biochemistry of the USSR Academy of Sciences.

Boris F. Poglazov achieved success from the outset of his scientific career. His world-famed early studies of biological motility were performed at the Bach Institute of Biochemistry. He was the first scientist in the world to find the main contractile proteins myosin and actin in non-muscle tissues of animals, as well as myosin-like proteins in higher plants and algae, and proposed from these findings that these proteins are present not only in mus-

cles, but also in all eukaryotic cells. This hypothesis was very audacious and unusual for that time (early 1960s), but later on it was completely corroborated.

Well-known studies on reconstruction of virus particles were performed by Boris F. Poglazov at the Institute of Molecular Biology of the USSR Academy of Sciences, at the Department of Biochemistry, Faculty of Biology of Moscow State University, and from 1967 at the Laboratory of Molecular Biology and Bioorganic Chemistry of Moscow State University (currently known as the Belozersky Institute of Physico-Chemical Biology of Moscow State University) where he headed, from 1973, the Department of Functional Biochemistry of Biopolymers. These studies resolved the molecular organization of some components of bacteriophages and revealed the character of structural changes that occur on the injection of DNA into a bacterial cell. The data obtained from these studies made a fundamental contribution to the theory of self-assembly of supramolecular

structures and became the basis for modern ideas on the mechanism of assembly of elementary biological structures.

From 1977, Professor Boris F. Poglazov worked at the Bach Institute of Biochemistry and headed the Laboratory of Molecular Organization of Biological Structures; in 1988, he was elected the Director of the Institute.

Professor Poglazov published more than 300 scientific papers, both in Russian and in international journals, and eight monographs; among them, the following can be noted: "Structure and Functions of Contractile Proteins" (1966), "Assembly of Biological Structures" (1970), "Morphogenesis of T-Even Bacteriophages" (1973), "Myosin and Biological Motility" (1982, in co-authorship with D. I. Levitsky), and "Non-muscle Systems of Motility" (1989, in co-authorship with S. A. Burnasheva). Under his supervision, more than 40 Ph.D. theses were defended, and five of his followers became Doctors of Biological Sciences.

Professor Poglazov performed a fruitful scientific and organizing activity as the Director of the Bach Institute of Biochemistry of the Russian Academy of Sciences, the Head of Department of the Belozersky Institute of Physico-Chemical Biology of Moscow State University (1973-1998), and the Chairman of the Scientific Council on Biochemistry of the Russian Academy of Sciences. He was the Editor-in-Chief of the journal *Applied Biochemistry and Microbiology* (from 1993) and the annual *Uspekhi Biologicheskoi Khimii*.

The remarkable contribution of Professor Poglazov to the development of Russian biochemistry was honored by many awards. In 1976, he was awarded the Bach Prize of the USSR Academy of Sciences. In 1990, he was elected a Corresponding Member of Russian Academy of Sciences; in 1999, he was awarded the Order of Friendship of the Russian Federation.

Colleagues, students, and friends of Professor Boris F. Poglazov knew him as a talented scientist, a good organizer, and a fair, well-wishing, and cultured person. His infinite devotion to science and organizing faculties harmonized with modesty and tact. His premature death in 2001 was a big loss not only for the Bach Institute of Biochemistry but also for the whole of science.

This issue of the journal is dedicated to the memory of Professor Boris F. Poglazov. It includes review articles by his students and followers—Vadim V. Mesyanzhinov, Dmitrii I. Levitsky, Antonina L. Metlina, and Irina I. Serysheva, who continue the studies begun by Professor Boris F. Poglazov on various systems of biological motility and on structural organization of bacteriophage T4, as well as the papers of foreign colleagues of Professor Poglazov (J. D. Karam and S. Marco with coauthors) and leading researchers of the Bach Institute of Biochemistry of Russian Academy of Sciences. We are grateful to his friends and colleagues who have kindly accepted the invitation to submit a paper to this issue dedicated to the memory of this outstanding Russian scientist.

*Guest-Editors of the Issue:*

*Prof. Vladimir O. Popov, Dr. Chem. Sci.*

*Prof. Boris I. Kurganov, Dr. Chem. Sci.*

*Prof. Dmitrii I. Levitsky, Dr. Biol. Sci.*

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