

The 60th Birthday of Valerii Fedorovich Galchenko

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In April 2008, Valerii Fedorovich Galchenko, a corresponding member of the Russian Academy of Sciences, Doctor of Biology, and Director of the Winogradsky Institute of Microbiology, Russian Academy of Sciences, celebrates his 60th birthday.

V.F. Galchenko is a world-famous scientist and a specialist in the field of microbiology, microbial ecology, and physiology of microorganisms; he was a student of Academicians G.K. Skryabin and M.V. Ivanov. After graduating from Gor'kii State University (presently, Nizhni Novgorod State University) in 1971, V.F. Galchenko became a postgraduate student at the Skryabin Institute of Biochemistry and Physiology of Microorganisms. In 1985, he accepted an offer from Academician M.V. Ivanov and started his career with the Winogradsky Institute of Microbiology, Russian Academy of Sciences, first as a senior researcher and finally as Director of the Institute. Since 1996, V.F. Galchenko has headed the Laboratory of Classification and Storage of Unique and Extremophilic Microorganisms (UNIQEM) of the Winogradsky Institute of Microbiology, Russian Academy of Sciences.

In 2003, he became Director of the Institute. In December 1997, he was elected a corresponding member of the Russian Academy of Sciences in physicochemical bio-logy.

Methanotrophy and methanotrophic bacteria, microbial communities of extreme ecosystems, as well as physicochemical, immunological, microbiological, and molecular techniques and methods used for in situ studies of microorganisms have been the priority of V.F. Galchenko's research.

At the onset of his career as a microbiologist, V.F. Galchenko was the first in Russia to isolate pure methane-oxidizing cultures and, along with his colleagues from the Skryabin Institute of Biochemistry and Physiology of Microorganisms, founded a large collection of methanotrophs which to this point has been the most impressive in the world. The bacteria of this collection were studied for the first time with respect to methanotroph–bacteriophage relationships; techniques of polyphase taxonomy of methane-oxidizing bacteria have been developed, and the influence of low temperature and other extreme factors on methan-

otroph survivability were studied. Ever since, descriptions like “first” and “pioneering investigations” have been associated with V.F. Galchenko’s name.

V.F. Galchenko is the author of a series of fundamental works on the role of methanotrophs in marine ecosystems, as well as on the microorganisms of extreme ecosystems, such as marine deep-water hydrotherms (black smokers), Antarctic and Arctic lakes, and permafrost tundra soils. He confirmed experimentally the principal role of methanotrophs in the balance of atmospheric methane, the most important greenhouse gas. Using radioisotope and biochemical methods, as well as mass spectrometry and electron microscopy, he discovered symbiotrophic associations between the gastropods inhabiting black smokers and methane-oxidizing bacteria found in the gills of these mollusks.

V.F. Galchenko took part in three expeditions to Antarctica, during which he carried out a series of complex physicochemical and molecular analyses of perennially ice-covered lakes and studied the microbiological and bioenergetic characteristics of these lakes. By comparing the conservative sequences of *moxF* and RuBisCo genes, he, along with his coworkers, designed gene probes to study the distribution of oxygenic and anoxygenic phototrophic and methanotrophic microorganisms inhabiting Antarctic and Arctic lakes. In recent years, V.F. Galchenko’s attention has concentrated on the study of bacterial resistance to stress factors, both in environmental and laboratory conditions.

The results of V.F. Galchenko and his coworkers’ major investigations were summarized in the mono-

graphs *Taksonomia i sistematika obligatnykh metanotrofnykh bakterii* (Taxonomy of Obligate Methanotrophic Bacteria) (1986), *Ecology of Methanotrophic Bacteria in Aquatic Ecosystems* (1995), and *Metanotrofnye bakterii* (Methanotrophic Bacteria) (2001). His monograph *Metanotrofnye bakterii* (Methanotrophic Bacteria) was awarded the Winogradsky Prize, instituted by the Russian Academy of Sciences.

V.F. Galchenko carries out extensive scientific organizational, social, journalistic, and public activities. Since 2003, he has been the Chairman of the Scientific Council of the Winogradsky Institute of Microbiology, Russian Academy of Sciences; since 2005, the Chairman of the Scientific Council on Microbiology of the Russian Academy of Sciences. He is a member of the Space Biology and Physiology Section of the Space Council of the Russian Academy of Sciences. He is a member of the Editorial Board of the journal *Mikrobiologiya* (Microbiology), and a co-founder and President of the Russian Interregional Microbiological Society.

V.F. Galchenko’s colleagues appreciate his unique professional experience and erudition, as well as his benevolence and responsible attitude.

We heartily congratulate Valerii Fedorovich on his birthday and wish him good health, many years of happy life, well-being, and success in his activities and creative explorations.

*The Editorial Board
of the journal Mikrobiologiya (Microbiology)*