

JOSEF I. GITELSON
CURRICULUM VITAE AND EXPERTISE

Academic Education:

1946 - 1951 - Moscow University, Biological Faculty;
1946 - 1952 - Krasnoyarsk Medical Institute.

Scientific Degrees:

Full member of the Russian Academy of Sciences (Academician).

Doctor of Medicine (M.D.).

Ph.D. (Biology).

Professor of Biophysics.

Full member of the International Academy of Astronautics.

Full member of the Russian Academy of Natural Sciences.

Founding member of the Russian Academy of Ecology.

Academic Career:

since 1996 - Scientific Advisor of Russian Academy of Sciences in Institute of Biophysics, Siberian Branch of RAN, Krasnoyarsk.

1984 - 1996 - director and chief scientist, Institute of Biophysics (Russian Academy of Sciences, Siberian Branch).

1981 - 1991 – head laboratory of Photobiology, Institute of Biophysics (USSR Academy of Sciences, Siberian Branch), Krasnoyarsk (after separation from the Institute of Physics).

1961 - 1981 – head laboratory of Photobiology, Institute of Physics (USSR Academy of Sciences, Siberian Branch), Krasnoyarsk.

1957 - 1961 - senior researcher, biophysics laboratory, Institute of Physics. (USSR Academy of Sciences, Siberian Branch), Krasnoyarsk.

1953 - 1957 - lecturer of biology, Krasnoyarsk Agricultural Institute.

1952 - 1953 - haematologist, Krasnoyarsk blood transfusion station.

Current position:

1965 - 2006 - professor, head of department of physiology and biochemistry, Faculty of Biology, Krasnoyarsk State University.

Distinguished Professor, Krasnoyarsk State University.

2006 – professor of Siberian Federal University, scientific supervisor of Initiative educational project “Creative and development of department of physics-chemical biology and fundamental ecology”.

Temporal Positions

Short-term scholar, Kennan Institute, Smithsonian Institution, 1995

Distinguished Visiting Professor, New Mexico State University, USA, 1995

Visiting Lecturer International Space University, 1990, 1992, 1994, 1996.

Visiting scientist NASA Ames Research Center (Grant of American Nat. Acad. Of Sci.) 1996-1998.

Boeing Defense and Space Group Contract with the Institute of Biophysics, principal investigator, 1994-1995

Visiting Professor of Universities in Canada, Japan, France, Spain, Sweden, 1990-1997.

Visiting Scientist in Bologna and Florence University (Grant of Landau Network-Centro Volta)

Visiting scientist in Birmingham Univ. England (Grant of Royal Society).

Memberships at Scientific Societies:

member, Siberian Branch of the Russian Academy of Sciences;
member, Division of Biophysics and Biochemistry of the Russian Academy of Sciences;
member, Scientific Council on Biology, Siberian Branch of the Russian Academy of Sciences.
member, Scientific Council on Biophysics of the Russian Academy of Sciences;
vice-chairman, COSPAR Committee for Life Sciences, 1992-2000
member, Life Sciences Working Group Intercosmos - NASA;
member, Scientific Council on Microbiology of the Russian Academy of Sciences;
member, the Scientific Council on Physiology of Man and Animals of the Russian Academy of Sciences;
chairman, Scientific Council of the International Center for Closed Ecological Systems Studies;
referee for several scientific journals and member of the editorial board of "Biophysica", "Life Support and Biosphere Science" (US) journals.

Experience:

ecological biophysics, closed ecosystems design, human-made bioluminescent analysis, biotechnology, experimental haematology.

Basic Results in Scientific Activities:

1961 - 1998 - Development of biospherics - a branch of ecology studying and creating closed ecosystems. Development and implementation of "BIOS" - an experimental closed ecological human life-support system and performance of long-term experiments in it. A stable essentially closed ecosystem for man (noospheric systems), based on continuous cultivation of microorganisms and higher plants, have been proved feasible. The purpose of such systems is to support human life in space, to improve the habitat under adverse conditions of Earth: in the Arctic and Antarctic regions, under water, underground, in high mountains, deserts as well as in technogenously contaminated environment, including sick building syndrome and modelling noosphere.

1960 - 1985 - Construction of biophysical apparatus and development of methods for monitoring large water ecosystems. Construction of apparatus to measure bioluminescence of marine ecosystems. Taking part in a series of oceanographic expeditions in the Pacific, Atlantic, Indian, Arctic oceans in the 60-80s, has described basic regularities of bioluminescence as a general oceanic phenomenon and its distribution in the World ocean in relation to the structure and productivity of marine ecosystems.

1995-1998 - Bioalarm System project is designed to monitor "health" of marine ecosystems and early warning about anomalies arising due to anthropogenic and natural factors.

1951 - 1970 - In the field of experimental haematology has developed methods for spectrophotometric analysis of erythrocytes population for normal and pathological blood. Has put forward a general theory of three-stage mechanism of haemolysis, has described regularities of distribution of erythrocyte population over resistance with respect to their age, intensity of production and destruction. Has provided a mathematical description of quantitative regularities of normal erythropoiesis and in blood loss.

Publications:

More than 250 publications in home and foreign journals, including monograph: JI Gitelson, GM Lisovsky, R MacElroy. Manmade Closed Ecological Systems. 2003, Taylor & Francis, 400 p.

Social Activity:

Has initiated a number of scientific-social projects; "Ecology of Great Rivers of the World" (supported by the Hydrological Society of UNESCO), "The Pristine Yenisey River " (supported by the Russian Academy of Sciences and Krasnoyarsk Territorial administration; "Chlorophyll in Biosphere".

Educational Activity:

Professor at Krasnoyarsk State University, head of Department of Biochemistry and Physiology training specialists on biochemical analysis for medicine, ecological and biotechnical laboratories.
Has organized and trained three groups of researchers: construction and investigation of closed ecosystems, investigation of marine bioluminescence, investigation of biophysics of blood. More than 40 of his pupils have defended Ph.D. on biology, physics and medicine.
Delivers popular lectures, TV presentation and publishes articles in the mass media on the problems of ecology, biospherics and human life-support without polluting the environment on Earth and in space missions.
Many times was invited as a visiting professor and lecturer on the problems of global ecology, marine ecosystems and human life support on Earth and Space missions to York University (Canada, 1990), Kitakyushu University (Japan, 1992), Cergy Pontoise University (France, 1992), Barcelona Autonomous University (Spain, 1994), Ames Research Center NASA (1994), Kennedy Space Flight Center NASA (1995).
Invited Professor of the International Space University in 1990 (Canada), 1992 (Japan), 1994 (Spain) and 1995 (Sweden).

Languages: Russian (native), English (fluent).

Personal Data:

born July 6, 1928, Samara, Russia.

Hobbies:

travelling in forest, mushroom picking, coral reef scuba diving

Marital Status:

married, 4 children.

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