Пущино
Chairman of the Pushchino Research Center

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http://www.psn.ru
PRC includes the institutes:

- Institute of Protein Research
- Institute of Cell Biophysics
- Institute of Biochemistry and Physiology of Microorganisms
- Institute of Mathematical Problems in Biology
- Institute of Basic Biological Problems
- Institute of Physicochemical and Biological Problems of Soil Science
- Institute of Theoretical and Experimental Biophysics
- Branch of Institute of Bioorganic Chemistry
- Institute for Biological Instrumentation
- Pushchino Radio Astronomy Observatory of Astro Space Center of Lebedev Physical Institute
Institute of Protein Research

- Address: Institute of Protein Research, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495) 9240493, (4967) 730542
- Fax: (495) 9240493
- Director: Lev P. Ovchinnikov, Dr. Sci. (Biol.), Professor, Member of the Russian Academy of Sciences
Major research areas:

- **Studies of molecular mechanisms of protein biosynthesis including the following:**
  - structural basis of functioning of ribosomes and their components;
  - regulation of protein biosynthesis;
  - development of a large-scale cell-free system of protein biosynthesis;
  - development of cell-free systems of RNA replication.

- **Structural studies of proteins and their biological functions including the following:**
  - processes of formation of the 3-D structure of proteins;
  - development of the theory of the 3-D structure of proteins;
  - protein functioning;
  - primary and 3-D structures of proteins by classic methods (X-ray analysis, microcalorimetry, optical techniques, etc.);
  - gene and protein engineering;
  - chemical synthesis of biologically active polypeptides and protein fragments.
Institute of Cell Biophysics

- Address: Institute of Cell Biophysics, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495) 9255984, (4967) 730519,
- Fax: (4967) 330509
- Director: Evgeny E. FESENKO, Dr. Sci. (Biol.), Professor, Corresponding Member of the Russian Academy of Sciences
Major research areas:

- Effects of physical factors on the cell and cell systems. Mechanisms of cellular stress and hibernation.
Institute of Basic Biological Problems

- Address: Institute of Basic Biological Problems, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (4967) 733601
- Fax: (4967) 330532
- Director: Vladimir A. SHUVALOV, Dr. Sci. (Biol.), Member of the Russian Academy of Sciences
Major research areas:

- Molecular mechanisms underlying the biological processes of energy transformation, energy conversion and storage in photosynthesis; structure and functions of membranes and supramolecular complexes involved in the biological transformation of energy and metabolites; photobiotechnology.

- Physicochemical problems of ecosystems stability, environmental biogeochemistry and monitoring of its components, ecophysiological and biochemical problems of ecosystems adaptation under anthropogenic impact.

- Molecular mechanisms of genetic information expression; formation of functionally active proteins; regulation of biochemical processes; effects of physical factors on biological systems; bioreceptors.
Skryabin Institute of Biochemistry and Physiology of Microorganisms

- Address: Skryabin Institute of Biochemistry and Physiology of Microorganisms, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495) 956-33-70
- Fax: (4967) 73-07-62
- Director: Alexander M. BORONIN, Dr. Sci. (Biol.), Professor, Corresponding Member of the Russian Academy of Sciences
Major research areas:

- Microbial diversity and its resources.
- Physiological-biochemical potential of microorganisms in their interaction with the environment.
- Molecular mechanisms underlying the functioning of genetic systems of microorganisms.
- Use of microorganisms in biotechnology.
Institute of Mathematical Problems in Biology

- Address: Institute of Mathematical Problems in Biology, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (4967) 732408
- Fax: (4967) 330570
- Director: Victor D. LAKHNO, Dr. Sci. (Phys.-Math.)
Institute of Theoretical and Experimental Biophysics

- Address: Institute of Theoretical and Experimental Biophysics, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495) 9239668, (4967) 732580
- Fax: (4967) 330553
- Director: Genrikh I. Ivanitsky, Dr. Sci. (Biol.), Professor, Corresponding Member of the Russian Academy of Sciences
Major research areas:

- **Biosynergetics:**
  - Nonlinear processes in biological systems: transitions from disorder to ordering, cooperative events, spatial-temporal relaxational oscillations and wave processes, formation of dissipative structures at the molecular, cellular, organism and population levels. Mathematical modelling.

- **Molecular Biophysics:**
  - Physical and structural bases of organization and functions of biopolymers and supramolecular systems.

- **Bioinformatics:**
  - Cell receptors and mediators, low-molecular-mass regulators, extracellular matrix, cell-cell interactions. Brain as the system of monitoring and processing of information.

- **Cell Biology and Cytotechnology:**
Cell structure and functioning; the cell cycle and programmed death of cells. Reconstruction of cell metabolism based on genetic information. Biophysical fundamentals of research-based biotechnologies and medicine. Genetic, cell, tissue and organ engineering.

Effects of Biophysical Factors on Biological Systems:
Mechanisms of action of ionizing radiation and electromagnetic fields on biological systems. Cosmophysical impacts. Stabilization and protection of the genome and cell systems, developmental mechanisms of degenerative processes under the action of physical and chemical agents.

Bioenergetics:
Mechanisms and regulation of energy transformation in mitochondria. Energy conversion and mechanisms of ion transport in biological membranes. Mechanisms and regulation of energy transformation during muscle contraction and other forms of biological motility. Regulation of intracellular energy exchange in the organism.
Institute of Physicochemical and Biological Problems of Soil Science

- Address: Institute of Physicochemical and Biological Problems of Soil Science, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (4967) 731896
- Fax: (4967) 330595
- Director: Valery N. KUDEYAROV, Dr. Sci. (Biol.)
Major research areas:

- Physicochemical and biogeochemical soil processes, the membrane and barrier role of soils in the biosphere.
- Role of terrestrial ecosystems in global and local biogeochemical cycles of elements.
- Spatial organization, functioning mechanisms, evolution of soils and prediction of the state of ecosystems of different levels.
- Mechanisms and modelling of the resistance of ecosystems to the action of natural and anthropogenic stress factors.
- Genesis, physicochemistry and microbiology of the cryopedosphere.
- Ecological monitoring, bioremediation and rehabilitation of polluted and degraded soils and landscapes.
Branch of Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry

- Address: Branch of Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495)9252342, (4967)731719
- Fax: (4967) 330527
- Director: Vadim T. IVANOV, Dr. Sci. (Biol.), Professor, Member of the Russian Academy of Sciences
Major research areas:

- Bioorganic chemistry
- Molecular biology
- Biochemistry
- Plant biology
- Biotechnology.
- Protein and gene engineering
- *In vitro* and *in vivo* protein biosynthesis
- Transgenic plant construction
- Plant clonal micropropagation
- Laboratory animal strains
- Preclinical development
- Biological activity and preliminary screening.
Institute for Biological Instrumentation

- Address: Institute for Biological Instrumentation, RAS, 142290, Pushchino, Moscow Region, Russia
- Phone: (495) 9245749, (4967) 730478
- Fax: (4967) 330522
- Director: Evgeny A. PERMYAKOV, Dr. Sci. (Biol.), Professor
Major research areas:

- Instruments for thermodynamic studies.
- Spectral and optical instruments.
- Equipment for cultivation of microorganisms.
- Instruments and equipment for biochemistry.
- Instruments and equipment for cell studies.
- Instruments and equipment for energy and resource saving.
- Instruments and equipment for biomedicine.
- Development of methods of surface analysis.
- Studies of physical, chemical and functional properties of metal-binding proteins.
Modular biotechnological equipment of the “Oka” series:
“Cascade” setup for cascade flow cultivation of microorganisms
Instruments and equipment for cell studies
Pushchino Radio Astronomy Observatory of Astro Space Center of Lebedev Physical Institute

- **Address:** Pushchino Radio Astronomy Observatory of Astro Space Center of Lebedev Physical Institute
  142290, Pushchino, Moscow Region, Russia
- **Phone:** (4967) 739075
- **Fax:** (4967) 732482
- **Director:** Rustam D. DAGKESAMANSKII, Dr. Sci. (Phys-Math.)
Major research areas:

- Solar super corona and interplanetary plasma
- The pulsars
- Pulsar astrometry
- Radio spectroscopy
- Nonthermal radio emission of the Galaxy
- Radio Galaxies and quasars
- Information Technologies