



CONGRATULATIONS TO GEORGY PINKUSOVICH ITKIN

August 5, 2019 marked the 80th anniversary of the day Georgy Itkin, a professor of Biology, and Head of the Laboratory of Biotech Systems at the Shumakov National Medical Research Center of Transplantology and Artificial Organs, was born. He is one of the top experts when it comes to developing artificial heart and auxiliary blood circulation apparatuses and systems.

Professor Itkin has a long and thorny career, but one which is full of interesting and fruitful work. After graduating from the Moscow Aviation Institute in 1963, he worked as an engineer at Tupolev, a Soviet aerospace and defence company. In 1966, he was employed at the laboratory of artificial heart under the Scientific Research Institute of Clinical and Experimental Surgery, headed by Prof. Valery Shumakov. Till present, he continues to work at the research institute, creating mechanical circulatory support systems.

In 1975, Prof. Itkin defended his PhD dissertation, and in 1989 became a professor of biology, his project being devoted to development and comprehensive analysis of methods and means of temporary replacement of the heart. Prof. Valery Shumakov highly recognized Georgy Itkin's contributions throughout their joint activities.

Itkin has participated in the design of control systems and bench-top research under the Soviet-American intergovernmental agreement on artificial heart. At that time, many Soviet laboratory developments were ahead of their American counterparts, which was greatly credited to the celebrant. Itkin has worked closely with outstanding world-class scientists from Europe, USA, and Japan – pioneers in artificial heart and cardiopulmonary bypass devices: Valery Shumakov, Michael DeBakey, Willem Kolff, Robert Jarvik, and Tetsuzo Akutsu. He has jointly worked with Czechoslovak scientists and engineers from Jan Evangelista Purkyně University (Prof. J. Washka and Prof. Urbanek), with Austrian scientists from the University of Vienna (among whom was Prof. W. Schim), and German scientists from the Free University of Berlin (one of whom was Prof. C. Affeld).

Under Professor Itkin's leadership, an automatic control system for the artificial heart was developed using a mathematical model of the circulatory system. This innovation allowed to achieve long-term survival of artificial heart calves (Olymp lived for 102 days). In his students' projects, a model of the circulatory system was used to analyze interaction between auxiliary circulatory devices and the cardiovascular system. The name "Georgy Itkin" has been directly associated with all the achievements in experiments on long-term implantation of artificial heart for calves and its subsequent clinical testing in the USSR and Poland for a two-stage heart transplantation.

In recent years, a team of young researchers has been actively working under Professor Itkin's guidance. This team has noted the professor's inexhaustible flow of research ideas, his creative spirit and cheerfulness, which has helped them solve complex problems involved in the creation of new non-pulsatile flow systems based on centrifugal and axial pumps.

The team's major achievement is the creation of an axial flow blood pump, which has been successfully used in clinical practice since 2012. Georgy develops methods and means of medical and technical testing of pumps. The laboratory staff loves and respects their leader and is proud of him. About 9 master's theses have been completed under his guidance.

Georgy Itkin is a professor at the Department of Living Systems, Moscow Institute of Physics and Technology. He is a member of the International Society of Artificial Organs and has authored over 200 research papers. He has 64 patented inventions and has been awarded the "Merited Inventor of the USSR" award.

The editorial team of the Russian Journal of Transplantology and Artificial Organs, including the editor-in-chief Professor Sergey Gauthier, and the laboratory staff, warmly congratulate Professor Georgy P. Itkin, a world-renowned scientist, an erudite educationist, and a wonderful person, on his 80th birthday. We wish him good health, good luck and energy in all his planned projects!