

## **EDITORIAL**

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In 2024, the Orekhovich Institute of Biomedical Chemistry (IBMC) is celebrating the 80th anniversary. Its history began in June 1944 with the Resolution of the Council of People's Commissars of the USSR dated June 30, 1944 No. 797, when as part of the founding of the USSR Academy of Medical Sciences, a decision was made to establish the Institute of Biological and Medical Chemistry of the USSR Academy of Medical Sciences.

The first director was the famous biochemist, Professor Yakov Oskarovich Parnas, who was then replaced in this post by Professor Sergei Evgenievich Severin in 1947. In 1949, Vasily Nikolaevich Orekhovich, a young, famous biochemist, became the director, who was destined to head the Institute for the next 40 years. Remarkable specialists who formed the “golden fund” of Soviet biochemistry took part in the creation and development of the Institute: Professors A.E. Braunstein, M.M. Shemyakin, N.A. Yudaev, V.A. Engelhardt, S.E. Severin, S.R. Mardashev. Graduates of Soviet universities worked effectively at the Institute of Biological and Medical Chemistry of the USSR Academy of Medical Sciences: professors S.Ya. Kaplansky, T.S. Paskhina, V.S. Tongur, E.L. Rosenfeld, V.Z. Gorkin, V.O. Shpikiter, V.I. Mazurov, B.F. Korovkin, I.I. Votrin, N.I. Solovyova, who confirmed the authority of Soviet biological and medical chemistry at the international level. Postgraduate students and applicants were future organizers of entire scientific directions, who later became academicians: R.B. Khesin, Yu.A. Pankov, T.T. Berezov.

Such scientists as I.S. Severina, I.S. Lukomskaya, I.V. Tsvetkova, A.I. Tochilkin, G.V. Ponomarev, G.Y. Wiederschain, V.F. Pozdnev, A.E. Berman, N.N. Sokolov made their contribution to scientific research at IBMC.

In 1989, the Institute was headed by Corresponding Member of the USSR Academy of Medical Sciences, Professor A.I. Archakov, one of the world's leading experts in the field of membrane structure research and molecular mechanisms of microsomal oxidation. In the same year, IBMC was joined by the team of the Institute of Medical Enzymology of the USSR Academy of Medical Sciences, headed by Corresponding Member of the USSR Academy of Medical Sciences B.F. Korovkin. Under the leadership of Academician A.I. Archakov, IBMC overcame the consequences of the difficult “post-perestroika” 90s and became a modern world-class research institution.

During the years of A.I. Archakov leadership, IBMC has become the flagship of Russian medical biochemistry, occupying a leading position in Russia and in the world in such areas as proteomics, genomics, bioinformatics, nanobiotechnology. On the initiative of Academician A.I. Archakov, IBMC was included in the implementation of a large-scale international scientific project “Human Proteome”.

In 2015, Corresponding Member of the Russian Academy of Sciences (now academician) A.V. Lisitsa became the director of IBMC. During his directorship the biomedical research in the priority areas was successfully continued.

Since 2020, IBMC has been headed by Doctor of Biological Sciences Elena Aleksandrovna Ponomarenko, an authoritative specialist in the field of bioinformatics and postgenomic data analysis.

The IBMC staff includes Academicians of the Russian Academy of Sciences A.I. Archakov, A.V. Lisitsa; Corresponding Members of the Russian Academy of Sciences V.V. Poroikov, K.N. Yarygin, professors and doctors of sciences — O.A. Gomazkov, V.G. Zgoda, A.S. Ivanov, Yu.D. Ivanov, E.F. Kolesanova, A.A. Lagunin, P.G. Lokhov, A.E. Medvedev, A.Yu. Misharin, T.O. Pleshakova, V.V. Shumyantseva. The new generation of laboratory heads is represented by young and proactive scientists — D.D. Zhdanov, V.A. Zolottsev, E.V. Ilgisonis, E.V. Poverennaya, D.D. Grishin, A.L. Kaisheva. In 2020, a unique scientific facility (USF) “Avogadro” was registered on the basis of IBMC. The USF “Avogadro” is a complex based on molecular detectors for determination of proteins at low and ultra-low concentrations in order to establish markers of socially significant diseases and targets of effective drugs. The solution to the problem of increasing the sensitivity of bioanalysis will allow developing new principles for assessing human health and identifying biological markers of pathological conditions.

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Since 2020, IBMC has become a member of the world-class Scientific Center “Digital Biodesign and Personalized Healthcare” within the framework of the national project “Science and Universities” to carry out scientific research aimed at solving problems in the field of biomedicine in accordance with the priorities of scientific and technological development of the Russian Federation.

The Institute maintains the vector of infrastructural development set by V.N. Orekhovich: research is carried out on exclusive equipment, including advanced technical and software solutions.

The issue of the journal offered to readers includes the articles written by IBMC scientists, on the most relevant areas of biomedical chemistry, which are successfully developed at this Institute.