NEW ITEMS

ON THE 75TH BIRTHDAY OF ACADEMICIAN OF THE NATIONAL ACADEMY OF SCIENCES OF UKRAINE, PROFESSOR SERHII OLEKSIIOVYCH KOSTERIN

This year, the scientific community marks the 75th anniversary of Academician of the National Academy of Sciences of Ukraine, Doctor of Biological Sciences, Professor Serhiy Kosterin – a distinguished biochemist and biophysicist, and a long-standing researcher of the Palladin Institute of Biochemistry, NAS of Ukraine.

S. Kosterin began his scientific career in the Department of Muscle Biochemistry at the Palladin Institute of Biochemistry, where, after completing his postgraduate studies, he defended his Candidate of Sciences dissertation in 1976 and his Doctor of Sciences dissertation in 1988. Since then, his research has been closely related to the study of calcium transport mechanisms and the regulation of smooth muscle cell function. Since 1988, he has headed the Department of Muscle Biochemistry, and since 1998, he has served as Deputy Director of the Institute for Research.

The scientific contributions of S. Kosterin are extensive and include enzymology, biomembranology, and the molecular physiology of muscles. He made fundamental discoveries in the study of Ca^{2+} transport systems in biological membranes, particularly the identification and characterization of calcium pumps, exchangers, and the mitochondrial uniporter. For the first time, he demonstrated the sensitivity of these systems to hormonal regulation, developed novel approaches to the kinetic analysis of biochemical processes, and constructed mathematical models of calcium homeostasis. A special area of his research is the study of calixarenes as potential selective regulators of ion transporters, thereby opening new perspectives for the development of next-generation therapeutic agents. He has built a distinguished research school and supervised 15 Candidates and 7 Doctors of Sciences, many of whom continue their scientific careers in Ukraine and abroad.

Serhiy Kosterin is the author of more than 315 scientific publications, including 7 monographs, textbooks, and teaching manuals. His book Calcium Transport in Smooth Muscle was awarded the O. V. Palladin Prize of the NAS of Ukraine. He is also a co-author of the international monograph Control of Uterine Contractility (CRC Press, USA), prepared in collaboration with scientists from the USA, Canada, France, and Japan; the monograph Biochemical Properties and Regulation of Ca^{2+} Transport Systems of Smooth Muscle Cells (2016); and Calixarenes as Effectors of ATP-Hydrolyzing Systems of Smooth Muscle Cells (2019).

Beyond his scientific work, Professor Kosterin has played a significant organizational role that includes heading the department, serving on scientific councils for many years, being a member of the editorial board of the Ukrainian Biochemical Journal, and organizing seminars and congresses.

Since April 2023, S. Kosterin has chaired the interdisciplinary academic seminar in the natural sciences Topical Issues of Physicochemical and Mathematical Biology. This seminar, held almost monthly at the Palladin Institute of Biochemistry, NAS of Ukraine, has become an important platform for discussing the latest research and scientific ideas. Leading scholars from various fields – from biochemistry, molecular biology, and biophysics to mathematics, computational biology, and nanotechnology – are invited to participate. Thanks to Kosterin's energy and persistence, the seminar is not limited to formal presentations but has become a space for lively scientific discussion, mutual enrichment, and collaboration between research schools.

Even in wartime conditions, when even holding a scientific meeting at a set time requires considerable organizational effort and human resilience and despite all the difficulties – air raids, transport disruptions, or sleepless nights affecting both organizers and presenters, many of whom are seniors, Serhiy Kosterin has succeeded in maintaining the regularity and vitality of these meetings.

This is undoubtedly the merit of S. O. Kosterin, who, by his own example, affirms the principle that even under the most difficult circumstances, science must be heard, must develop, and must unite.

Equally notable are Professor Kosterin's contributions to education. He was the first in Ukraine to design a lecture course on the kinetics and thermodynamics of enzymatic reactions and published a textbook in 1976 that is still used by students in Ukraine and beyond. Over the decades, he has taught specialized courses on enzymatic kinetics, biochemical membranology, and biophysics at leading universities in Ukraine, as well as for postgraduate students at the Palladin Institute of Biochemistry. He has continually chaired state examination boards and lectured at many universities across Ukraine. For his exceptional teaching activity, he has received awards from the National University of Kyiv-Mohyla Academy, the Ministry of Education and Science of Ukraine, and the Honorary Award of the Scientific Council of Taras Shevchenko National University of Kyiv.

Kosterin is a firm advocate of integrating mathematical approaches into biology. The main point of his pedagogical credo is that modern biology needs to be grounded in the exact sciences. He believes that progress in modern science and technology is impossible without the thorough training of students and graduate students in chemistry, physical chemistry, and physical and mathematical sciences. That is why he consistently conveys the idea of transdisciplinary education as a cornerstone of scientific and technological development in Ukraine.

Professor Kosterin's contributions to science have been widely recognized. He is a laureate of the State Prize of Ukraine in Science and Technology (2010), the O. V. Palladin Prize (1993), the Kostiuk Award (2023) and the Taras Shevchenko Kyiv National University Prize (2025). He has also been awarded the honorary title of Honored Science and Technology Figure of Ukraine (2015), as well as Certificates of Honor from the Verkhovna Rada of Ukraine, the NAS of Ukraine, the Ministry of Education and Science of Ukraine, and several universities.

On the occasion of the 75th anniversary of Serhiy Kosterin, we pay tribute to his tireless dedication to science and education, his leadership in shaping future generations of researchers, and his contributions to advancing modern biochemistry and biophysics in Ukraine.

Anniversaries pass, but our gratitude and respect remain with us every day.

Editorial Board
of the Ukrainian Biochemical Journal

Colleagues, students, and friends wish Serhiy Kosterin health, happiness, and inspiration for new scientific discoveries!