



IN MEMORIAM OF TETYANA M. YURCHENKO

07.11.1933—07.02.2026



On February 7, 2026, the Ukrainian cryobiological scientific community suffered a devastating loss. The heart of an outstanding scientist, one of the founders of the national school of cryobiology and cryomedicine, winner of the State Prizes of the USSR and Ukraine, MD, Prof. Tetyana M. Yurchenko stopped beating.

Tetyana M. Yurchenko graduated from the Kharkiv Medical Institute in 1957. She started her career at the Kharkiv Regional Clinical Hospital, in 1964—1969 she was an assistant at the Department of Eye Diseases of the Kharkiv Medical Institute, in 1969—1972 she held the position of a research associate at the Institute of General and Emergency Surgery.

Prof. T.M. Yurchenko worked at the Institute for Problems of Cryobiology and Cryomedicine of the National Academy of Sciences of Ukraine (IPCC of the NAS of Ukraine) from its very foundation (1972), for over 37 years she headed the Department of Cryomorphology. The main direction of the scientific activity of Prof. T.M. Yurchenko was the study of the structures and functions of various biological objects under the influence of low temperatures. Under her leadership, fundamental studies

of the effect of cold on biological objects of different levels of organization were carried out using the methods of electron microscopy, classical histology, histo- and cytochemistry. The findings formed the basis for the development and implementation in clinical practice of methods for cryopreservation of eye tissues, blood cells and bone marrow. In 1986, for the development of a method for low-temperature preservation of human corneas for transplantation, T.M. Yurchenko, jointly with a team of co-authors, was awarded the USSR State Prize.

In 1998, with the active participation of Prof. T.M. Yurchenko, the SE "Interdepartmental Scientific Center for Cryobiology and Cryomedicine of the NAS, AMS and the Ministry of Health of Ukraine" was created on the base of the IPCC of the NAS of Ukraine, the main task of which was to introduce the developed methods of cryopreservation of cells and serum of cord blood, tissues of fetoplacental origin into practical medicine, and to create new therapeutic drugs for the correction of a number of diseases. In 2004, T.M. Yurchenko, together with a group of scientists of the IPCC of the NAS of Ukraine, was awarded the State Prize of Ukraine in the field of science and technology for fundamental research and development of a new biotechnology for obtaining cell and tissue allografts.

Tetyana Yurchenko was one of the ideologists and an active participant in the development of a new direction in medicine — cell and tissue therapy, the basis of which is the transplantation of cryopreserved cells and tissues of the fetoplacental complex for the treatment of various pathological conditions of the human body. She was also one of the founders of a new direction in cryobiology — the study of morphological aspects of reparative regeneration of various biological objects after the cooling effect.

Within the framework of the activities of the SE "Interdepartmental Scientific Center for Cryobiology and Cryomedicine of the NAS, AMS and the Ministry of Health of Ukraine", she led and personally participated in the development of cryopreservation tools for fetoplacental tissues and their implementation in medical practice.

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Under her coordination, the studies on the structural manifestations of adaptation processes in biological objects after cooling were carried out, and the cryosensitivity of cells at different stages of ontogenetic development was determined.

Tetyana M. Yurchenko was always a generator of new ideas, actively worked on their development herself and inspired her students and colleagues. Until her last breath, she took an active part in planning scientific work and discussing results, and provided advisory assistance to young scientists. A person of high moral principles, a kind and fair leader, she was an example of devotion to science, strength and indomitable spirit.

Prof. T.M. Yurchenko combined scientific activity with organizational work. She was the scientific secretary of the Problem Commission in Cryobiology and Cryomedicine at the Bureau of the Presidium of the NAS of Ukraine, a

member of the editorial board of the "Problems of Cryobiology and Cryomedicine" journal, a member of the Scientific and Specialized Scientific Councils. Prof. Yurchenko was the author of over 200 scientific papers, 8 monographs, 10 patents. During her lasting scientific activity, Prof. T.M. Yurchenko prepared 10 candidates and 2 doctors of sciences, and was a mentor to young cryobiologists. Her students became highly qualified specialists, professors, and today they head scientific teams and medical institutions.

The staff of the Institute for Problems of Cryobiology and Cryomedicine of the NAS of Ukraine, the Laboratory of Cryomorphology shares the pain and sorrow of this heavy loss with the family members. Bright memory of T.M. Yurchenko will be remembered forever by her numerous students and colleagues, and her name will be engraved on the pages of the Institute's history.