

COMMITMENT TO IDEALS OF SCIENCE TO THE 90TH BIRTHDAY ANNIVERSARY OF ACADEMICIAN VADYM PINCHUK

On December 28, 2020, the academic community commemorates the 90th birthday anniversary of Academician Vadym Pinchuk, well-known scientist in the field of pathophysiology, radiobiology and experimental oncology, the talented enthusiast of science, the former director of the Institute founded by Academician Rostyslav Kavetsky.

V. Pinchuk was born in Poltava. After graduating from O. Bogomolets Kyiv Medical Institute, he continued the studies as a postgraduate at the Department of Pathological Anatomy focusing on the pathology of the radiation-induced lesions due to external radiation and incorporated radionuclides. Thirty years later, this experience became especially useful in scientific-and-practical activities aimed at eliminating the consequences of Chernobyl catastrophe.

Since 1961, V. Pinchuk started his professional career at the Ukrainian Research Institute of Experimental and Clinical Oncology of the Ministry of Health of Ukrainian SSR (since 1971 — Institute for Oncology Problems and nowadays — RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology, the National Academy of Sciences of Ukraine), where he worked his way up from the researcher to the Head of the Department and the Academician. The scientific progress and creative growth of V. Pinchuk as the specialist in experimental oncology owed much to his experienced supervisor — Rostyslav Kavetsky, an excellent scientist of O. Bogomolets' pathophysiological school.

An important event in his scientific career that is difficult to overestimate happened when in 1962 Vadym Pinchuk, then a young scientist, was sent to Paris for training in the laboratory of Professor Bernard, the founder of one of the first schools of electron microscopy in the world. The valuable experience gained during this training helped him for organizing the laboratory of electron microscopy, one of the first in Soviet Union engaged in studying ultrastructure of cancer cells.

In 1970, V. Pinchuk defended his doctorate thesis entitled "Electron microscopic features of cells under chemical carcinogenesis in liver and cellophane-induced carcinogenesis in kidney". Two years later, V. Pinchuk was conferred the academic title of professor. In 1973, V. Pinchuk was elected the Corresponding



Member of the Academy of Sciences of Ukrainian SSR, since 1991 — he was the Academician of the National Academy of Sciences of Ukraine.

After the death of Academician Rostyslav Kavetsky, Vadym Pinchuk took charge of the Institute in 1978, remaining in this position for 18 years, difficult years encompassing "perestroika", Chernobyl catastrophe and the ruin of the Soviet state. Nevertheless, in spite of all the difficulties, the Institute headed by Vadym Pinchuk continued the development of the concept of tumor-host relations set up by Rostyslav Kavetsky. The major fields of scientific interests of Vadym Pinchuk were the mechanisms of carcinogenesis

and anticarcinogenesis at the subcellular level. Based on the findings on the disordered differentiation of cancer cells and alterations of their ultrastructure, Vadym Pinchuk put forward the original hypothesis on the role of the damaged membranes of ergastoplasma in carcinogenesis. His numerous works provided the novel data on the ultrastructure of several human cancers, in particular, prostate cancer, chordoma, multiple myeloma. Vadym Pinchuk co-authored the monographs "Pathological Anatomy and Ultrastructure of Nodular Hyperplasia and Prostate Cancer" (1977), "Ultrastructure and Histochemistry of Normal and Cancer Cells" (1980). In 1979, he was awarded O. Bogomolets prize for the fundamental work "Experimental Tumors of Liver".

Academician Vadym Pinchuk headed the novel areas of research in oncomorphology related to automation of cytological diagnostic studies, the development of hybridome technology and production of monoclonals, the application of immunohistochemical techniques for diagnosis of cancer. His studies contributed to the novel concepts of the cell basis in carcinogenesis. These results were disclosed in the monographs coauthored by Vadym Pinchuk "Clonal-Selectional Concept of Tumor Growth" (1987), "Modern Tech-

niques of Automation of Cytological Studies” (1988), “Immunocytochemistry and Monoclonal Antibodies in Oncohematology” (1990), “Structure of Thymus and Differentiation of T lymphocytes” (1991). Vadym Pinchuk contributed much to the development of the concept of tumor-host relations put forward by Rostyslav Kavetsky. In 1981, Vadym Pinchuk and the leading scientists from the Institute became the laureates of the State Prize of Ukrainian SSR.

The last ten years of his life, Vadym Pinchuk devoted himself to the urgent problems related to the medical and biological aspects of the consequences of Chernobyl catastrophe. The Institute provided the significant input to the development of the concept “Ukraine against cancer after Chernobyl”. Soon after Chernobyl disaster, the scientists of the Institute have tackled the scientific and practical tasks studying the remote consequences of low dose radiation exposure. These findings were summarized in the monograph “Radiobiological Consequences of the Chernobyl NPS Accident” (1992) that was later translated and published in Germany. Vadym Pinchuk was one of the scientific editors of the multidisciplinary reference book “Chernobyl Catastrophe” published in 1994–1997 in Russian, Ukrainian and English. The Institute developed the homemade hemosorption device, the new sorbents and methods for detoxification therapy put into clinical practice for treating the patients who suffered from radiation exposure. The scientific development of the

Institute in post-Chernobyl era has been highly recognized in Ukraine.

Vadym Pinchuk was a talented organizer of science. He headed the Coordination Council “Malignant Neoplasms” of the National Academy of Sciences of Ukraine. After Chernobyl disaster, he was appointed the Deputy-Head of the standing committee on the elimination of the consequences of Chernobyl accident in the Presidium of the NAS of Ukraine. For many years, Vadym Pinchuk was the Deputy Academician Secretary of the Department of Biochemistry, Physiology and Molecular Biology of the NAS of Ukraine. He was the Editor-in-Chief of Experimental Oncology founded by Academician Rostyslav Kavetsky.

For his scientific and public activities, Dr. Vadym Pinchuk, Academician of the Academy of Sciences of Ukraine and the Academy of Medical Sciences of Ukraine was decorated with government awards. Posthumously, he was honored with the State Award of Ukraine for studying immunomorphological fundamentals of antitumor resistance.

The life of Vadym Pinchuk was filled with passion for science. The oncologists of Ukraine, the collaborators and followers of Vadym Pinchuk, the staff of the Institute, all those who knew him keep alive the memory of this wonderful person, investigative talented scientist and genuine intellectual.

Academician Vasyl Chekhun
Editor-in-Chief