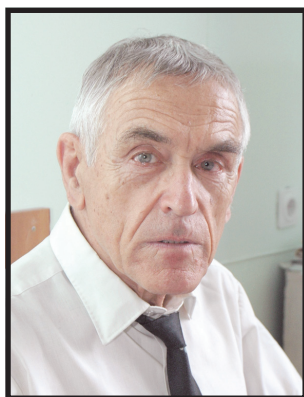


NIKOLAI FEDOROVICH GAMALIYA (1932–2016)

Professor Nikolai Fedorovich Gamaliya, well-known scientist in the field of laser biomedical research, biophysicist, authority in experimental oncology, Laureate of the State Prize in Science and Technology of Ukraine, Head of the Department of Biological Effects of Ionizing and Non-Ionizing Radiation of R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of the National Academy of Sciences (NAS) of Ukraine died on June 14, 2016 at the age of 83.



N. Gamaliya was born in 1932 in Chita, Transbaikal region, in the family of doctor. In 1955, he graduated from the Department of Microbiology, Biological Faculty of Taras Shevchenko Kyiv State University. In 1964, he defended his PhD thesis in medical microbiology. Being eager to work in the field of cancer research,

Dr. N. Gamaliya continued his carrier at the Institute of Experimental and Clinical Oncology (nowadays — R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of the NAS of Ukraine) as a junior and then senior researcher where he organized a group of tissue culture under the supervision of Academician R.E. Kavetsky, the founder of the Institute.

From September 1967 to September 1968, N. Gamaliya was on a scientific mission in USA as a Fellow of the International Cancer Agency, working in one of the leading laser biomedical centers at Pasadena Foundation for Medical Research. In 1969, in France he participated in the international symposium “Lasers in Medicine” as the co-chair and speaker. Based on the gained experience, in 1971 N. Gamaliya set up the first in the former Soviet Union laboratory for studying the biological and therapeutic effects of the laser radiation, in which world-class devices and methods for laser treatment of tumors were developed. In 1973, N. Gamaliya defended his doctoral thesis in the All-Union Cancer Research Center, Moscow. Since 1978, he is professor of biophysics.

Prof. N. Gamaliya has authored more than 300 publications, including 6 Russian and 4 foreign monographs on the subject, including the chapter “Laser Biomedical Research in the USSR” (pp. 1–173) in the most fundamental early publication “Laser Applications in Medicine and Biology”, ed. M.L. Wolbarsht, Plenum Press, New York — London, 1977. His monograph “Lasers in Experiment and Clinic” (Moscow, 1972) became the basis for further successful development in this area. As one of the pioneers of the laser biomedical research in the world, he organized three all-union conferences and was co-organizer of several international forums — in Paris, Munich, Greifswald, Limassol. The top-priority inventions by Prof. N. Gamaliya were confirmed by USSR inventor’s certificate and the patents of USA, Germany, UK and France.

In 1972–1984, Dr. N. Gamaliya was the Deputy Chairman of the Task Force of the Academy of Medical Sciences of USSR on the Use of Lasers in Medicine. In 1986–1991, he was the expert of World Health Organization on non-ionizing radiation, in 1988–2000 — INTAS expert. According to the decree of the Presidium of National Academy of Sciences of Ukraine, over 5 years Dr. N. Gamaliya coordinated the Program for comprehensive research at the institutions of the Academy of Sciences, Ministry of Health of the USSR and the USSR State Agricultural Committee, grounding scientific basis for blood exposure to light radiation in veterinary and medicine. Since 1999, he was the Deputy Editor-in-Chief of “Photobiology and Photomedicine” journal. For many years, Prof. N. Gamaliya was the Member of Editorial Board of “Experimental Oncology” journal. He was a supervisor of 15 PhD theses.

In 2003–2008, Prof. N. Gamaliya supervised the pre-clinical trials on the photodynamic therapy of tumors. For the first time in Ukraine, this new treatment method was introduced in clinical practice of the national oncology.

Prof. N. Gamaliya is known among the experts as the author of innovative views on photobiological processes in humans and animals. He made a great contribution to the fundamental principles of photobiology. In particular, his studies on the mechanisms of interaction of laser radiation with living tissue became the basis for the development of novel methods of laser therapy in oncology. The findings by Prof. N. Gamaliya provided the experimental justification of the original hypothesis of biorhythm regulation by light through the non-visual photoreception mechanisms.

Since 2009, Prof. N. Gamaliya started his research in the field of bionanotechnology aimed at improving the efficacy of cancer treatment. Under his leadership, a series of studies on development of more effective novel photosensitizers based on the gold nanoparticles was provided.

Everyone who worked in collaboration with or under the supervision of Nikolai Fedorovich Gamaliya knew him as a high-class specialist in oncology and related fields of science, an expert with encyclopedic knowledge, the talented personality with an extremely wide range of interests. All his life until the last day was a real passion for science. The bright memory of Prof. N. Gamaliya will remain forever in the hearts of all who knew him.

**Administration, Scientific Council and staff
of R.E. Kavetsky Institute of Experimental
Pathology, Oncology and Radiobiology
of the NAS of Ukraine
Editorial Board of “Experimental Oncology”**