

IN MEMORY OF A. V. LEBEDINSKII

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January 1, 1965 marked the sudden death of Doctor of Medical Sciences Andrei Vladimirovich Lebedinskii, Active Member of the USSR Academy of Medical Sciences, Honored Scientist of the RSFSR, and Major General of the Medical Service.

Soviet biological science has lost an outstanding scientific thinker, a successor of the finest traditions of the Soviet physiological schools of I. M. Sechenov, I. P. Pavlov, and L. A. Orbeli, who has made a remarkable contribution to the development of biology and medicine.

The great Soviet physiologist A. V. Lebedinskii traversed a great path of life. He was born in 1902 into the family of a physics professor. While still a student of the Military Medical Academy, Andrei Vladimirovich began his scientific activity in the laboratory of L. A. Orbeli and did not cease it even after graduation, working from 1924 to 1928 as neuropathologist. At this time he combined therapeutic work with research—he was a scientific co-worker of the psychophysiological laboratory of the Air Force. The next 25 years of his life were connected with the Military Medical Academy, where he began work as an instructor of the physiology department and subsequently headed this department.

Simultaneously with the great pedagogical and scientific work at the Military Medical Academy, A. V. Lebedinskii devoted much time and effort to research in numerous physiological scientific organizations. For instance, he managed the physiological sector of the psychophysiological laboratory of the Leningrad Institute of Engineers of the Civil Air Fleet, the physiological laboratory of the Leningrad Ophthalmological Institute, the physiological sector of the V. M. Bekhterev Brain Institute, and the theoretical sector of the A. L. Polenov Leningrad Research Neurosurgical Institute.

The first scientific work performed in the laboratory of L. A. Orbeli was devoted to the effect of sympathetic innervation on the electrical conductivity of the skeletal muscle. Later Andrei Vladimirovich devoted much attention to a study of the biophysical bases of vital processes. In the 1930's to 1940's the scope of interests of A. V. Lebedinskii was extremely broadened. He was occupied with physiological optics, and the results of these works received the wide acknowledgement of practical oculists, were incorporated into a handbook on ophthalmology and into clinical practice, and were awarded the I. P. Pavlov Medal by the Leningrad Society of Physiologists in 1936.

Andrei Vladimirovich made a number of important discoveries and conclusions while studying various aspects of physiological optics, bioelectrical phenomena in muscles, nerves, and the central nervous system, the elasto-viscous properties of muscles, permeability of tissues, and the effect of ultrahigh-frequency waves on an organism. An investigation of the interaction of afferent systems revealed many patterns in the realm of the physiology of sense organs. Studies of the trophic function of the nervous system led to the creation of an interesting concept of the origin of neurogenic dystrophy, which together with abundant experimental material was cited in the monograph published in 1945, "On the Mechanisms of the Origination of Neurogenic Dystrophy." A further development of the idea of Soviet physiology concerning the trophic effects of the nervous system and a study of its patterns and mechanisms of neurotrophic disorders, became the most important directions of the entire scientific creativity of A. V. Lebedinskii.

Urgency of the investigations carried out by A. V. Lebedinskii was characteristic. During the Second World War his investigations took a new trend corresponding to the urgent needs of medical practice. Since the

end of the 1940's A. V. Lebedinskii has studied problems of radiation physiology. He is rightfully considered to be one of the founders of Soviet radiobiology. Even at the Military Medical Academy from 1947 to 1953 A. V. Lebedinskii directed special studies on radiation medicine. This problem did not leave his sphere of attention until 1953-1954 when he headed the department of physiology of the Naval Medical Academy. Since 1954 he has devoted himself wholly to radiation medicine.

A. V. Lebedinskii approached the problem of the effect of radiation on an organism from broad general-biological and physiological positions. Particular attention in the works of A. V. Lebedinskii and his co-workers was devoted to an elucidation of the pattern of the reaction of the nervous system to irradiation. A. V. Lebedinskii was one of the first to put forth and prove, contrary to the opinion of foreign researchers, the hypothesis of the great radiosensitivity of nervous formations at all levels, starting from the cortical structures and ending with the postganglionic neuron. At the same time A. V. Lebedinskii and co-workers experimentally analyzed the mechanisms of the changes in the cardiovascular system, investigated the participation of the endocrine system in the reaction of an organism to ionizing radiation. Andrei Vladimirovich was one of the first to call attention to the theoretically and practically important problem of the effect of ionizing radiation in small doses on an organism.

Both in other areas of biology and in radiobiology Andrei Vladimirovich constantly aspired that his theoretical principles find practical application, and he worked out applied vital problems. The large team he headed participated in developing a system of radiation protection on the world's first icebreaker "Lenin," methods of providing radiation safety in space flights, etc. The outstanding scientific achievements of Andrei Vladimirovich and his students in the field of radiobiology were generalized in a number of works published in the Soviet press and in reports presented at international conferences and symposia.

The name of A. V. Lebedinskii has been continuously associated with the development and formation of aviation and space biology and medicine. As long ago as the 1920-1930's he began investigations in this direction. During those years Andrei Vladimirovich and his co-workers carried out a number of investigations devoted to medical aspects of aviation. Recently he, together with the leading physiologists of the country, worked out the principles of space physiology. A. V. Lebedinskii was one of the originators of the Soviet doctrine of space biology.

A. V. Lebedinskii was a wonderful organizer of research works. He headed many scientific teams that solved fundamental problems in various areas of biology and medicine. For many years he directed such a large research center as the Institute of Biophysics of the USSR Ministry of Health.

Andrei Vladimirovich had an enormous capacity for work and his clearness of purpose and organizational acumen as a researcher and director can serve as a wonderful example. He published about 200 works. Being a brilliant teacher and lecturer, he taught an entire army of physicians and scientists, and under his supervision 7 doctoral and more than 30 candidate's dissertations were fulfilled. The textbook written by A. V. Lebedinskii in collaboration with A. G. Ginetsinskii still remains the most popular and it is used not only by students but also by scientific workers.

Along with this Andrei Vladimirovich did enormous public work. He worked in the medical department of the Society for the Propagation of Political and Scientific Knowledge, was elected a deputy of the Regional Council in Leningrad and Moscow, was permanent chairman of the USSR on the Scientific Committee of the United Nations Organization on the Effect of Atomic Radiation, from 1955 to 1958 was chairman of the scientific councils of the USSR Academy of Sciences on problems of "Radiobiology" and "Special Physiology," a member of the board of the All-Union Society of Physiologists, vice-chairman of the board of the Moscow Society of Physiologists, participated in the work of the journals "Radiobiology," "Atomic Energy," "Physiological Journal," and was a member of the editorial board of the "Radiobiology" section of the Large Medical Encyclopedia.

A. V. Lebedinskii did great work at the post of assistant chief-editor of the journal "Bulletin of Experimental Biology and Medicine." Vast erudition, a broad general-biological outlook, and attentive and at the same time strict regard for each work, a constant endeavor to help authors—these are the characteristics of the work of A. V. Lebedinskii as assistant editor which to a considerable extent increased the popularity and authority of the journal for readers and authors.

The Soviet government highly valued the scientific and sociopolitical work of the remarkable scientist-communist A. V. Lebedinskii, having awarded him two Orders of Lenin, the Order of the Red Banner, the Order of the Red Star, two Orders of the Red Banner of Labor, medals, and conferred on him the title of Honored Scientist of the RSFSR.

A. V. Lebedinskii combined in himself the qualities of an outstanding scientist and remarkable person, a person of brilliant talent, and the wonderful trait of his constant goodwill to people.

The bright memory of the outstanding physiologist and charming person will always remain in the hearts of all who knew A. V. Lebedinskii and had the good fortune to work with him.