



Ivan Solomonovich Beritashvili

## OBITUARY

IVAN SOLOMONOVICH BERITASHVILI  
(1885-1974)

Professor Ivan Beritashvili (Beritov), one of the most eminent neurophysiologists of our time, died at the age of 90 on December 24, 1974. He began working in Professor N. E. Vvedensky's laboratory while still a student, and after graduating from St. Petersburg University, he was retained by N. E. Vvedensky in the Department of Physiology and sent to R. Magnus in Utrecht and to A. F. Samoilov in Kazan. The principal stage of his scientific endeavors began after the Great October Revolution. In 1919 he was invited to Tbilisi State University where he established a Department of Physiology. There his scientific activities and ideas gave rise to the Georgian school of Neurophysiology. In 1941 the Institute of Physiology that he had organized became a part of the Georgian Academy of Sciences and developed into a major center of brain research, with I. S. Beritashvili as its permanent scientific leader. Even in his 90th year, he continued to be a subtle judge of neurophysiological studies and his capacity for work and scientific imagination was amazing. His name was synonymous for selfless devotion to science and stanchness in upholding scientific principles.

Ivan Beritashvili was a brilliant experimenter and personally conducted physiological experiments during a period of almost 70 years; he was a pioneer in the use of the electrographic method of studying the central nervous system. His studies gained a renown reputation and included investigations of the rhythmic nature of inhibition, the physiological peculiarities of dendrites, the function of the brain stem reticular formation, the direct and reverse temporary connections in the elaboration of conditioned reflexes, the orientation of animals and man in space, the behavior of animals determined by the formation of images of the external world, and the phylogeny of memory. He is the author

of almost 350 scientific papers as well as a fundamental three-volume textbook of the general physiology of the muscular and nervous system. Few physiologists know that he wrote a monograph entitled *Teaching on the nature of man in ancient Georgia (4th–14th centuries)*.

Beritashvili formulated his way in physiology as follows: "From spinal coordination of movements to neuropsychic integration of behavior". His first work entitled "Reciprocal innervation of skeletal muscles in local strychnine poisoning of the spinal cord" was published in the *Izvestiya Imperatorskoï Akademii Nauk S.-Peterburg* in 1910, while his last work, titled *Memory of vertebrates, its characteristics and origin* (Second edition), was published by the Izdatel'stvo Nauka in 1974. Theoretically, he persistently endeavored for several decades to solve the most complicated problem, namely to establish the connections between general physiology and the morphology of the cerebral cortex and its mental activity.

Beritashvili was a member of the USSR Academy of Sciences, USSR Academy of Medical Sciences and the Georgian Academy of Sciences. In addition, his honorary memberships included the International Brain Research Organization (IBRO), the New York Academy of Sciences, and the American Society of Electroencephalography. He was awarded the I. P. Pavlov and I. M. Sechenov prizes, and the highest title of Hero of Socialist Labor.

In a few months I. Beritashvili, as the honorary chairman, was to have opened the Twelfth All-Union Congress of Physiologists in Tbilisi. His untimely death precluded him from doing so. He died surrounded by his wife Olga Antonovna, his daughter and grandson. His funeral was attended by his relatives, coworkers and pupils, representatives of academies of sciences of which he was a member, and leaders of the Government and the Communist Party of Georgia. He is buried in the garden of Tbilisi University where he served as professor for more than half a century.

*Alexander I. Roitbak, Tbilisi*

#### PRINCIPAL I. S. BERITOV'S PUBLICATIONS

- 1914. Über die Zentrale reziproke Hemmung auf Grund der elektrischen Erscheinungen am Muskel. Parts I–III. *Z. Biol.* 64: 175–188, 285–296, 297–309.
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- 1920. Textbook of physiology (in Georgian). Gosudarstvennoe Izdat., Tbilisi.
- 1924. On the fundamental nervous processes in the cortex of the cerebral hemispheres. Parts I and II. *Brain* 47: 109–148, 358–376.

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1934. Studies of individual behavior of dogs (in Russian). Parts I-VII. Fiziol. Zh. SSSR 17: 176-183, 184-195, 457-463, 688-697, 698-706, 912-920, 1186-1197.
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1941. On the excitation, inhibition and facilitation in the spinal cord (in Russian; English summary). Tr. Inst. Fiziol. Prof. I. Beritashvili 4: 1-38.
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1965. Neural mechanisms of higher vertebrate behavior. Translated from the Russian and edited by W. T. Liberson. Little Brown and Co., Boston. 384 p.
1966. Obschaya fiziologiya myshechnoi i nervnoi sistemy. Vol. II. Izdat. Meditsina, Moscow. 435 p.
1969. Struktura i funktsii kory bol'shogo mozga. Izdat. Nauka, Moscow. 532 p.
1971. Vertebrate memory. Characteristics and origin. Translated from the Russian. Plenum Press, New York. 143 p.
1974. Pamyat' pozvonochnykh zhivotnykh, ee kharakteristika i proiskhozhdenie. Second ed. Izd. Nauka, Moscow. 212 p.