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The Contributions of Corr. Member G. Galabov for the Development of the Neuromorphology in Bulgaria on the Occasion of His 90th Anniversary

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Corr.-member Georgi Galabov was one of the most outstanding Bulgarian neuromorphologists of international renown and of an extraordinarily broad professional scope, huge humane virtues and creativity. He is one of the founders of the Bulgarian neuromorphological school.

Key words: neuromorpholgy, histochemistry, histoautoradiography, electron microscopy, regeneration

90 years ago corresponding member of Bulgarian Academy of Sciences Georgi Galabov was born on November 7th 1918 in the village of Yavorovo (Plovdiv region) – one of the most outstanding Bulgarian neuromorphologists of international renown and of an extraordinarily broad professional scope, huge humane virtues and creativity.

He has graduated from secondary school in Plovdiv (1937) and the Medical Faculty (Department) of Sofia University in 1943. He has worked as General Practitioner in the village of Raikovo and IInd Divisional hospital in the village of Orisare (Smolyan region). He has also been elected and nominated later assistant professor at the Chair of Anatomy of the Human at the Medical Faculty in Sofia (1944); associate professor (1950); full professor (1960); corresponding – member of Bulgarian Academy of Sciences (1977) [10, 11, 12].

With great dedication and professional expertise corr. – member G. Galabov has put great amounts of efforts in the teaching activity in the Chair of Anatomy of the Higher Medical Institute since 1944 till the end of his life. He was a revered tutor, teacher and guide in science for a number of generations of Bulgarian students in medicine, stomatology, Ph.D.- students, nurses, etc. corr.-member G. Galabov is one of the founders (creatots) of the Bulgarian neuromorphological school.

Applying great skills and insight he devoted all his efforts for raising neuromorphology in Bulgaria to the world level. Corr.-member G. Galabov has authored over 150 papers dedicated to important and up-to-date medico-biological problems in the fields of neuromorphology, anatomy and popularization of science. Corr.-member G. Galabov is the author and co-author of a number of textbooks in

anatomy : "Short Textbook in Anatomy of Man" for nurse and obstetrical schools (with D. Kadanov); "Defining the situation and direction of the organs and parts of the human body"; "Short textbook in anatomy of man"; "Anatomy of man for Students of the Sports Academy " (with Sp. Morov and R. Kossev); "Introduction to the anatomy and general Anatomy" (with D. Kadanov). Anatomy and Physiology of man. A textbook for students in a teacher`s training colleges. (with T. Gotsev); Anatomy of man. A textbook for students in medicine and stomatology (with V. Vankov); Repetitorium anatomicum (with V. Vassilev) etc. [5, 11].

At the bottom of the entire scientific activity of corr. – member G. Galabov lies the idea of restoration of the link between the two parts of the spinal cord upon its severing, an extraordinarily important issue affecting the destiny of thousands of disabled individuals.

Corr.-member G. Galabov and the team led by him has a number of original tributes to the neuromorphology and regeneration of the CNS. Important relationships between the neurons, the glial tissue and capillaries in the spinal cord have been established.

In collaboration with corr.-member M. Davidov in 1973 he has published the monograph "Lysosomen und lysosomale Enzymen im Zentralnervensystem der Ratta" devoted to the lysosomes in CNS [2].

He has also studied at the ultrastructural level with TEM the distribution of a number of hydrolases and has done the first description with TEM of a number of other enzymes in CNS.

The works of corr.-member G. Galabov dedicated to the study of reactivity and regeneration of the nervous system are also of original nature. He has studied in detail the axonal reaction after severing the peripheral nerves.

The works of corr.-member G. Galabov on the trans-synaptic changes in various parts of CNS after a cross – cut of the spinal cords or separate tracts are also of great interest. He has established differences in the morphology and metabolism of the structures situated over and under the point of cut of the spinal cord.

In 1971 together with prof. K. Ichev and prof. S. Manolov he has published an original paper devoted to the changes in the ultrastructure of the blood vessels of the spinal cord after its transversal section [6].

In collaboration with prof. Chuchcov in 1971 he has performed in – detail histoautoradiographic study on the synthesis of DNA in the spinal cord after cutting of plexus brachialis [7].

In 1983 his monograph co-authored by assoc. – prof. R. Dimova dedicated to the morphology of the glial cells in CNS was published [8].

His works on the macro anatomical investigations and the studies of the morphology of separate organs are also of importance.

Corr.-member G. Galabov has described in detail the adaptational capacities of the organism, the peculiarities of metabolism of the different cell types as well as the tracts and connections between the different parts of the nervous system.

The study on the conductive tracts in CNS allowed corr.-member G. Galabov to make important discoveries. He has proved that a part of the long dendrites of the motor – neurons in the spinal cord cross into the contralateral side and are incorporated in the composition of the corresponding front radices (roots).

He has reported for the first time on the presence of cortico-nigral, cortico-bulbar and cortico-subthalamic tract in the brain of certain mammals.

The data from the investigations carried out in collaboration with prof. V. Vassilev on the biomechanics of the lumbar portion of the spine are of great practical value [9].

Together with prof. K. Uzunov and prof. A. Palov by the help of TEM the cell characteristics and synaptic organization of the medial thalamic nucleus in the cat brain have been established [3].

The methodological contributions of corr.-member G. Galabov are also of importance. He has created an original method for histochemical detection of the acid 5 – nucleotidase; a method for the visualization of the enzyme acetylcholine - esterase; a method for extramedullar recovery of the lesion by implantation of an intercostals nerve from the intact segments of the proximal portion into segments of the distal portion, etc. [1, 4]

His activity as editor of a number of periodicals, monographs and textbooks published in Bulgaria is also very significant.

As a long-standing, respected and highly valued manager (organizer) of science and public health in our country he has actively participated and contributed to the building of several large research units in Bulgaria. In 1942 he has founded the Chair of anatomy at the higher Sports School hose head he was till 1963. Since 1965 he was elected head of the Chair of Human Anatomy at the Medical faculty in Sofia. In the same year he has founded the Central Laboratory in Regeneration at BAS and was elected its director. From 1959 till 1966 he served as Scientific Secretary of BAS. In the period 1966-1970 he was elected Rector of the Medical Academy (Higher Medical School) – Sofia. He has actively taken part in and contributed to the founding of the Medical Faculty in Plovdiv.

His role as Chairman of the Medical Scientific Association in Bulgaria (1973) and as Chairman of the association of the anatomists, histilogists and embryologists in Bulgaria (1971-1982), etc. is also of great value.

A lot of efforts and energy he has devoted as Counsellor of Direction "Higher Education of CSAC" (Committee for Science, Arts and Culture) – (1948-1951); Head of Department "Science and Education" at the Ministry of Public Health (1950-1951).

For his great merits for the development of neuromorphology in Bulgaria and his commitment in his scientific-organizational activity he has been conferred the public distinctions "Merited Scientist" (1970); "People's scientist"(1982) and "Laureate of Dimitrov Prize" (1982). He has also been awarded the order of the "People's Republic of Bulgaria" Ist degree (1968); the "Cyrill and Methodius" order Ist degree (1960), etc.

Corr.-member G. Galabov passed away on August 6th 1982 in Sofia.

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