

## IN MEMORIAM

G. P. MEN'SHIKOV

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On 31 May 1967, Professor Georgii Petrovich Men'shikov, Doctor of Chemical Science and Laureate of the State Prize, died suddenly.

G. P. Men'shikov was one of the talented pupils of the eminent Russian scientist A. E. Chichibabin. All Georgii Petrovich's scientific interests were closely connected with the chemistry of medicinal substances, and his activities promoted the development of the domestic chemical and pharmaceutical industry.

From 1923 he had worked in the Ordzhonikidze All-Union Chemical and Pharmaceutical Scientific-Research Institute. Since 1928, when a department of alkaloid chemistry was created in the Institute under the direction of Academician A. P. Orekhov and the study of the flora of the USSR was begun, G. P. Men'shikov's talent was widely used when he investigated one of the most complex branches of organic chemistry, the chemistry of natural compounds. As a result, new alkaloids were discovered and their structure was established.

In 1932, he began the study of plants belonging to the family Boraginaceae, which led to the discovery of a new heterocyclic system forming the basis of many alkaloids, which he called pyrrolizidine. The multiplicity of the alkaloids based, as it was found, on the newly discovered bicyclic system of pyrrolizidine, and also their peculiarities permitted these substances to be treated as a special, separate branch of alkaloid chemistry. An important result of the investigation in the field of pyrrolizidine alkaloids was the synthesis of the first Russian curare-like preparation — diplacin. The study of the alkaloids forming derivatives of 1-methylpyrrolizidine and their detection in a number of weeds made it possible to discover the cause of cases of toxic diseases of man and also of the poisoning of cattle in the republics of Central Asia.

G. P. Men'shikov was one of the first to begin the systematic study of the active principles of plants. His investigations also covered the alkaloids of other classes: anabesine, spherophysine, eleagnine, halostachine, colchamine, and others.

Almost at the very beginning of the development of the chemistry of antibiotics, G. P. Men'shikov devoted great attention to the new field of science, also making fundamental discoveries in this branch of the chemistry of natural substances. In 1956, he published an original investigation on the isolation of a new antibiotic, longisporin. It was established that longisporin, and also fluorin, which he discovered later, belonged to a new group of antibiotics, the cyclo-tripsides.

The last two decades of the life of G. P. Men'shikov were devoted almost entirely to the search for natural anti-tumor substances. Since 1952, he had worked in the Institute of Experimental and Clinical Oncology of the Academy of Medical Sciences of the USSR, where he investigated antibiotics and other substances of plant origin. During this work it was found that the sea buckthorn plant is a natural source of 5-hydroxytryptamine (serotonin) and simple method was developed for isolating this amine which is important at the present time in various branches of medicine and biology. Simultaneously, G. P. Men'shikov isolated and studied the new anti-tumor antibiotic chrysomallin, belonging to the group of actinomycins.

G. P. Men'shikov took part in the industrial introduction of a number of new medicinal substances and also in the perfection of the technology of materials already being produced (caffeine, morphine, santonin, penicillin, streptomycin, etc.). In work extending over many years, Georgii Petrovich made a valuable contribution to the chemistry of natural substances and thereby promoted the world prestige of Soviet chemical science. He gave great assistance to the national economy in discovering new medicinal substances and introducing them into industry.

The broad and deep theoretical investigations of G. P. Men'shikov have proved of extremely great value, and in 1947 he was awarded the State Prize. For his outstanding and faultless work, in 1951 G. P. Men'shikov was awarded the Order of Lenin, in 1945, the Order of the Red Banner of Labor, in 1946, the medal "For valiant work in the Great Patriotic War", and in 1947 the medal in honor of Moscow's 800th Anniversary.

A great scientist, one who approached the problems set from the national point of view, strict and demanding of himself and of others, of unimpeachable honesty, impatient with compromise, a man of great modesty, as such will Georgii Petrovich Men'shikov always remain in the memory of his friends, pupils, and colleagues.

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