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Mariya Nikolaevna Bekhtereva (1908–2000)

Mariya Nikolaevna Bekhtereva, who died on October 4, 2000, at the age of 92, was a leading researcher at the Institute of Microbiology, Russian Academy of Sciences, and one of the pioneers of industrial microbiology in the USSR. An associate of academician V.N. Shaposhnikov, she was concerned with the solution of various theoretical and applied biotechnology problems.

Bekhtereva graduated from the Department of Biology of the Faculty of Physics and Mathematics of the Moscow State University in 1931 as a microbiologist. From 1930 through 1938, she worked at the Research Chemical and Pharmaceutical Institute in the laboratory headed by Shaposhnikov. Together with N.D. Ierusalimskii and other collaborators, Bekhtereva investigated acetone–butanol bacteria and did much to put into operation the first acetone and butanol–producing plant in the USSR.

In 1938, Bekhtereva, together with Shaposhnikov, joined the staff of the Institute of Microbiology, USSR Academy of Sciences.

At the beginning of World War II, Bekhtereva left Moscow for Talitsa, a town in the Ural region, where she was commissioned to put into operation an AB-2 military plant.

In 1947, Bekhtereva returned to the Institute of Microbiology in Moscow to continue her work, first as a senior researcher, then, since 1963, as head of one of its departments and, later, as an adviser (till 1992). The main subject of her research interest was the physiology of the producers of biologically active substances, such as antibiotics, amino acids, β-carotene, and other bioactive lipids.

As head of the Department of Physiology and Biochemistry of Heterotrophic Microorganisms, Bekhtereva initiated the development of biotechnological processes for the production of carotenoids and other bioactive substances. She contributed heavily to the organization of the first large-scale production of β-carotene in the USSR by the mycelial fungus *Blakeslea trispora*.

In collaboration with a group headed by R.P. Evstigneeva, corresponding member of the Russian Academy of Sciences, from the Moscow Institute of Fine Chemical Technology, Bekhtereva elaborated the biotechnological process of production of pharmacologically valuable eicosapolyenoic fatty acids and initiated its use at the Belarussian plant *Belmedpreparaty.*

At the Institute of Microbiology, Bekhtereva supervised students who did their postgraduate work. Many of them are now skilled researchers working not only in Russia, but also in the former Soviet Republics and abroad.

Bekhtereva's scientific achievements were recognized by an Order of the Red Banner of Labor award, the Prize of the Council of Ministers of the Russian Federation, and several medals. She also received the honorable title of Outstanding Worker of the Food Industry of the Soviet Union.

Bekhtereva's death is a huge loss for Russian microbiology. She belonged to a generation of scholars who are noted for their selfless devotion to science, creative enthusiasm, and energy.

Researchers from the Institute of Microbiology, Russian Academy of Sciences

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