

Obituary Note: Dr. Mikhail Eldarov, A Russian Genetic Engineer

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With deep sorrow, we knew about the untimely demise of our colleague and friend Dr. Mikhail A. Eldarov on December 8, 2020. He was Head of the Group of Fungal Genetic Engineering in Federal Research Centre “Fundamentals of Biotechnology” of the Russian Academy of Sciences in Moscow, Russia.

Dr. Eldarov was born on February 14, 1956, in Moscow, USSR. He was graduated from the Department of Genetics, Faculty of Biology, Moscow State University in 1978 and he earned a Ph.D. in Molecular Biology in 1985. Since 1989 he has worked at the Centre “Bioengineering” of the Russian Academy of Sciences, leading the group of fungal genetic engineering.

His research was in the field of industrial biotechnology, protein expression, purification, and site-directed mutagenesis, generation of viral-like particles, regulation of biosynthesis of beta-lactam antibiotics, genomics, fungal genetic engineering, and mitochondrial genomics of yeast and fungi. He was interested in rather diverse aspects of the regulation of primary and secondary metabolism in yeast and fungi. The main topic of his studies was the molecular control of secondary metabolite production (cephalosporin C, lovastatin) in filamentous fungi *Acremonium chrysogenum* and *Aspergillus terreus* with the focus of biogenic polyamines as inducer of antibiotic production, cell survival and stress resistance in these fungi.

He has developed an agrobacterium-mediated transformation system for industrial *A.chrysogenum* and *A.terreus* strains, determined the dynamics of gene expression of key antibiotic biosynthesis and transport genes in these fungi, defined differences in some biochemical, morphological, molecular genetic, and physiological properties of industrial fungal strains, associated with their high producing phenotype.

His research activities also involved the production of recombinant proteins in bacterial and yeast cells – microbial asparaginases for antitumour therapy, industrial enzymes for biotransformation of cephalosporin antibiotics, and vaccines.

Among his achievements, there was the development of methylotrophic yeast strains overproducing industrial enzymes and G-protein coupled receptors, enzymes of phosphate metabolism. He had published around 200 scientific works, including research papers and book chapters. He was granted a Diploma from the Federal Institute of Industrial Property for inventions, included in the 100 best inventions of Russia (2012).

Dr. Eldarov was a supervisor of research associates, master and Ph.D. students, principal investigator in several projects and state contracts funded by the Ministry of Sciences and Education, Federal Agency of Scientific Organizations, Russian Foundation of Basic research. He held teaching courses “Modern industrial



Dr. Mikhail A. Eldarov
14-02-1956 – 8-12-2020

Biotechnology” and “Yeast Biotechnology and Genomics” at the Department of Biotechnology, Biological Faculty Moscow State University.

Dr. Eldarov will be remembered not only as an outstanding scientist, brilliant genetic engineer but also as a real friend for his colleagues and an excellent teacher for numerous young professionals in the field of molecular biology and biotechnology. His contribution to the scientific community cannot be forgotten. We are grateful for his efforts as an author and reviewer of NanoWorld Journal.

With heavy hearts, we join his wife Anna, his disciples, and collaborators in mourning the loss of a very dear husband, teacher, colleague, and friend.

Prof. Eugenia Pechkova.