

Alexander Vladimirovich Zelenin Eightieth Anniversary Greetings

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Professor Alexander Vladimirovich Zelenin, an outstanding scientist in the field of cell and molecular biology, a founder of a new direction and a scientific school, reached eighty on March 10, 2010. A.V. Zelenin undoubtedly belongs to the type of scientists-romanticists, and chromosomes and chromatin have had the luck to become his scientific passion.

A.V. Zelenin has been working constantly in the V.A. Engelgardt Institute of Molecular Biology from the first months of its foundation in 1960. His way to the academic science began in the laboratory of Functional morphology of the cell, which was headed by Academician M.N. Mejselem. There Zelenin developed as a highly qualified expert in the field of fluorescent microscopy and cytochemistry. Pioneer works of A.V. Zelenin on the binding of Acridine orange with live cells became classical and are widely quoted in the world literature: at present, his citing index on ISI comes near to 1700.

One of the directions fruitfully developed by A.V. Zelenin and his colleagues was cell engineering. Thus, they discovered a new type of nucleus activation in non-dividing cells and in collaboration with the Electrochemistry Institute they developed methods of electrically induced fusion of animal cells. For the first time the possibility of transformation of cereal cells by means of bombardment with microparticles of the precious metals bearing alien genes was demonstrated. The development of this "genetic gun" was so resonant that initiated an editorial article in *Nature Genetics* devoted to these works of A.V. Zelenin.

One more field, to which A.V. Zelenin and his colleagues have made an appreciable contribution, is the research of mitotic chromosomes of animals and plants. Introduction of new methods and approaches into experimental research allowed identification of an entire set of chromosomes of the basic cultivated cereals and of some other agricultural crops. On the basis of these works, principles of the chromosomal analysis in selection of plants have been formulated.

The cycle of investigations supervised by A.V. Zelenin on the localization in human chromosomes of genes and non-coding sequences by a method of fluorescent hybridization in situ has brought an appreciable contribution to the development of the Russian program *Human Genome*. A.V. Zelenin's merits in the field of human and plant genomes have been highly estimated: in 2004 Russian Academy of Sciences awarded A.V. Zelenin the A.A. Baev premium.

It is difficult to overestimate the contribution of A.V. Zelenin in the field of a professional training. This activity has been always supported by his deep scientific intuition, encyclopedic erudition, personal charm and benevolence. To his school belong 9 doctors of sciences and numerous candidates of sciences. The nature also gifted A.V. Zelenin with organizing talents. In the years difficult for the Russian science, not only he managed to keep his laboratory and to support the forming ones, but also actively developed new and perspective directions of research. Many years A.V. Zelenin effectively worked as the Institute's Deputy Director on scientific work. The kindest words deserves his active work as the Deputy Editor-in-chief of the journal *Biologicheskie Membrany* and as a member of Editorial boards of the journals *Tsitologia* and *Ontogenez*. Among his colleagues A.V. Zelenin is considered one of the most authoritative Russian biologists; in 2002 he was awarded a title of the Honored worker of science of the Russian Federation.

The Editorial of *Biologicheskie Membrany* congratulates our friend and colleague, a member of our editorial board, Alexander Vladimirovich Zelenin on the 80th anniversary, sincerely thanks him for the long-term and fruitful cooperation, and wishes him good health and creative longevity.

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