



## Victor Anatoliyovych Kunakh (to his 60<sup>th</sup> anniversary)

On April 28, 2006 a prominent Ukrainian scientist, Doctor of Science (biology), Professor, Corresponding Member of NAS of Ukraine, the Chairman of Department of Genetics of Cell Populations of the Institute of Molecular Biology and Genetics of NAS of Ukraine, Victor Anatoliyovych Kunakh, is celebrating his 60<sup>th</sup> anniversary.

V. A. Kunakh was born in the village of Selets, Chernyakhiv district, Zhytomyr region. After graduating from Tomakiv high school, Dniprovetrovsk region, with the silver medal, he entered the Department of Biology of Kyiv State University named after T. G. Shevchenko in 1964, and graduated with honours in 1969.

He started his first scientific experiments on cytogenetics of plant cells *in vitro* during his study years in the Institute of Botany named after M. G. Holodny, Academy of Sciences of Ukrainian Soviet Socialist Republic (AS USSR). In 1969–1971 he served in the ranks of the army.

Since 1971 he has been working in the Institute of Molecular Biology and Genetics, AS USSR. In 1975 under the leadership of V. P. Zosymovych, Corresponding Member of AS USSR (one of the founders of IMBG of National Academy of Science of Ukraine (NASU)) he defended the first in the USSR Ph. D. dissertation in Genetics of plant cultures «Cytogenetic study of cell populations in culture of isolated plant tissues». In 1989 he became Dr. Sc. (biology) after the defense of the thesis on the topic «Variability and selection in the populations of cultivated plant cells». In 1983 he initiated the

creation of the laboratory of genetics of cell populations in the Institute of Molecular Biology and Genetics, which transformed into Department in 1988.

Scientific achievements of Professor V. A. Kunakh are concentrated mainly in the area of biology of plant cells cultivated *in vitro*. He started genetic research of cultivated cells in Ukraine as well as a new scientific direction – genetics of cell populations. His main works are devoted to studying genome variability in the processes of cells dedifferentiation and differentiation, revealing the laws of processes of genome variability and selection in cell populations, searching for the ways of variability regulation in the populations of cultivated cells and creating highly productive cell strains on this basis – producers of biologically active substances of plant origin, first of all, medical preparations (phytopreparations).

The most significant scientific achievement of V. A. Kunakh was theoretical argumentation and experimental confirmation of the hypothesis that cells, cultivated *in vitro*, are a new, experimentally created system, which is characterized by the originality of relevant properties and peculiarities, while at the same time it submits to general biological population laws, in particular, the law of homologous rows in hereditary variability, made by M. I. Vavylov. A high level of variability is the characteristic feature of the cultivated cells population, mainly due to separating cells from integral organism, which results in the disorder of correlative relations, first of all, concerning the hormone system. Professor V. A. Kunakh proved the leading role of the hormone system in the regulation of genome variability of plant cell popu-

lations. It was shown that hormonal changes *in vitro* not only cause the appearance of genetic disorder in cells, but also correct the direction of cell selection.

On the basis of his research, Professor V. A. Kunakh together with his colleagues created several dozens of unique cell strains of valuable medicinal plants, above all, rare, endangered and tropical ones. He pays special attention to plants which increase the human organism resistance to extreme factors, have antistress, antimutagenic and radioprotecting action, and are used for prophylactics and treatment of cardio-vascular diseases. Together with the colleagues he created and introduced into the industrial production the first in the world highly productive cell strains of *Rauwolfia serpentina* (the source of anti-arrhythmic alkaline alkaloid), cell strains of *Victor ungueria*, ginseng and *Rhodiola rosea*. He is the author of the monograph «Biotechnology of medicinal plants. Genetic and physiological-biochemical grounds», co-author of the text book «Plant biotechnology», the author of several articles to 4-volume book «Biotechnology in agriculture and forestry», published by Springer Publishing House (Germany), co-author of the monograph «Aneuploidy», published by Alan R. Lis (USA). He published more than 300 scientific works and patented 30 inventions in the sphere of cell selection and plant biotechnology. Victor Anatoliyovich takes an active part in the training of young scientists: he has been giving lectures in cell selection, molecular biology, biotechnology, and genetics in Ukrainian educational institutions for many years, among them are Kyiv National University named after T. G. Shevchenko and International Solomon University. He was the supervisor of two Dr. Sc. and 15 Ph. D. specialists in the field

of genetics, molecular genetics, cell biology, biotechnology, plant physiology, molecular biology, and biochemistry. V. A. Kunakh is the first Vice-President of the Ukrainian society of geneticists and selectionists named after M. I. Vavilov, a member of presidium of the Ukrainian society of cell biologists, the editor-in-chief of the journal «Bulletin of the Ukrainian Society of Geneticists and Selectionists», a member of the editorial board of the journal «Biopolymers and Cell», the member of several specialized scientific boards for defending doctoral theses, the expert of the Highest Certifying Commission of Ukraine.

He is the laureate of State prizes of Ukraine in the sphere of science and technology, the laureate of the prize named after V. Y. Yur'yev of NAS of Ukraine, Honoured specialist of education of Ukraine, was awarded the medals of the USSR «Formilitary valour. In the commemoration of the 100<sup>th</sup>-anniversary of V. I. Lenin's birthday» and the «For labour excellence» medal, one silver medal and three bronze medals of the Exhibition of Achievements of the National Economy of the USSR, the diplomas of the Ministry of Education and Science of Ukraine, the Presidium of NAS of Ukraine, and Kyiv City Mayor.

We wish him sound health, happy creative longevity, further work achievements and vital forces, new inventions and ascensions in his favourite occupation – serving the Science!

May you prosper in every thing, dearly respected Victor Anatoliyovich!

*The staff of IMBG of NAN of Ukraine  
The «Biopolymers and Cell» editorial board*