



Rakhmetkazhy Bersimbay

Head of the Department of
General Biology and Genomics

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Professional experience:

2012 – till present – Head of the Department of General Biology and Genomics

From October 2011 – Director of the Institute of Cell Biology and Biotechnology, Head of the Laboratory of Molecular Genetics, L.N.Gumilyov Eurasian National University, Astana
2008-2011 – Vice-Rector of the Eurasian National University, Astana
2005-2008 – First Vice-Rector of the Academy of Public Administration under the President of the Republic of Kazakhstan, Astana

2004-2005 – Vice-Minister of the Ministry of Education and Science of the Republic of Kazakhstan, Head of Administration Department, Astana

2001-2004 – Dean of Faculty of Biology, Al-Farabi Kazakh National University, Almaty
1995 -2001 – Director of the Institute of General Genetics and Cytology, Almaty
1988-1995 – Dean of the Faculty of Biology, Al-Farabi Kazakh National University, Almaty

Scientific degree, scientific school:

Novosibirsk State University (1969), Faculty of Natural Sciences, Department of Molecular Biology, speciality "Biology".

Ph.D. in Biochemistry (Cand. Sci.), 1974 Postgraduate of the Institute of Cytology and Genetics, Siberian Branch of Russian Academy of Science, Novosibirsk, Russia, 1972

Dr.Sci. (Doctor of Biol. Sci. in Biochemistry), 1986 Saint-Petersburg State University, Russia

Professor, 1987

Corresponding Member of Kazakh National Academy of Science, 1995

Member (Academician) of Kazakh National Academy of Science, 2003

Visiting Professor of the National Institute of Biomedical Innovation, Osaka University, Japan (2011)

Scientific interests:

Molecular mechanisms of genetic processes

Grants:

2003–2023 – Kazakhstan Republic Research Grants on Basic Research.

2015 – Winner of the state scientific grant for scientists and experts who have made outstanding contributions to the development of science and technology.

2001–2003 – CRDF (USA) award *KB2-2289*.

1998–2001 – INCO-COPERNICUS award (*EC, ERBIC15-CT98-0217*).

1998–1999 – Civilian Research Developmental Fund (CRDF, USA) award *KS2-444*

1997–2000 – INTAS-96-1765 award (EC).

1995–1996 – Welcome Trust International Interlaboratory Collaboration Support (UK-Kazakhstan), Award *043 790/Z/95/Z*.

1994–1995 – International Science Foundation Award (*RUO 000*), USA.

1993–1994 – USAID Research Award, Jerusalem University, Israel.

Delivered courses:

Genetics (B). Molecular biology (B). Gene expression (M). Basic molecular and genetic mechanisms (M). Molecular mechanisms of genetic processes (D).

Publications (selected):

The level of free-circulating mtDNA in patients with radon-induced lung cancer // *Environmental Research*. – **2022**. – T. 207. – C. 112215. (**Q1** Web of Science **IF 8.431**)

The role of mitochondrial miRNAs in the development of radon-induced lung cancer // *Biomedicines*. – **2022**. – T. 10. – №. 2. – C. 428. (**Q2** Web of Science **IF 4.757**)

Role of microRNAs in Lung Carcinogenesis Induced by Asbestos// *J Pers Med*. – **2021** Feb 3;11(2):97. (**Q1**)

microRNA-19b-3p as a biomarker of chronic obstructive pulmonary diseases // *FEBS Open Bio*, 11 (Suppl. 1). – P. 443. – **2021** (**Q3 IF-2.69**)

The Plasma Levels of hsa-miR-19b-3p, hsa-miR-125b-5p and hsa-miR-320c in Patients with Asthma, COPD and Asthma-COPD Overlap Syndrome (ACOS)// *Microna*. – **2021**

Radon biomonitoring and microRNA in lung cancer // *Int. J. Mol. Sci*. 21(6):2154, **2020** (**Q1**, Web of Science **IF=4.182**)

Association of polymorphism TP53 Arg72Pro with radon-induced lung cancer in the Kazakh population // *Vavilov Journal of Genetics and Breeding*. 23(5):594-599, **2019**.

Awards:

"Best Scientist" (2021)
"Honored Worker of the Republic of Kazakhstan" (2019)
"The best teacher of the high school" (2014)
Kazakhstan Republic Order «Kurmet» (2012).
"Honored employee of RK education" Ministry of Education and Science (2007)
"For a contribution to the development of the science of Kazakhstan" (2003)
State grant for scientists who have made outstanding contributions to the science and technology development of Kazakhstan (2002)
Pyotr Kapitsa Award, Royal Society of Great Britain

Residential radon exposure and lung cancer risk in Kazakhstan // *Int.J.Mol.Med.* 44:190. – **2019** (Web of Science **IF =2.928**).

A novel calix[4]pyrrole derivative as a potential anticancer agent that forms genotoxic adducts with DNA // *Scientific Reports.* 8(1):11075. – **2018 (Q1, Web of Science IF= 4.011)**

Resistance to cancer chemotherapeutic drugs is determined by pivotal microRNA regulators // *American Journal of Cancer Research.* – Vol.7(6). P. 1350-1371. – **2017 (IF=3.264)**

On the limits of drought-Life history of *Gagea bulbifera* (Liliaceae) // *FLORA* Vol.210, P.: 72-79. – **2015, (IF=1.716)**

Mutations in the Arabidopsis LST8 and raptor genes encoding partners of the TOR complex, or inhibition of TOR activity decrease abscisic acid synthesis in Arabidopsis // *Biochemical and Biophysical Research Communications.* Vol. 466, p.992-997. – **2015 (IF=2.297)**

The health effects of radon and uranium on the population of Kazakhstan // *Genes and Environment.* Vol. 37:18. – **2015.**

Autoregulation of the mTOR Complex 2 integrity is controlled by the ATP-dependent mechanism // *Journal of Biological Chemistry,* V.288, P.27019-27030. – **2013**

Minor differences with big consequences: Reproductive patterns in the genus *Gagea* (Liliaceae) // *Flora.*, V.208, P. 591-598. – **2013**

Isolation of the mTOR Complexes by Affinity Purification *Methods in Molecular Biology,* V. 821, P. 59-74. – **2012**

Evaluation of Human Risk in Space Environment and Its Protection: Protection of Radiation Late Effects Space *Utiliz Research,* V.28, P. 126-129. – **2012**

Integrity of mTORC2 is dependent on the rictor Gly-934 site. *Oncogene.* – P.1-6. – **2011**

Monitoring of Human Population Exposed to Radiation: Studies of Genetic Polymorphism and Expression of Minisatellite Mutations in Three Generation of Population Living In Vicinity to the Semipalatinsk Nuclear Test Site // In: Rapid Diagnosis of a population in an Emergency and at Risk after exposure to ionizing Radiation and Chemicals (Ed. A. Cebulska-Wasilewska) *NATO SCIENCE SERIES BOOK,* IOS Press, USA, p.145-157. – **2010**

Biochemical Mechanisms of Suppression of RNA Interference by Plant Viruses // *Biochemistry* (Moscow), V.75.N.8, p.965-970. – **2010**

Relations between nitric oxide synthase DNOS1, Hsp70 and apoptosis regulatory gene *grim* in *Drosophila melanogaster* after heat stress induction // *Biopolymers and Cell,* V.26,N.3, P.194-199. – **2010**

Textbooks:

1. Genetics. *Textbook.* Astana, «L.N. Gumilyov ENU», 2015. 400 pp.
2. Molecular biology. *Textbook.* Astana, L.N. Gumilyov ENU, 2015. 255 pp.
3. Molecular biology. *Textbook.* Astana, L.N. Gumilyov ENU, 2014. 303 pp.