**Author Information**



**1. Surname, name:**

Bozhbanov Alikhan.

**2. Position, academic degree, title:**

candidate of biological sciences, docent (associate professor), corresponding Member "Academy of youth tourism and local history named after A.A. Ostapts-Sveshnikov", Moscow c., academician International academy and informatization, Almaty c.

**3. Education:**

- 1985-1990, Kazakh state university named after S.M. Kirov, faculty of biology, specialty - "Biologist". Biology and chemistry teacher;

- 2007, candidate of biological sciences dated September 27, 2007 protocol № 7 (diploma GK № 0000607) in the specialties 16.00.03 "Veterinary microbiology, virology, epizootology, mycology with mycotoxicology and immunology";

- 2011, docent (associate professor) dated June 24, 2011, protocol № 5 (diploma DC № 0002251);

2014, corresponding member (International public organization "Academy of youth tourism and local history named after A.A. Ostapts- Sveshnikov", Moscow, reg. № K-264, 05.06.2014);

2014, academician (International informatization academy, Almaty, 24.01.2014).

**4. Field and areas of research, including participation in scientific projects with a brief description of the research results:**

*Area and directions of research:*

- biotechnology, biology, ecology.

*Participation in scientific projects:*

- for many years he was the responsible executor of a number of initiative, economic contract and grant works related to ecology and biology.

1. "Development of innovative nanotechnologies for monitoring food safety in the metropolis" Almaty city, State registration № 0115RK00436 (2018-2021).

Results:

a comprehensive study of this problem made it possible to develop a number of measures to optimize the environmental safety of food products in the metropolis of Almaty. First of all, this is the creation of a legal framework that promotes the interest of domestic producers in the production of harmless and high-quality products, a thorough study of the biological, technological and culinary transformation of chemical compounds in food products, as well as the mechanism of adaptation of the human body to them.

2. Head of the scientific project "Research of biotechnological methods for the processing of agricultural and industrial organic waste".

Results:

a comprehensive technology for the recultivation of lands contaminated with toxic chemicals was developed and tested using biodestructor microorganisms and earthworms. At the first stage, the contaminated soil is treated with biodegrading microorganisms, and then, after the decomposition of the pollutants, the substrate is populated with earthworms to restore the normal soil microflora and soil structure. To increase the fertility of recultivated soils, it is advisable to add manure or biohumus to the processed substrate along with earthworms.

**5. List of the most significant publications (monographs, patents, developed standards):**

Over the period of work, more than 250 scientific papers and two innovative patents of the Republic of Kazakhstan have been published, the author of 3 textbooks, 15 manuals and 8 standard curricula.

*Textbooks:*

1) The textbook was published on the recommendation of the Ministry of Education and science of the Republic of Kazakhstan. "Fundamentals of environmental zoogeography". The textbook. - Almaty: - Association of Universities of the Republic of Kazakhstan, 2013. - 340 P. Co-author: Baibatshanov M.K.;

2) The Electronic multimedia textbook was published on the recommendation of the Ministry of Education and science of the Republic of Kazakhstan. "Fundamentals of environmental zoogeography". Electronic textbook. Republican Interuniversity Electronic Library, - Almaty -2015. Co-author: Baibatshanov M.K.;

3) electronic multimedia textbook "Ecology and sustainable development" recommended by the Ministry of Education and science of the Republic of Kazakhstan. - Almaty -2022.

*10 textbooks recommended by the Ministry of Education, Culture, Sports and Science of the Republic of Kazakhstan:*

1) Economics of Environmental Management: a textbook.- Karaganda: - IP "Aknur publishing house", 2013. -152 P.; Co-author: Turgumbekova N.M.;

2) Ecotoxicology: training manual.- Almaty: - Economics publishing house, 2014. -254 P. coauthor: Medeuova G.Zh.;

3) Fundamentals of Biogeochemistry: training manual. - Almaty: - Economics publishing house, 2015. - 156 P. Co-author: Medeuova G. Zh.;

4) Workshop on Zoology: training manual.- Karaganda: - LLP "Medet Group", -2015. -168 P.;

5) Workshop on Zoology: A textbook.- Karaganda: Medet Group LLP,- 2015. -146 p.;

6) Social Ecology and sustainable development: a textbook. - Almaty: - LLP "Medet group", - 2015. - 280 P. Co-Author: Satbaeva G.S.;

7) Bozhbanov A.Zh., Jakupova I.B /Ecology and sustainable development lesture course, Tutorial, Almaty, 2018 / Almaty: ATU, 2018;

8) Dzhakupova I.B Bozhbanov A.Zh. Sharifkanova G.N.Ecology and sustainable development in Russian and English. / Textbook /Almaty ATU, 2018.- 484 p.;

9) Bozhbanov A.Zh., Dzhakupova I.B. Biological properties of the E.COLI A-20 strain and its use for the prevention of escherichiosis of calves. Monograph of Almaty, 2019, ISBN 978-601-263-372-6, 11 p.l/ Co-author: I.B. Dzhakupova;

10) Bozhbanov A. zh. Dzhakupova I. B. Ecology and sustainable development in Kazakh and English languages. /Study guide/ Almaty ATU, 2021. - 538 P.;

11) Bozhbanov A.Zh., Jakupova I.B /Ecology and sustainable development, manual, Almaty: TechSmith, 2022. - 292 p.;

12) Dzhakupova I.B Bozhbanov A.Zh. Ecology and sustainable development / Textbook /Almaty: TechSmith, 2022. - 312 p.;

13) Bozhbanov A. zh.Dzhakupova I. B. Ecology and sustainable development / textbook / Almaty, 2022. - 338 P.

*10 textbooks recommended by the Scientific and Methodological Council of ATU:*

1) The doctrine of the environment: a textbook.-Almaty:- Medet group LLP.-2015.- 328 pages. Co-author:Dzhakupova I.B.;

2) Ecological aspects of natural science: a textbook. - Karaganda: Medet group LLP, 2017.- 292 p. Co-author:Dzhakupova I.B.

*Main scientific publications:*

1) Bozhbanov A.Zh., Dzhakupova I.B. "Biological method of wastewater treatment". - Penza State Technological University" XXI century: results of the past and problems of the present plus a periodical scientific publication.Series: Ecology, Perm, 2014, pp. 48-54;

2) Bozhbanov A.Zh., Abulgaziev A.U, Kaldybayeva Zh. History of the formation of the relief of the northern Kazakh plain/ No. 2(2) / 2013 Journal "Search" series of natural and technical sciences pp. 298-301.;

3) Bozhbanov A.Zh., Dzhakupova I.B. "Pollution of the air basin by oil-producing enterprises of Western Kazakhstan", Monthly scientific journal Eurasian Union of Scientists, Moscow, pp. 27-31, 2014;

4) Bozhbanov A.Zh., Dzhakupova I.B. The impact of oil transportation on the environment of Western Kazakhstan. Monthly International Scientific Journal "Innovative Science", No. 5/2015, Russia;

5) Bozhbanov A.J., Dzhakupova I.B. Environmental sound technologies for growing soybeans. International Scientific Journal "European science review" No. 3-4, March-April 2015, Vienna, Austria;

6) Bozhbanov A.Zh., Dzhakupova I.B. The main chemical pollutants of the atmosphere of the metropolis of Almaty. Bulletin of ATU, September 2016, pp. 83-89;

7) Bozhbanov A.Zh., Dzhakupova I.B. Synthetic wollastonite – as an innovative material recycled from industrial waste/ Bulletin, Almaty Technological University. № 2 (119) 2018, pp. 16-21;

8) Bozhbanov A. Zh., Dzhakupova I.B., Shynybekova S. Searthworm castings as an ecologically clean organic fertilizer European Sciences review. Scientific journal. № 5-6 2018, May-June, Vienna. Impact factor 1.26, pp. 38-41;

9) Bozhbanov A.Zh. Abdukarimov S.A., Tursymbekova Z.Zh. Development of a system for automating the testing of students' knowledge.Bulletin of the University of Almaty/May, 2018, pp. 8-11;

10) Bozhbanov A.Zh., Dzhakupova I.B., Egeubaeva S.S. Reproductive toxicity of the drug methyliodidadimethylaminogrossgemin. Bulletin of the fourth issue of the magazine GU Shakarima, Semey, December 2018, pp. 161-163;

11) Bozhbanov A.Zh., Abdukarimov S.A. Ways to effectively use secondary energy reserves, Bulletin of ATU, Almaty/ No. 2, 2019, pp. 4-8;

12) Bozhbanov A.Zh., Saparbayeva N.A., Dzhakupova I.B. The Current State of the Rheum Wittrockii Lundstr. (Polygonaeceae Juss.) Population in the Northern Tien Shan (Kazakhstan).Journal of Computational and Theoretical Nanosciense /Vol. 16, 2839-2846, 2019, p.8.Printed in the USA;

13) Bozhbanov A. Zh., Zhakupova I.B., Tolepbergen B.D. / Technology of processing of various agricultural and industrial waste/ Food products: production, safety, quality : materials of the international scientific and practical conference. February 17-18, 2022 - Ufa: Bashkir State University, 2022. - 252 p., pp. 217-222;

14) Bozhbanov A.Zh., Dzhakupova I.B. //Formation of a model of environmental safety culture in a technological university //Problems of modern pedagogical education. - Higher Attestation Commission. Collection of scientific papers: - Yalta: RIO GPA, 2022. - Vol. 76. - Part 3. - pp. 76-79;

15) Bozhbanov A. Zh., Zhakupova I.B., // Formation of culture of ecological safety in higher schools of Kazakhstan//Colloquium-journal" Polish International Journal of Scientific Publications. No. 6 (129), 2022, Warszawa, Polska, RSCI, pp. 19-21.

**6. Scientific internships:**

- Center "Bioengineering", Wuhan, China 2014.

**7. Achievements in research, teaching activities (awards):**

- Letter of thanks from Akim Auezov district of Almaty for active participation in the elections of the President of the Republic of Kazakhstan dated April 26, 2015;

- Letter of thanks from Baidibek district maslikhat of the South Kazakhstan region for assistance in the socio-economic development of the Kensai school dated December 2, 2016.

- Silver medal named after A. Baitursynov, Association of universities of the RK , January 2018;

- "Gratitude" for work as a member of the jury within the framework of the Minor Academy of Sciences of the Republic of Kazakhstan, 2018;

- A letter of thanks for preparing students to participate in the 8th International Student Forum "Green Bridge Through Generations", 2018;

- Letter of thanks for the work as the chairman of the section "Biology and Biotechnology" in the republican scientific-practical conference "The educated generation is the future of the country", Women's pedagogical university, 28.02.2018;

- "The best electronic course ", diploma of the third degree, 2018;

- Gratitude for participation in the Republican competition of video lessons and video lectures "Panorama of pedagogical ideas", 2018;

- Diploma for participation in the Republican competition of video lessons and video lectures "Panorama of pedagogical ideas", 2019;

- A letter of thanks "Panorama of pedagogical ideas", National center for advanced training "Orleu", 2019;

- Medal of Honor for contribution to the development of education and science of the Republic of Kazakhstan, by the decision of the Council for Public Awards in May 2021;

- Letters of thanks for preparing students in International Student Conferences, Olympiads, Start-Up, awarded with a diploma "Kurmet" for the introduction and development of professional pedagogical ideas, from the National center for advanced training "Orleu", 2020;

- the owner of the title "The best teacher of the university of the RK", 2021;

- awarded with an honorary medal for his contribution to the development of education and science of the Republic of Kazakhstan "Excellence in education in Kazakhstan" by the decision of the Council of the National Innovative Research Center "Bilim orkenieti", Nur-Sultan, on March 4, 2022;

- Letter of Thanks of Akim of Auezov district of Almaty for Active Participation in holding of extraordinary Presidential elections, December 2022;

- Diploma Winner of the Republican competition "The best teacher in biology - 2022" of the 1st degree, Nur-Sultan 2022;

- Diploma - Society of Teachers of the Republic of Kazakhstan, Astana - 2022 for outstanding works presented at the Republican competition "Teachers of an independent country - 2022";

- By the decision of the Society of Teachers of the Republic of Kazakhstan, he was awarded the Order of "Teacher" for a significant contribution to the field of education, December 2022.

**8. E-mail address, contact details (tel.: work. (ext.), cell.):**

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