



List of research projects of the Faculty of Biology and Biotechnology aimed at maintaining and expanding existing ecosystems and their biodiversity, both plants and animals, especially threatened ecosystems

№	Project name, № state registration number Full name of the head, position, title, department	Basis for implementation (IRN, type of research) <i>Fundamental- hoe/Applied</i>	Deadlines (start, end)	I finance it- Financing Organization (KN of the Ministry of Education and Science of the Republic of Kazakhstan)
1.	"Investigation of the biological consequences of the impact of technogenic pollutants on biota, public health and the natural environment". Bigaliev A. B. A. B. Doctor of Biological Sciences, Professor of the Department of Molecular Biology and Genetics	of the IRN project: AR19680351 Fundamentaflax	2023-2025	KN of the Ministry of Education and Science of the Republic of Kazakhstan
2.	"Bioassay of water and bottom sediments of the Ile River and Kapshagai reservoir, forecasting of environmental risk for the biodiversity of the studied ecosystems". Shalakhmetova T. M. Doctor of Biological Sciences, Professor of the Department of Biodiversity and Bioresources	of the IRN project: AR14869740 Fundamental	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan
3.	"Biotechnology of processing keratin by-products using immobilized thermophilic bacteria". Kistaubaeva A. S. Candidate of Biological Sciences, Acting Professor of the Department. biotechnologies	of the IRN project: AR1487168 3 Applied	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan
4.	"Development of a new technology of composite compost using cattle manure and low-grade coal for sustainable soil fertility".	of the IRN project: AP1486993 4 Applied	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan



	Zhubanova A. A. Doctor of Biological Sciences, Professor of the Department. biotechnologies			
5.	"Development of biohydrogen production technology based on promising cyanobacteria strains for biofuel production". Bolathan K. PhD, lecturer of the Department. biotechnologies	of the IRN project: AP09260785 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
6.	"Microbial multifunctional exopolysaccharides: biochemical characteristics, production methods and prospects for application in the oil industry". Mukasheva T. D. Doctor of Biological Sciences, Professor of the Department of Biotechnology	of the IRN project: AR14871512 Applied	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan
7.	"Creation of an environmentally and economically viable bio- fossil fuel based on efficient joint combustion of coal residues and microalgae biomass". Akimbekov N. Sh. PhD, Acting Associate Professor of the Department. biotechnologies	of the IRN project: AR19677705 Applied	2023-2025	Book of the Ministry of Education and Science of the Republic of Kazakhstan
8.	"Production of bioethanol by continuous fermentation of whey using immobilized yeast cells". Zhubanova A. A. Doctor of Biological Sciences, Professor. of the Department. biotechnologies	of the IRN project: AP09258285 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
9.	"Research of Kazakhstan's low-grade coals on their biogenic conversion potential to methane". Akimbekov N. Sh. PhD, Acting Associate Professor of the Department. Biotechnologies	of the IRN project: AP09057876 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
10.	" Development and evaluation of chimeric endolysins bacteriophages for the control of multiple drug-resistant gram-negative pathogens of sturgeon fish". Bisenbayev A. K., Doctor of Biological Sciences, Academician of the National Academy of Sciences of the Republic of Kazakhstan, Professor of the Department of Molecular Biology and Genetics	of the IRN project: AP09259735 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
11.	"Molecular and biochemical characteristics of the created mutant germplasm of spring wheat, for resistance to leaf and yellow rust, morphometry and grain quality".	of the IRN project: AP09258679 Fundamental	2022-2024	Book of the Ministry of Education and Science of the



	Kenzhebaeva S. S. Doctor of Biological Sciences, prof. department. Biotechnologies			Republic of Kazakhstan
12.	"Introduction of perennial wheat to agricultural culture for the conservation of biodiversity and soil fertility in the south and south-east of Kazakhstan". Kurmanbaeva M. S. M. S. Doctor of Biological Sciences, Professor of the Department of Biodiversity and Bioresources	of the IRN project: AP09259457 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
13.	"Biotechnology of creating compositions of microorganisms to stimulate the growth and increase the adaptive potential of agricultural plants". Omurbekova A. A. PhD, Acting Associate Professor of the Department. biotechnologies	of the IRN project: AP09261262 Applied	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
14.	"Search and study of new secondary metabolites of cyanobacteria promising for use in agricultural biotechnology". Акмуханова N. R. Akmukhanova Candidate of Biological Sciences, assoc. prof. of the Department of Biotechnology	of the IRN project: AP14870201 Applied	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan
15.	"Isolation, molecular taxonomic identification and study of nematophage activity of predatory fungi of Southern Kazakhstan for the purpose of selecting promising strains for creating bionematocides". Богуспаев Boguspaev K. K. Candidate of Biological Sciences, assoc. prof. of the Department of Biotechnology	of the IRN project: AP14871628 Applied	2022 -2024	KN of the Ministry of Education and Science of the Republic of Kazakhstan
16.	"Development of new nanobodies for effective neutralization and use as a specific and sensitive reagent for rapid detection of rabies virus". Bisenbayev A. K., Doctor of Biological Sciences, Academician of the National Academy of Sciences of the Republic of Kazakhstan, Professor of the Department of Molecular Biology and Genetics	of the Institute of Agricultural Sciences of the project: AP14870256 Applied	2022-2024	Book of the Ministry of Education and Science of the Republic of Kazakhstan
17.	"Development of a long-acting biological product based on a polymer matrix with	of the IRN project: AR19679444	2023-2025	Book of the Ministry of



	effective microorganisms for stimulating the growth of agricultural crops". Ignatova L. V. Candidate of Biological Sciences, Associate Professor of the Department. biotechnologies	Applied		Education and Science of the Republic of Kazakhstan
18.	"Participation of phosphoinositol diphosphate (PIP2) and potassium channels Kv7 in the regulation of hyperexcitation in the model of epileptic activity". Abdrasulova Zh . T. Senior lecturer of the Department of Biophysics, Biomedicine and Neuroscience	of the IRN project: AR19680470 Fundamental	2023-2025	Book of the Ministry of Education and Science of the Republic of Kazakhstan
19.	"Innovative multi-spatial integrated approach to biomonitoring of saline ecosystems of Lake Alakol". Inelova Z. A. Candidate of Biological Sciences, Assoc. prof. Candidate of Biological Sciences, assoc. prof. of the Department of Biodiversity and Bioresources	of the IRN project: AR19674623 Fundamental	2023-2025	Book of the Ministry of Education and Science of the Republic of Kazakhstan
20.	"Research of the biotechnological potential of the domestic collection of microalgae for obtaining liquid fuel-biobutanol". Sadvakasova A. K. Candidate of Biological Sciences, Professor of the Department. biotechnologies	of the IRN project: AP 09260077 Fundamental	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
21.	"Molecular characteristics of the TORC1 signaling pathway of Triticum aestivum and their significance in the control of wheat grain germination". Smekyonov I. T. PhD, lecturer of the Department of Molecular Biology and Genetics	of the IRN project: AP09259754 Fundamental	2021-2023	Book of the Ministry of Education and Science of the Republic of Kazakhstan
22.	"Investigation initiated by mismatch-specific thymine-By DNA of the aberrant pathway of excisional repair of complex DNA damage initiated by mismatch-specific thymine-DNA glycosylase reparations complex damages DNA in vitro and in vivo". Taipakova S. M.	of the IRN project AR13067762 Fundamental	2022-2024	KN of the Ministry of Education and Science of the Republic of Kazakhstan



	PhD, lecturer of the Department of Molecular Biology and Genetics			
23.	"Complex research of some promising medicinal plant species from <i>the Asteraceae</i> family for industrial development". Ydyrys A. PhD, lecturer of the Department of Biophysics, Biomedicine and Neuroscience	IRN project: AR 13067924 Fundamental	2022-2024	KN of the Ministry of Education and Science of the Republic of Kazakhstan