



# DEAR COLLEAGUES AND GUESTS OF OUR UNIVERSITY, WELCOME TO AL-FARABI KAZAKH NATIONAL UNIVERSITY!

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Let's achieve common goals together. I express my great confidence that we will develop partnerships and actively work for a common goal.

I wish you good health and well-being.

Our main goal is to provide high-quality education to young people, train qualified scientific personnel who will further vastly contribute to the development of the state.

Today, young people from 50 countries of the world study at KazNU, summer and winter schools are held within the

framework of the academic mobility program.

Since the new academic year, branches have been launched in Turkey and Kyrgyzstan. Negotiations to open other branches of the university abroad are underway with several other countries.

Due to more than 62 double-degree educational programs, students of KazNU can study and train at the best universities.

KazNU is gradually gaining recognition in the global scientific and educational area and expanding cooperation with foreign partners. It is important for us to exchange best practices, expand cooperation between research organizations and universities. KazNU cooperates with more than 500 top universities of the world.

Today Al-Farabi Kazakh National University has become a large intellectual corporation with a unique scientific and innovative infrastructure that trains competitive qualified specialists for every sector of society.

President of the Republic of Kazakhstan Kassym-Jomart Tokayev in his State of the Nation Address "Unity of the people and systemic reforms are solid foundation for the prosperity of the country" declared the following: "The development of science is our most crucial task. This means being one step ahead and provide innovative technologies in step with the times."

Scientists of the university make a significant contribution to development of the integration of national educational system, science and business.

The most important news of this year is that KazNU by a Decree of the Government has been granted the status of a research university.

This is a high assessment and a great responsibility for us. KazNU is the first and only university in the Central Asia, which has received "Five Stars" award in QS Stars Rating System.

Al-Farabi Kazakh National University is a unique university in Kazakhstan and Central Asia, ranked among the top-200 best universities in the world. This year KazNU has been ranked 150 in the global QS WUR ranking. The university annually leads in the national ranking.

Kind regards,  
Chairman of the Board-Rector  
Al-Farabi Kazakh National University  
Zhanseit TUIMEBAYEV

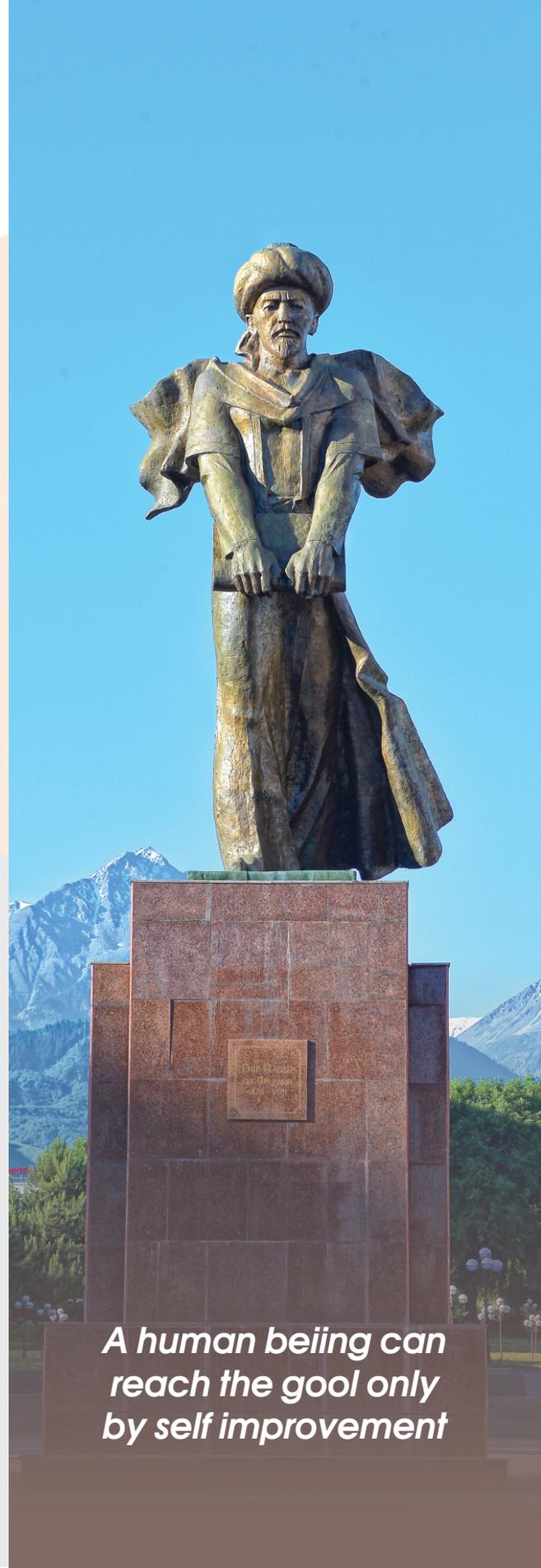
## ABU NASR AL-FARABI – GREAT EASTERN PHILOSOPHER

Al-Farabi Kazakh National University is one of the oldest universities in Kazakhstan.

On October 23, 1991, the country's leading university was named after the great scientist, thinker, encyclopedist "Second Teacher" of the East Abu Nasyr Al-Farabi.

KazNU was founded in 1934 and during this period it has produced thousands of graduates who make a great intellectual contribution to public administration, to the development of science, education and culture to build modern business and an innovative economy.

KazNU graduates occupy key positions in the government, state bodies, national companies, financial institutions, universities, research institutes, enterprises and business structures.



*A human being can  
reach the goal only  
by self improvement*

# MISSION

**Strengthen the capacity of highly skilled competitive professionals capable of meeting the challenges and intellectual demands of the world, through innovative methods of learning and the integration of education, science and business, which will increase national and international prestige.**

# VISION

**Become a World class research university, competitive in the global research and education environment.**

# ACHIEVEMENTS

- KazNU takes a leading position not only in national, but also international rankings, 150th place in the QS World ranking University Ranking. It is the only Kazakh university in top 200 best universities in the world.
- KazNU is recognized as the 1st university in Central Asia according to «QS Asia University Rankings 2023: Central Asia».
- Al-Farabi Kazakh National University for the first time is #44 in the QS Asia University Rankings.
- Al-Farabi Kazakh National University is the first and only university in Central Asia to be highly rated for excellence in QS Stars Rating System.
- In the QS Emerging Europe ranking and Central Asia University Rankings KazNU ranks 16th among the best universities in Europe and Central Asia.
- The country's leading university strengthened its position in the international QS Graduate Employability Rankings, rising to the top 201-250. It has become one of the leaders in the employment of graduates, ranking 55th in the world according to this indicator.
- Al-Farabi Kazakh National University received an AA+ rating from the prestigious European Academic Ranking of World Universities - European Standard (ARES) and stood on a par with leading European universities.
- Al-Farabi Kazakh National University is in top 401-500 in Times Higher Education Asia University Rankings.
- KazNU got extension for four period of being Global Hub of the UN Academic Impact Program for Sustainability.
- KazNU got awarded in the nomination «The Outstanding Leadership and Management Team» in THE Awards Asia-2020.
- The university was ranked 212th in the UI Green Metric Ranking of World Universities, strengthening its position in the top 200 most environmentally friendly universities.

# NATIONAL AND GLOBAL COMPETITIVENESS

## INTERNATIONAL RANKINGS



QS WORLD UNIVERSITY RANKINGS - 150 PLACE



QS WORLD UNIVERSITY RANKINGS 2023: CENTRAL ASIA - 1 PLACE



QS WORLD UNIVERSITY RANKINGS 2023 - 44 PLACE



QS GRADUATE EMPLOYABILITY RANKINGS # 201-250 PLACE



EMERGING EUROPE & CENTRAL ASIA - 16 PLACE



QS 5 STARS EXCELLENCE



## NATIONAL RANKINGS



Независимое агентство аккредитации и рейтинга



Constant Leader Among Higher Education Institutions In Kazakhstan



34 TOP 10 EDUCATIONAL PROGRAMS

Dynamics of promotion in five stars Qs

| 2012 | 2018 | 2021 |
|------|------|------|
|      |      |      |

# INTERNATIONAL RECOGNITION

- Based on research by the well-known international organization Great value Colleges (USA), KazNU is included in the list of the 50 most advanced technological universities in the world, ranking 31st.
- KazNU is actively moving forward in the subject rating QS by Subject and shows high dynamics of promotion of educational programs in it. KazNU showed excellent performance in the direction of training «Modern Linguistics», taking 60th place among the best universities in the world.
- In the field of study «Linguistics», the university entered the top 101-150, and in the specialties «Religious Studies» and «Anthropology» for the first time it was placed in the top 101-140 of the best in the world.
- The areas of study «English Language and Literature» and «Law» took the position 151-200 among world universities.
- Rated by QS by Subject 2022 also included Archeology and Philosophy for the first time, ranking 151-200, while Politics and International Studies is in the top 201-220 in the world.
- «Economics and Econometrics» and «Mathematics» are located at positions 251-300, «Physics and Astronomy» - 451-500.



ACADEMIC RANKING  
EUROPIAN STANDART  
«AA+»



THE EMERGING  
ECONOMIES  
RANKINGS  
# 351-400 PLACE



THE BY SUBJECT



ASIA UNIVERSITY  
RANKINGS # 301-350  
PLACE

ART AND HUMANITIES  
# 401-500 PLACE  
BUSINESS AND ECONOMICS  
# 601-800 PLACE  
COMPUTER SCIENCES  
# 601-800 PLACE  
SOCIAL SCIENCES # 801+ PLACE  
ENGINEERING # 801-1000 PLACE  
PHYSICAL SCIENCES  
# 801-1000 PLACE

# INTERNATIONAL RECOGNITION



International recognition of KazNU is provided through accreditation of more than 85% of educational programs by leading European agencies, such as:



Academic Ranking of World Universities-European Standard  
ARES-2018 – 1st place «AA» among universities in Central Asia and is among the leading European universities.



Независимое агентство аккредитации и рейтинга

IAAR 2018 - 1st place with a large margin in the general ranking of TOP-20 universities in Kazakhstan.



NAOKO 2018 - 1st place in the ranking of the best multidisciplinary universities in Kazakhstan for ten years.



«Kazakhstan 2050 - National rating for innovation and academic excellence» - 1st place in 2018.



ACQUIN



Agency for Quality Assurance and Accreditation Austria

# INTERNATIONAL

**BILATERAL TREATIES AND AGREEMENTS ON  
COOPERATION WITH 550 WORLD UNIVERSITIES AND  
RESEARCH INSTITUTES IN 50 COUNTRIES**



# COOPERATION

## PARTNERSHIPS WITHIN INTERNATIONAL UNIVERSITY NETWORKS



World universities  
consortium



IREG – Observatory on Academic  
Ranking and Excellence



Eurasian Universities  
Association



The Shanghai Cooperation  
Organization University (SCO  
University)



European Universities  
Association



The University Alliance  
of the New Silk Road



Magna Charta Universitatum



International Association of  
Universities



University Social  
Responsibility Network



CIS Open  
Network  
University



International Association for the  
Exchange of Students for  
Technical Experience

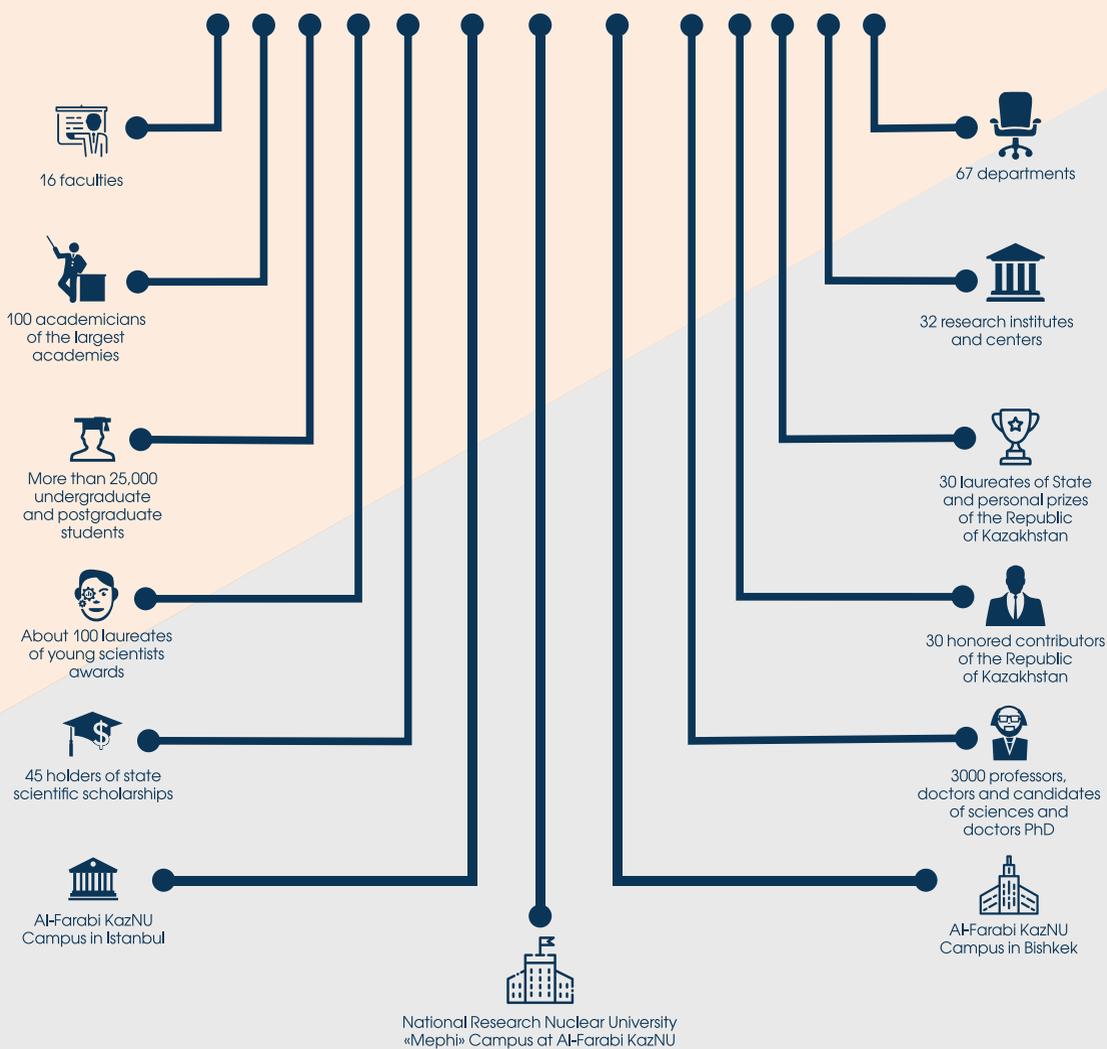
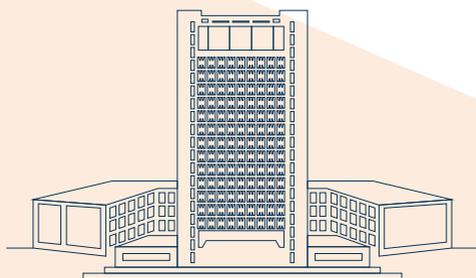


The Silk-road Universities  
Network



Eurasia - Pacific UNINET

# UNIVERSITY STRUCTURE



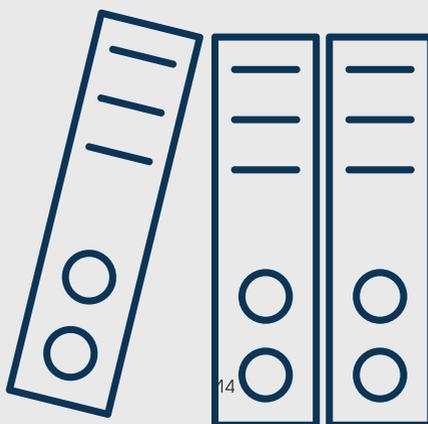
# PROFESSORS AND STUDENTS

## TEACHING STAFF

- 2,685 faculty members
- 467 (18%) teaching fellows
- 706 (28%) PhD candidates
- 353 (14%) PhD
- 22 academicians of National Academy of Sciences of the Republic of Kazakhstan
- 7 corresponding members of National Academy of Sciences of the Republic of Kazakhstan
- 14 laureates of the State Prize of the Republic of Kazakhstan in science and technology
- 400 winners of «The best university professor» grant
- More than 35% of faculty members teach in foreign languages

## STUDENT NUMBER

- Total: 23,595
  - Bachelor's program – 18,802
    - Master's program – 3,439
      - PhD – 1,354
- 81% on a scholarship, 19% on a contract



# INTERNATIONAL STUDENTS

Al-Farabi Kazakh National University is becoming an educational hub of Eurasia, covering all new regions of the world. Over 2,500 students from 53 countries of the world, including the CIS countries, Europe, Asia, North and South America and Africa.

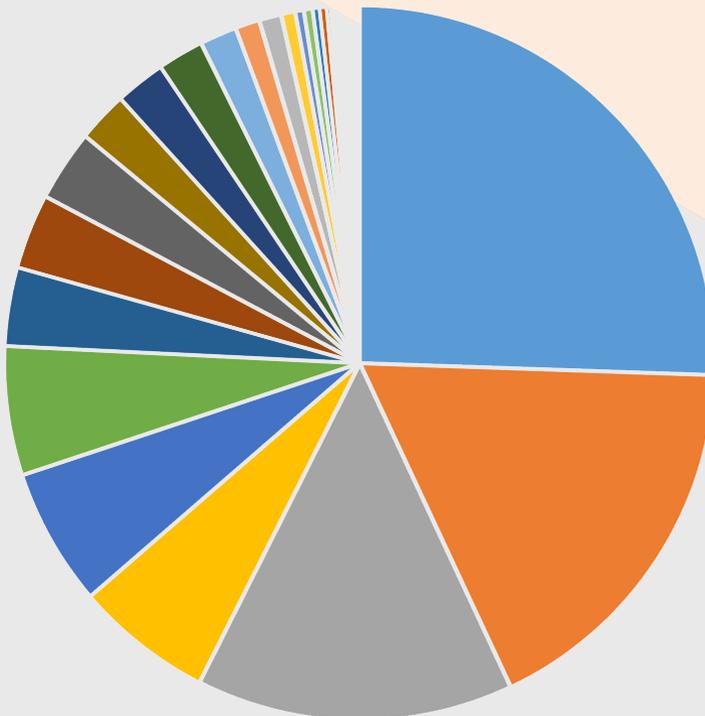


## INTERNATIONAL STUDENTS

- Total: 2521
- Foundation – 220
- Bachelor’s program – 2110
- Master’s program – 144
- PhD – 45
- Internship – 2

- TURKMENISTAN
- CHINA
- AFRICAN COUNTRIES
- MONGOLIA
- TURKEY
- PAKISTAN
- TAJIKISTAN
- SYRIAN ARAB REPUBLIC
- INDONESIA
- AZERBAIJAN
- VIETNAM
- SAUDI ARABIA
- GERMANY
- ITALY
- OCCUPIED PALESTINIAN TERRITORY
- BAHRAIN
- HUNGARY
- COLOMBIA
- UNITED ARAB EMIRATES
- SEYCHELLES
- JAPAN
- INDIA
- AFGHANISTAN
- UZBEKISTAN
- JORDAN
- IRAQ
- RUSSIA
- KOREA
- IRAN, ISLAMIC REPUBLIC OF
- KYRGYZSTAN
- BANGLADESH
- UNITED STATES OF AMERICA
- UKRAINE
- IRELAND
- DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
- PHILIPPINES
- BOSNIA AND HERZEGOVINA
- DOMINICA
- MOLDOVA, REPUBLIC
- POLAND
- FRANCE

## GEOGRAPHY OF INTERNATIONAL STUDENTS



## AL-FARABI KAZNU CAMPUS IN ISTANBUL

In the frames of the first official visit of the President of the Republic of Kazakhstan Kassym-Zhomart Tokayev to Turkey, he had a meeting with President Tayyip Erdogan, as a result of which they have reached an agreement to bring Kazakh-Turkish relations to the level of an expanded strategic partnership. During the official visit of the President of Kazakhstan, on May 11, 2022 of Al-Farabi Kazakh National University Campus was opened in Istanbul (Turkey). By integrating into the global scientific and educational space, KazNU increases its visibility and expands its network as a leading exporter of educational services.



## AL-FARABI KAZNU CAMPUS IN BISHKEK

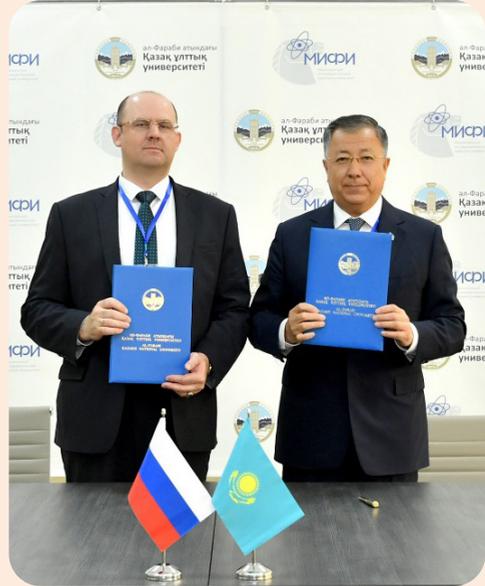


During the official visit of the Head of the State Kassym-Jomart Tokayev to the Republic of Kyrgyzstan on May 26, 2022 Campus of Al-Farabi Kazakh National University was opened. The President of the Republic of Kazakhstan, the President of the Kyrgyz Republic, the Minister of Education and Science of the Republic of Kazakhstan, the Minister of Education and Science of the Kyrgyz Republic attended the official opening ceremony. On the meeting with the distinguished guests, Zhanseit Tuimebayev discussed the new campus of KazNU. "The education will be conducted on 13 educational programs of undergraduate and graduate programs at the new campus of Al-Farabi Kazakh National University in Bishkek".

# NRNU "MEPHI" CAMPUS AT AL-FARABI KAZNU

The National Research Nuclear University «MEPhI» (Moscow Engineering and Physics Institute) was established at Al-Farabi KazNU in the frames of an agreement initiated by President Kassym-Jomart Tokayev and President the President of the Russian Federation Vladimir Putin in 2022.

The unique educational programs of the NRNU MEPhI are focused on the professions of the future and comply with international engineering education standards. Kazakh National University has rich experience of cooperation with foreign and Russian universities in the field of science and education.



# EDUCATIONAL PROGRAMS - 542

The university has a wide range of educational programs and research areas, increasing the potential of the university as a research university. 20% of educational programs are double degree programs, 105 programs are implemented in English. Al-Farabi KazNU is the leading modern center of education, science and innovation in Kazakhstan.

**95% ACCREDITED**

**62 – DOUBLE DEGREE PROGRAMS**

- Sapienza University of Rome, Italy
- University of Lorraine, France
- University of Reims Champagne-Ardenne, France
- University of Kadiz, Spain
- Istanbul University, Turkiye
- National Research Nuclear University "Mephi", Russia
- M. Lomonosov Moscow state university, Russia
- Saint-Petersburg state university, Russia

**4 JOINT EDUCATIONAL PROGRAMS**

- University of Lille, France
- Erasmus: University of La Coruna, Spain
- Asfendiyarov Kazakh National Medical University, Kazakhstan
  - South Kazakhstan Medical Academy, Kazakhstan

**105 – EDUCATIONAL PROGRAMS IN ENGLISH**

- Business, management and law
- Services
- Pedagogical sciences
- Social sciences, journalism and information
- Natural sciences, math and statistics
- Information-communication technologies
- Engineering, manufacturing and construction industries
- Health care



# «THE STRATEGY OF THE DEVELOPMENT OF SCIENTIFIC AND INNOVATIVE ACTIVITIES AND STRENGTHENING THE GLOBAL COMPETITIVENESS OF KAZNU»

GOAL: "Contribution to improving the global competitiveness of scientific and innovation activities and increasing their contribution to the country's socio-economic development"

## Human capital



Strategic Plan indicator development of KazNU-2025

I. STRENGTHENING THE HUMAN AND SCIENTIFIC POTENTIAL OF SCIENTISTS

Increase for 200%

By qualitative and quantitative indicators

Budget diversification  
R&D of the university  
Highly cited research papers publications

## Scientific research



Highly scientific-innovative reputation of the university

II. MODERNIZATION OF SCIENTIFIC INFRASTRUCTURE

20% renewal and modernization of scientific equipment and creation of collective use centers in priority areas of development

High international level scientific collaboration

International patents

## Commercialization. Technologies and Innovations



Integrated and reliable partnership with subjects of the real sector of the economy of the country and abroad

III. COMMERCIALIZATION OF THE RESULTS

50% transition of applied research to the commercialization stage

IV. COORDINATION OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT

25% level of co-financing of applied research and projects by the private sector commercialization

# DEVELOPMENT PROGRAM AL-FARABI KAZAKH NATIONAL UNIVERSITY FOR 2022-2026

## GOAL

TRANSFORMATION OF NJC  
"KAZNU AL-FARABI" TO THE WORLD-CLASS  
RESEARCH UNIVERSITY

INTEGRATION OF SCIENTIFIC ACTIVITIES  
AND EDUCATIONAL PROCESS AT ALL LEVELS  
OF HIGHER AND POSTGRADUATE EDUCATION

FORMING A PROMISING  
MODEL OF UNIVERSITY  
EDUCATION AND ENSURING  
ACADEMIC LEADERSHIP

INCREASING THE CONTRIBUTION  
OF UNIVERSITY SCIENCE  
IN THE SOCIO-ECONOMIC  
DEVELOPMENT OF THE COUNTRY

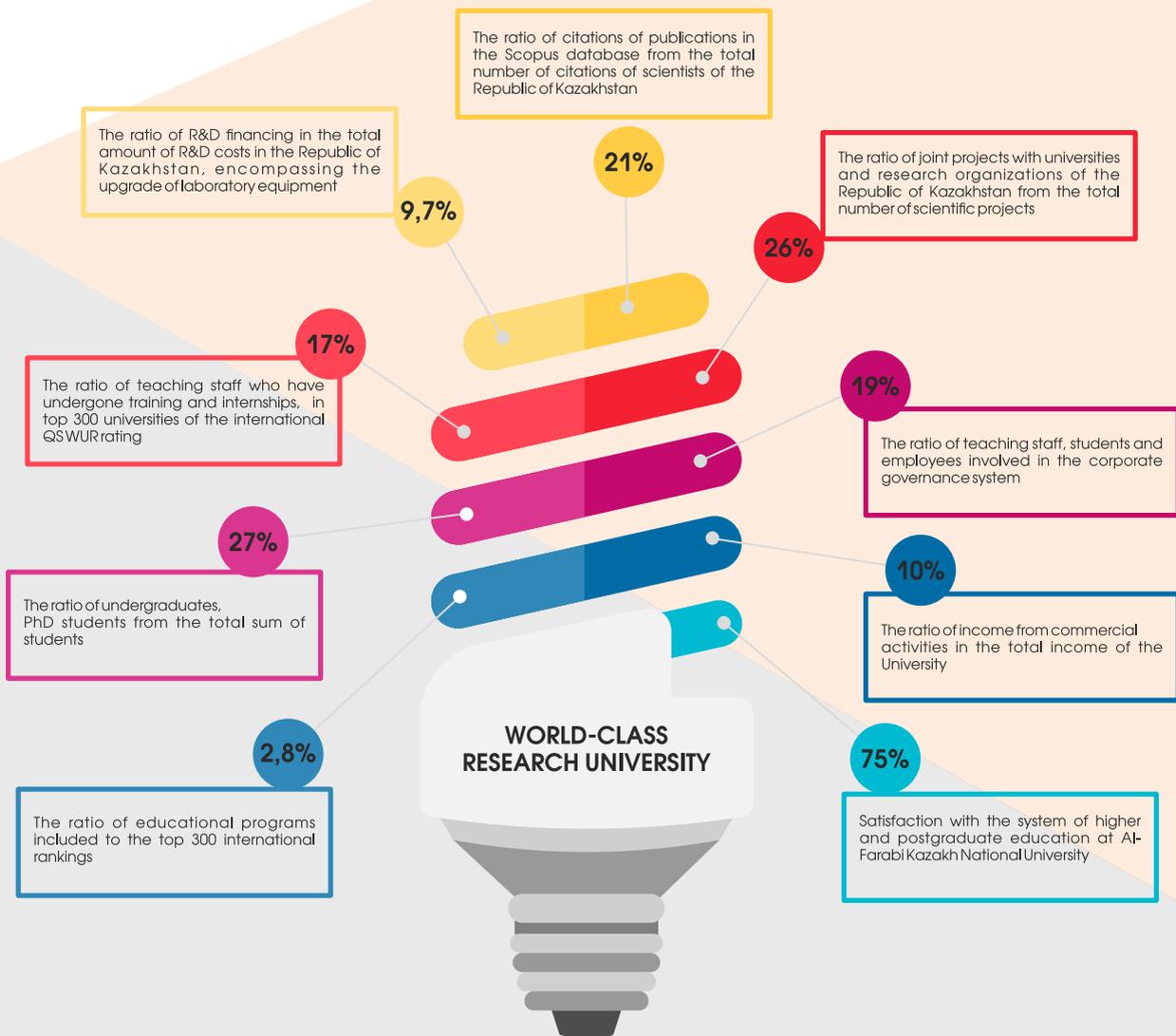
CREATING AN EFFICIENT CORPORATE  
GOVERNANCE MODEL TO ENSURE  
THE SUSTAINABLE  
DEVELOPMENT  
OF THE UNIVERSITY

## TASKS

# CONTRIBUTION TO THE COUNTRY'S SCIENCE AND INNOVATION PERFORMANCE

| THE INDICATORS  | 2020                      |      | 2021                      |      |
|---|---------------------------|------|---------------------------|------|
|   | KazNU                     | RK   | KazNU                     | RK   |
| Grant funding of research projects, (in billions of tg, %)  | 2,3<br>(13,6%<br>of RK)   | 16,9 | 2,7<br>(14,2%<br>of RK)   | 19,0 |
| Number of publications by Kazakhstani authors in Scopus, (number, %)  | 1 162<br>(20,3%<br>of RK) | 5721 | 1 191<br>(21,5%<br>of RK) | 5537 |
| Number of publications of Kazakhstani authors in Scopus in co-authorship with foreign scientists, (number, %) | 603<br>(19,5 %<br>of RK)  | 3085 | 772<br>(23,2%<br>of RK)   | 3333 |
| Number of scientific journals indexed in the international Web of Science database (number, %)                | 4<br>(25%<br>of RK)       | 16   | 7<br>(36,8%<br>of RK)     | 19   |
| Number of journals included in the Scopus database, (number, %)   | 1<br>(12,5%<br>of RK)     | 8    | 2<br>(22,2%<br>of RK)     | 9    |

# EXPECTED EFFECTS OF THE PROGRAM IMPLEMENTATION





## THE PROCESS OF TRANSFORMATION INTO THE RESEARCH UNIVERSITY

More than 35% of professors teach in foreign languages.

KazNU has partnerships with over 550 top universities around the world. There are over 62 double degree programs.

100 of the best foreign teachers and famous professors of the world teach at the schools and departments of the university. Among them is a neuroscientist, professor at the University of Sheffield Bazbek Dauletov, professor at Wayne University in the USA mathematician Walby Omirbaev and others.

KazNU is implementing 533 research projects.

Young people from 53 countries of the world study at the university, summer and winter schools are organized under the Academic Mobility program.

There are 250 professional, scientific and patriotic student clubs at the university.

The campus of the university occupies a large territory. There are 15 dormitories for 6000 places and the House of Young Scientists. On campus, there are grocery stores, canteens, several cafes, "Keremet" Student service center, telephone billing terminals, copy centers, and sports and entertainment facilities in the dormitories.



## CARBON NANOSTRUCTURED MATERIALS FOR A WIDE RANGE OF APPLICATIONS

**Project purpose:** setting up the production of carbon nanostructured materials for a wide range of applications.

**Project manager :** Ismailov Daniyar

### **Advantages of the technology**

- Graphene and its related structures are considered as cheap and promising materials.
- Production of sensors with 100% local content.
- High sensitivity.

**Amount of investment** – 15,0 mln KZT ~ 32.8 USD

**Contact information:** Daniyar.Ismailov@kaznu.kz

## INNOVATIVE DESIGNERS OF SMALL SPACECRAFT FOR EDUCATIONAL INSTITUTIONS

**Project purpose:** Launch of HIL (Hardware-in-the-Loop) simulation devices designed to teach the basics of development, design, assembly, testing and operation of a spacecraft to the school and university students with appropriate software and teaching materials.

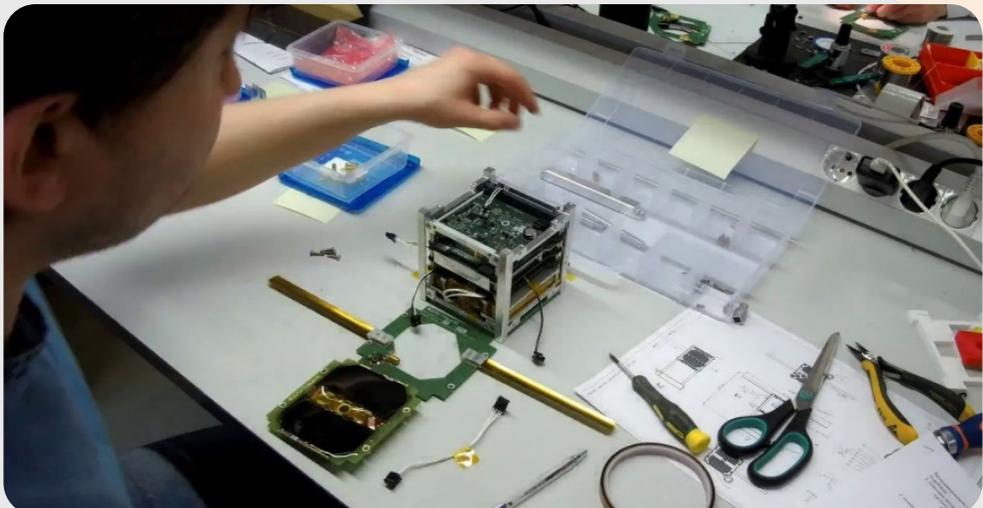
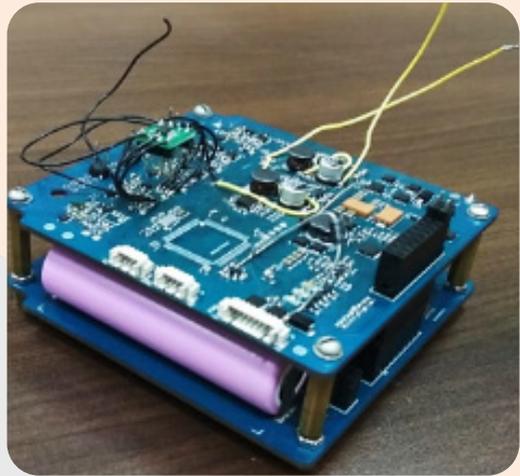
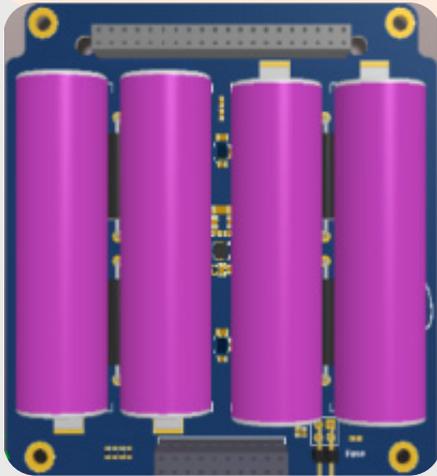
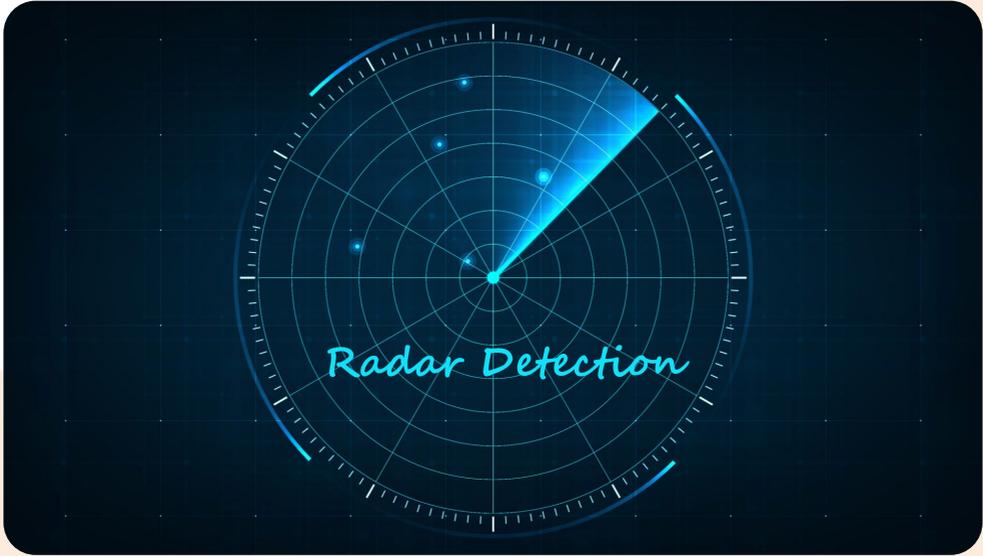
**Project manager :** Temirbayev Amirkhan

### **Advantages of the technology**

- no analogues in Kazakhstan;
- does not require the development of separate spacecraft systems;
- system design of the spacecraft;
- quick results - a working satellite.

**Amount of investment** – 87,7 mln KZT ~ 191.8 USD

**Contact information:** Amirkhan.Temirbayev@kaznu.kz, ntpkaznu@gmail.com



# PILOT PRODUCTION OF SOLVENT-FREE ACRYLATE PAINTS WITH IMPROVED CHARACTERISTICS

**Project purpose:** Pilot production of solvent-free acrylate paints with improved characteristics

**Project manager :** Agibaeva Laura

## **Advantages of the technology**

- High physical and mechanical properties, resistance to chemical reagents and the environment.
- Ease of applying and possibility of using in the cold season.
- Environmental friendliness.
- Over 17 applications.
- Cheaper than comparable epoxy and polyurethane paints.
- High quality.
- Low cost.

**Amount of investment** – 15 mln. KZT (approximately – 32.8 USD)

**Contact information:** Laura.Agibaeva@kaznu.kz, project.manager-ws@inbox.ru

# MEDICINES BASED ON LOCAL NATURAL RAW MATERIALS

**Project purpose:** The use of few selected biologically active medicinal plants, to create new natural oral supplements against the influenza virus and coronavirus, to support women's health and for bile and liver, to determine their chemical constituents, to isolate the main natural compounds, to study their structure and pharmacological activities to develop new methods and techniques for the creation of natural, less toxic, multi-natural drugs.

**Project manager :** Jenis Janar

- Advantages of the technology
- new natural compounds - the main active substances in medicines;
- establishing the structure of new compounds using modern instruments and methods of analysis;
- bioscreening;
- establishing a connection between the «structure-activity» of biologically active components;
- obtaining new biologically active complexes and drugs from plant resources of Kazakhstan.

**Amount of investment** – 150 mln KZT ~ 328.0 USD

**Contact information:** janarjenis@kaznu.kz, janarjenis@mail.ru



# TOURISM DIGITAL CONTENT: MOBILE APPS, PANORAMIC 3D TOURS, INTERACTIVE MAPS AND QR CODES

**Project purpose:** A single digital content in the form of a unified portal for registration and implementation of tourist services operating through the official website, mobile apps and other information resources.

**Project manager :** Aliya Aktymbayeva

## Advantages of the technology

- Sale of tourist products and individual tourist services according to the given parameters;
- Electronic fixation of sales parameters;
- Digitalization of the tourism industry;
- Providing information about tours and other services when registering and booking tourist services;
- The fastest and most efficient search.

**Amount of investment** – 250,0 mln. KZT ~ 546.7 USD

**Contact information:** tourismkaz2018@gmail.com

# MACHINE VISION BASED ON AN ADAPTABLE SELF-ORGANIZING NEURAL NETWORK

**Project purpose:** development of a hardware-software complex system for automatic recognition of graphic images (human face) among a large data array.

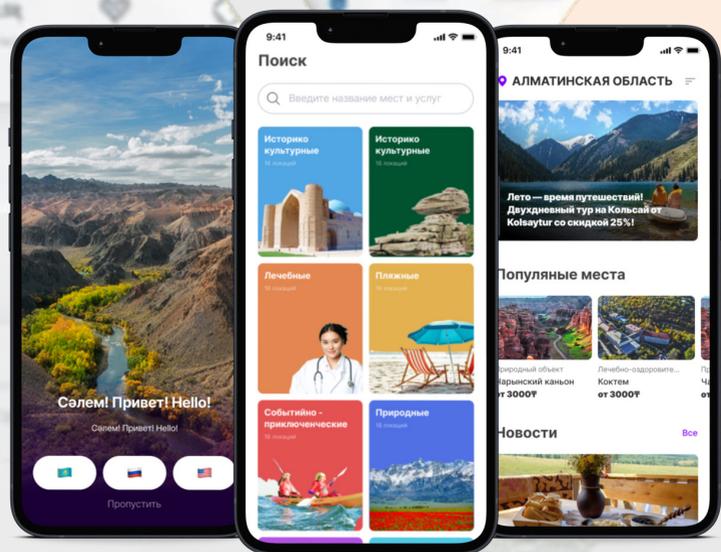
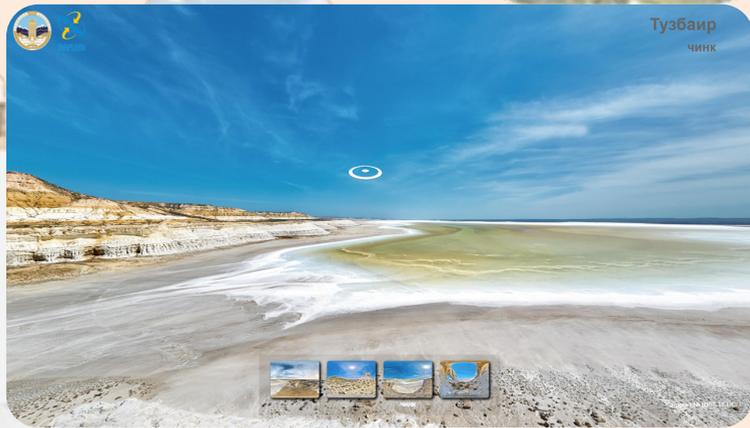
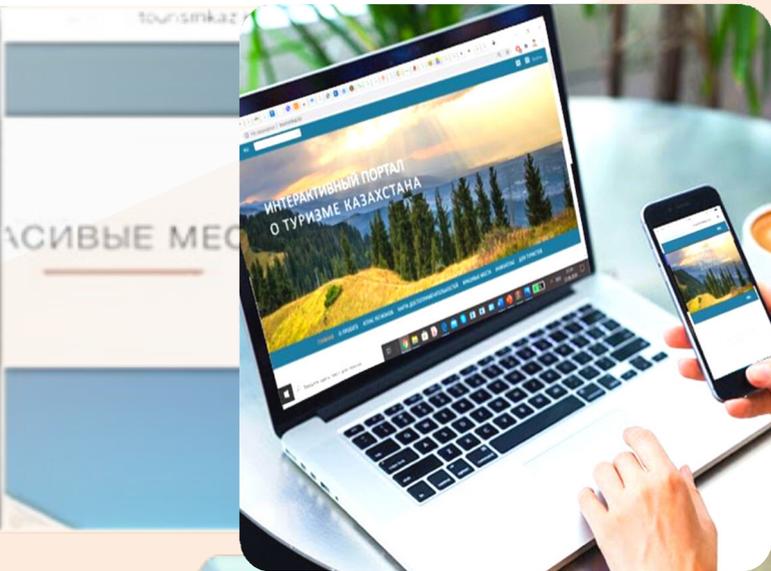
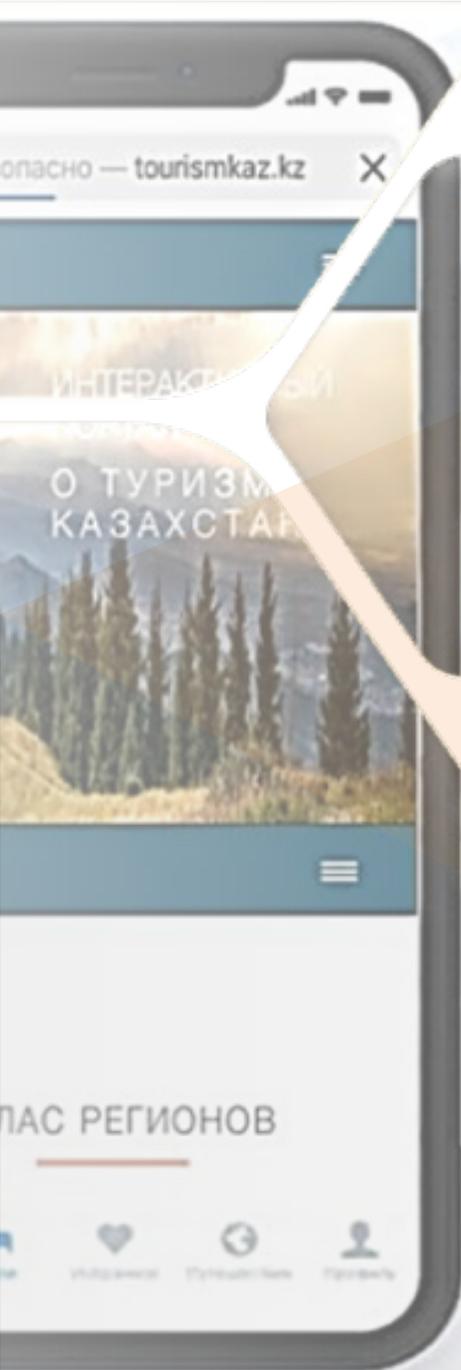
**Project manager :** Ibraimov Margulan

## Advantages of the technology

- Using a new generation neural network (the neural network is resistant to noise);
- Face recognition in real time;
- Face recognition in low light, from different angles, etc.;
- Recognition accuracy (above 90%);
- Does not require physical contact with the device;
- Contrast and image quality;
- Mobility.

**Amount of investment** – 10 mln. KZT ~ 21.8 USD

**Contact information:** margulan.ibraimov@kaznu.edu.kz



# PSYCHOPHYSIOLOGICAL MARKERS OF DEPRESSION

**Project purpose:** Development of methods for early diagnosis of depressive states, contributing to the objective and early diagnosis of depression and suicide prevention.

**Project manager :** Kustubaeva Almira

## **Advantages of the technology**

- Lack of similar technologies in the market of Kazakhstan.
- Objective diagnostics of depressive states and prevention of the consequences of depression.
- Availability and efficiency.
- Compactness/mobility.
- Increasing competitiveness in the international market.

**Contact information:** Almira.Kustubaeva@kaznu.edu.kz

# PREVENTION AND TREATMENT OF VASCULAR PATHOLOGY

**Project purpose:** development of new devices and methods for the treatment of arterial atherosclerosis.

**Project manager :** Darmenov Oralbay

## **Advantages of the technology**

- Normal blood flow is restored by cleaning the artery by removing atherosclerotic plaques.
- With a single surgical intervention, it is possible to clean several vessels, as well as to repeat cleaning.
- Displacement of methods of stenting and bypass artery from medical practice.
- Prolongation of average life expectancy by 10-15 years or more.
- Improvement in morbidity, mortality and disability from arterial pathology

**Amount of investment –** 15 mln. KZT (approximately – 32.8 USD)

**Contact information:** Oralbay.Darmenov@kaznu.edu.kz



# ANTIBACTERIAL DRUGS FOR THE TREATMENT OF DISEASES OF STURGEON FISH

**Project purpose:** study of the therapeutic potential of parental and engineered chimeric endolysins with increased lytic activity against gram-negative bacteria of sturgeon fish.

**Project manager :** Bisenbaev Amangeldy

## **Advantages of the technology**

- The product is effective against known antibiotic-resistant biofilm-forming pathogens.
- The use of the product does not form resistance to it, unlike antibiotics.
- The product has effects in relation to a specific pathogen and does not affect the beneficial microflora.

**Contact information:** amangeldy.bisenbaev@kaznu.edu.kz

# A PILOT PRODUCTION OF NEW COMPOSITE MATERIALS BASED ON CARBON-MINERAL RAW MATERIALS OF KAZAKHSTAN

**Project purpose:** Organization and development of pilot production of rubber and plastic products using carbon-mineral raw materials of Kazakhstan.

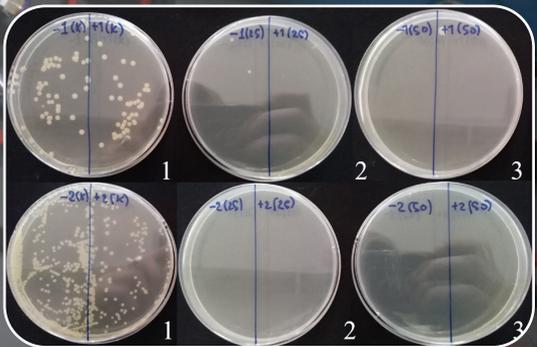
**Project manager :** Mikhail Nauryzbaev

## **Advantages of the technology**

- The use of technogenic waste dumps (shungite) of the Bakyrchik polymetallic mine as a reinforcing filler for rubber and plastic products.
- Reducing the cost of the final product by 20-25%.
- Increasing the elastic-strength properties of rubber, the service life of plastic products.

**Amount of investment** – 20 mln. KZT ~ 43.7 USD

**Contact information:** nauryzbaev@cfhma.kz



# INFRASTRUCTURE

- The Main administrative building
- O.A. Zholdasbekov Palace of Students
- 16 schools
- Al-Farabi Library
- The Youth Internet Center
- Tumar Public Catering Center
- The Student Service Center «Keremet»
- Sports and fitness complex
- Dormitory
- Publishing house «Kazakh university»
- Farabi Science and Technology Park
- The Situational Management Center



KazNU has the largest library in Central Asia, the book fund of which is over 2 million copies. On campus, there are Internet cafes, private cinemas, shops, more than 500 electronic services for young people.



# KAZNU – THE LEADER OF SPORT



KazNU is the leader of Kazakh sport. Al-Farabi Kazakh National University students actively participate in the Kazakhstan's and international sports arena. Many Olympic champions graduated from KazNU – Yermakhan Ibraimov, Yeldos Smetov, Dmitry Balandin, Elmira Syzdykova, Igor Son, Nurislam Sanaev, Nurdaulet Zhumagali and many others.



# YOUTH COMMITTEES

**1** **The Senate of the student** - organization that provides social and innovative creative projects, mobile and educated youth of the University. The Senate is - youth center, which prepare the talented students, to promote development of positive qualities and proper prioritization.

**6** **"Zhas Otan"** YW maintains the patriotism, and promote the development of human knowledge for the improvement and development of their country, it is landscaping, beautification carried out patriotic celebrations.

**2** Public fund **"Komek"** is a community of students created on the basis of the university KazNU. It has been organizing volunteer work to assist socially vulnerable groups of the population.

**7** **Student Alliance of KazNU** helps students solve their social, legal and domestic problems.

**3** Student Bureau of the Bologna process is the organization, whose main purpose is to support and protect the interests of students and address their academic issues, SBBP - is the building of the dialogue between the administration of the University and its students in the new format.

**8** **Scientific student organization** is the organization, which involves students in scientific activity, for preparation of scientific projects, to research conferences and contributes for carrying out rich student's life.

**4** Public association "Trade union of students and undergraduates" - **"Sunkar"** is a voluntary, self-reliant, independent, fixed and individual membership of a public non-governmental association established on the basis of the Constitution of the Republic of Kazakhstan and the Civil Code the Republic of Kazakhstan.

**9** **Supreme Student Council** is primarily active youth penalty. The main purpose of this organization is to keep order and cleanliness of the dorm, to organize events, competitions to involve students and make life dorm brighter and more saturated.

**5** Law enforcement officers (leo) is a special organization that provides students security and protects students' rights in order to avoid abuses of students, the absence of discipline in the dorm.

**10** **Student Dean's office** develops the principles of social partnership between students, student organizations, faculty administration,

## THE SCHOOL OF INFORMATION TECHNOLOGY

### Departments:

Information Systems  
Computer Science  
Artificial Intelligence and Big Data

### Research institutes and labs

- Continuing Professional Education – Cisco Academy
- Information Security
- Kaspersky Lab Center “PerCO”
- Computer Science
- Automation and management of technological processes
- Intelligent Programmable Systems
- Industrial controller’s
- Internet of things
- Alcatel Laboratory
- Computational Linguistics

## THE SCHOOL OF CHEMISTRY AND CHEMICAL TECHNOLOGY

### Departments:

General and Inorganic Chemistry  
Analytical, Colloid Chemistry and Technology of Rare Elements  
Physical Chemistry, Catalysis and Petrochemistry  
Chemical Physics and Material Science  
Chemistry and Technology Of Organic Substances, Natural Compounds and Polymers

### Research institutes, centers and labs

- New chemical technologies and laboratories (12 laboratories)
- Physico-chemical methods of the study and analysis (13 laboratories)
- Medicinal plants
- «Kazakh-Pakistani International laboratory of KazNU in the field of phytochemistry» accredited within the framework of the International Organization for the Development of Science and Technology COMSTECH (uniting 25 countries of the world) on the basis of the International Center For Chemical and Biological Sciences (Karachi, Pakistan)
- Engineering Design of Chemical and Technological Processes AVEVA “Joint training and educational center of KazNU and the British company” AVEVA Group “PLC.
- Al-Farabi Chemical
- Physical and chemical research
- Computational methods in chemistry



ҰЛТТЫҚ  
УНИВЕРСИТЕТ

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
АЛ-ФАРАБИ АТЫНДАҒЫ  
ҰЛТТЫҚ УНИВЕРСИТЕТІ

AL-FARABI KAZAKH NATIONAL UNIVERSITY

# THE SCHOOL OF BIOLOGY AND BIOTECHNOLOGY

## Departments:

Biotechnology  
Biophysics, Biomedicine and Neuroscience  
Molecular Biology and Genetics  
Biodiversity and Bioresources

## Research institutes and labs:

- Research Institute of Biology and Biotechnology Problems
- Research Institute of Problems of Ecology

## Research laboratories:

- Endocrinology
- Human and animal physiology
- Chronobiology and ecological physiology
- Applied Chronophysiology
- EEG
- Environmental morphology of animals
- Vertebrate morphology
- Aquaculture and fish diseases
- Zoology
- Environmental and evolutionary morphology and biochemistry
- Comparative plant anatomy
- Applied microbiology
- Biomaterials
- Environment
- Modern Biotechnology
- Plant Biotechnology
- Biochemistry
- Bionanotechnology
- Molecular ecophysiology
- Environmental monitoring and expertise
- Ecotoxicology
- Molecular genetics
- Mutagenesis
- Genetics and plant breeding
- Genetics of *Drosophila melanogaster*



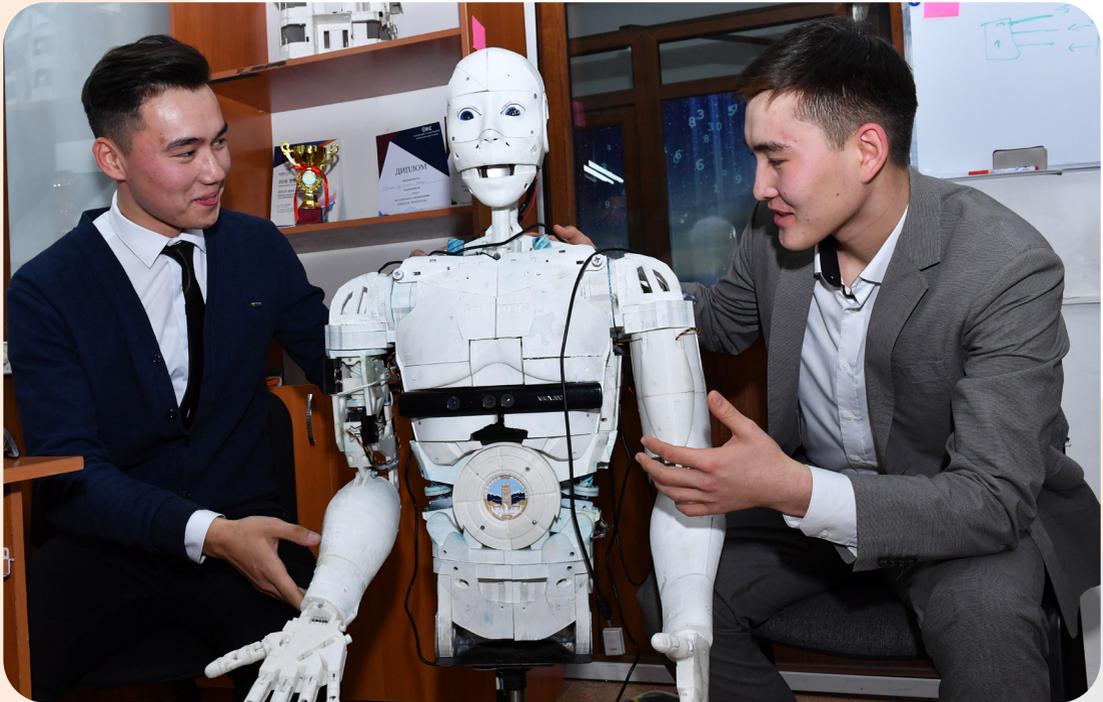
## THE SCHOOL OF MEDICINE AND HEALTH CARE

### **Departments:**

Epidemiology, Biostatistics and Evidence-Based Medicine  
Health Policy and Organization  
Physical Training and Sport  
Fundamental Medicine  
Clinical Disciplines  
Clinical Specialties

### **Research institutes and labs:**

- Scientific and Practical Center  
“Innovative Health Care”
- Health and Environment Research
- Health
- Clinical Simulation Center



## THE SCHOOL OF MECHANICS AND MATHEMATICS

### Departments:

Mathematical and Computer Modeling  
Mechanics  
Mathematics  
Computational Sciences and Statistics

### Research institutes and labs:

- Mathematics and mechanics
- Algebra and Logic
- Control Theories
- Equations of Mathematical Physics
- Mathematical and Functional Analysis
- Theoretical and Celestial Mechanics
- Mechanics of Liquids and Gases, Geoenergetics
- Robotic Systems, Theory of Mechanisms and Machines
- Space Engineering and Technology
- Computational Mathematics and Mathematical Modeling
- Mechanics of Deformable Solids
- Computing Technologies and Problems in the Oil Field
- Actuarial Mathematics
- Computational Statistics
- Inverse Problems

# THE SCHOOL OF PHYSICS AND TECHNOLOGY

## Departments:

Thermal Physics and Technical Physics  
Solid-State Physics and Nonlinear Physics  
Plasma Physics, Nanotechnology and Computer Physics  
Theoretical and Nuclear Physics

## Research institutes and labs:

- SRI of Experimental and Theoretical Physics
- National nano technological
- Engineering Profile
- General Relativity
- Nuclear theory and nuclear processes
- Structural materials of nuclear power plants nuclear interactions
- Quantum systems and particle
- Variations of cosmic rays
- Kriophysics and kriotechnology
- High-energy processes
- Simulation of heat and mass transfer
- Mathematical modelling of processes in the plasma
- Nonlinear and correlation phenomena in plasmas
- Pulsed plasma accelerator
- Dusty plasmas and plasma technologies
- Semiconductor and Functional Materials
- Semiconductor optoelectronics and nanophotonics
- Technology semiconductor structures
- Nonlinear Physics
- Semiconductor Electronics



# THE SCHOOL OF GEOGRAPHY AND ENVIRONMENTAL SCIENCES

## Departments:

Geography, Land Management and Cadastre  
Cartography and Geoinformatics  
Meteorology and Hydrology  
UNESCO Chair for Sustainable Development  
Recreational Geography and Tourism

## Research institutes and labs:

- Geographical Research and Additional Professional Education
- Digital Cartography and Applied Geography
- The Compts Center for (CCCS) – Kazakhstan
- Problems of Recreations and Tourism

# GRADUATE SCHOOL OF BUSINESS AND ECONOMICS

## Departments:

Economics  
Management  
Finance and Accounting  
Business Technologies

## Research institutes and labs:

- Economic Research Center
- Entrepreneurship and Innovation
- Management and Business Education
- Smart Marketing and Logistics
- Financial technologies and digitalization of accounting and auditing

## THE SCHOOL OF PHILOLOGY

### Departments:

Foreign philology and translation  
Kazakh literature and literary theory  
Russian Philology and World literature  
Foreign language  
Turkology and Language theory  
A. Baytursynov Kazakh Linguistics

### Research institutes and labs:

- Abay Research Institute
- Zhambyl Kazakh Folklore and Literature
- "Sociolinguistics: translation theory and practice"
- Computer Linguistics Language and Culture: Britain Center "Russian world"
- Flagship (USA)
- «Turkic world»

## THE SCHOOL OF LAW

### Departments

Theory and History of State and Law, Constitutional and Administrative Law  
Civil Law and Civil Procedure, Labor Law  
Criminal Law, Criminal Process and Criminalistics  
Customs, Financial and Ecological Law

### Research institutes and labs:

- Problems of crime control
- Legal Support of innovation development of Kazakhstan
- Legal Education
- Environmental Safety and Nature Management
- Local self-government development problems

# THE SCHOOL OF INTERNATIONAL RELATIONS

## Departments:

International relations and World Economy  
International Law  
Diplomatic translation

## Research institutes and labs:

- European Information,
- American and Democratic Studies,
- Resource and Information Centre on NATO,
- Security and Cooperation Problems,
- German Studies,
- The United Nations Assistance,
- Eurasian Studies,
- Intercultural Communication and Translation Studies
- Romance Research
- World Trade Organization (WTO) and International Trade Law
- European Law

# THE SCHOOL OF JOURNALISM

## Departments:

Print and Electronic Media  
UNESCO in Journalism and Communication  
Publishing, editing and design art

## Research institutes and labs:

- Humanities Research "Mediasphere"
- M.K. Barmankulov TV&Radio Station KazNU
- Rublic Relations and Press Services



## THE SCHOOL OF ORIENTAL STUDIES

### **Departments:**

Chinese Studies  
Middle East and South Asia  
Far East  
TURKSOY

### **Research institutes and labs:**

- Asian Studies
- Korean Studies
- Scientific and educational center for the study of Japan and Central Asia
- Written Monuments and Spiritual Heritage
- Turan – Iran
- Modern Chinese Studies
- Mahatma Gandhi Cultural and Educational Center
- Mohammed Ali Jinn Cultural and Educational Center
- Cultural and educational center of history and culture of Azerbaijan
- Cultural and educational center of history and culture of Tajikistan
- Cultural and educational center of Iranian studies
- Arabic Studies

## THE SCHOOL OF HISTORY

### **Departments:**

Archeology, Ethnology and Museology  
World History, Historiography and Source Studies  
History of Kazakhstan

### **Research institutes and labs:**

- Study of Traditional Civilization in Central Asia
- Study of World History
- Archival Studies and Document Management

# THE SCHOOL OF PHILOSOPHY AND POLITICAL SCIENCES

## Departments:

Philosophy  
Political Sciences and Political Technologies  
Pedagogy and educational management  
General and Applied Psychology  
Sociology and social work  
Religious and cultural studies

## Research institutes and labs:

- "Al-Farabi"
- Gender studies
- Religious studies and expertise
- Psychological Technology and Innovation
- Political Studies
- Sociological Research and Social Engineering
- Pedagogical Excellence and Innovation "Way to Success"
- Polygraph

# THE SCHOOL OF PRE- UNIVERSITY EDUCATION

## Departments:

Foundation  
Language training and general education of foreigners  
College  
Profession-oriented school

## Research institutes and labs:

- Training and education center "Zerde"
- Multilingual education resource center
- Intensive language courses (3-6 months)
- Abai academy



# KAZNU CAMPUS

1. Main Administration Building
2. Zholdasbekov Palace of students
3. School of Mechanics and Mathematics,  
School of Information Technologies
4. School of Physics and Technology
5. School of Chemistry and Chemical  
Technology
6. School of History,  
School of Philology and World  
Languages,  
School of Journalism
7. The Graduate School of Economics and  
Business,  
Law School,  
School of Medicine and Health Care
8. School of Geography and Environmental  
Sciences
9. School of Biology and Biotechnology
10. Al-Farabi Library
11. Youth Internet Center
12. "Aitumar" Foodservice Center
13. "Keremet" Student service center
14. Sports and Fitness complex
15. Dorms

