



# ANNUAL REPORT

Medical University of Karaganda NCJSC  
**for 2021**

## CONTENT

<b>ADDRESS BY THE CHAIRMAN OF THE BOARD OF DIRECTORS OF “MUK” NCJSC .....</b>	<b>3</b>
<b>RECTOR’S ADDRESS.....</b>	<b>4</b>
<b>GENERAL INFORMATION.....</b>	<b>5</b>
Authorized capital structure .....	5
Structure of assets .....	5
<b>REPORT ON THE IMPLEMENTATION OF THE DEVELOPMENT PROGRAM OF “MUK” NCJSC for 2019-2023 .....</b>	<b>7</b>
<b>OPERATING RESULTS.....</b>	<b>12</b>
Education .....	12
Scientific activities.....	17
Clinical activity.....	19
International cooperation.....	24
Youth policy and achievements of students .....	26
<b>FINANCIAL RESULTS .....</b>	<b>28</b>
Structure of incomes of “MUK” NCJSC.....	28
Structure of expenses of “MUK” NCJSC .....	30
<b>BOARD ACTIVITY REPORT .....</b>	<b>31</b>
<b>GOALS AND PLANS FOR THE FUTURE .....</b>	<b>37</b>

## **ADDRESS BY THE CHAIRMAN OF THE BOARD OF DIRECTORS OF “MUK” NCJSC**

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### **Dear colleagues, partners!**

The main task in the reporting period was to continue the development of the trinity of medical education, clinical practice and scientific work. The integration of these areas is the basis of the modern activity of the Karaganda Medical University.

We have a high reputation in the field of providing educational, scientific, medical and diagnostic services, confidently nurture and develop a young generation of researchers who replenish the number of faculty members of the university, expand the horizons of international cooperation with foreign universities and research organizations.

The past year, 2021, was quite busy for the university, the joint work of the Board of Directors and the Management Board was aimed at implementing priority tasks, such as proper and uninterrupted provision of the educational process, effective research work, provision of high-quality medical care to the population by clinics and university teachers.

In general, I believe, all processes were carried out qualitatively, at a decent level, as evidenced by the achieved positive results of financial and economic activity, academic and scientific achievements of the university, its performance of the main key indicators.

I express my gratitude to the entire staff of the “Medical University of Karaganda” NCJSC for the work done and wish further professional success in the implementation of the assigned tasks.

**Chairman of the Board of Directors of the “Medical University of Karaganda” NCJSC  
Erzhan Nurlybaev**

## RECTOR'S ADDRESS

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### **Dear colleagues!**

The year 2021 was significant for the whole country as the year of the 30th anniversary of Independence of the Republic of Kazakhstan.

Our university has come to this date with dignity, we are proud to continue the tradition of high-quality training of doctors, laid down since the founding of the university.

Educational programs of Karaganda Medical University have retained their dominant positions in the rating of educational programs of Kazakhstani universities of NCE "Atameken".

"MUK" NCJSC entered the rating of the 10 best universities in Kazakhstan, compiled by the League of Academic Integrity.

According to the results of the competition for grant funding of the Ministry of Education and Science of the Republic of Kazakhstan, 9 scientific projects of the university were approved.

During the second wave of coronavirus infection, our university continued to provide comprehensive assistance to the practical healthcare of our republic. Thus, on the basis of the Occupational Health Clinic of the "MUK" NCJSC, an infectious hospital with 150 beds functioned; our specialists actively provided both medical and diagnostic and advisory assistance to the population, trained their colleagues.

The university's volunteer students continued the mission of kindness that was started at the beginning of the COVID-19 pandemic. Due to this, in May 2021 student of the School of Medicine, future surgeon Daryn Abilzhanov was declared the winner of the national project «100 new persons of Kazakhstan».

Such doctors will serve worthily for the benefit of the nation's health, develop and improve medical education and the country's healthcare system.

**Acting Board Chairman – Rector of the "Medical University of Karaganda" NCJSC  
Anar Turmukhambetova**

## GENERAL INFORMATION

"Medical University of Karaganda" NCJSC (further - MUK, University) is the organization of higher and post-graduate education. The University was founded in 1950, since 2019 it is a non-commercial joint stock company Karaganda Medical University, since 2019 it has the status of a research university.

The University is certified according to ISO 9001:2015, has institutional accreditation according to the standards of the WFME, including additional education and Technical and Vocational Education (TVE). In addition, "MUK" NCJSC has certificates of accreditation of the university as a subject for scientific and scientific-technical activities, accreditation in the field of healthcare for compliance with accreditation standards for medical organizations providing inpatient care with the assignment of the first category, certification for compliance with the standard of good clinical practice (GCP) by the Committee of Pharmacy of the Ministry of Health of the Republic of Kazakhstan, accreditation of the laboratory of collective use according to the standard ST ISO 15 189 (2018), sanitary and hygienic laboratory according to GOST ISO/IEC 17025-2019 (2020).

The university's infrastructure allows for the training of qualified specialists in accordance with modern requirements and includes a simulation center with high-tech simulators and dummies, a research center, molecular genetic and sanitary epidemiological laboratories, a center for clinical and preclinical trials, university clinics, the Institute of Public Health and Occupational Health.

A student campus has been established, which includes six dormitories, which provide all conditions for comfortable accommodation of students. The construction of a new dormitory for 400 places in the center of the city of Karaganda at the expense of the university, which is in line with the ideas of five social initiatives of the First President of Kazakhstan.

<b>7</b>	Academic buildings	29160,6 m <sup>2</sup>
<b>6</b>	Dormitories	2500 beds
<b>3</b>	University clinics	
<b>2</b>	Canteens	
<b>2</b>	Recreation areas	
	Library	453 227 copies
	The shared laboratory	928 m <sup>2</sup>
	Center for Simulation and Educational Technologies	1300 m <sup>2</sup>

<http://www.qmu.kz>



### Authorized capital structure

The sole shareholder of MUK is the State Institution "Ministry of Health of the Republic of Kazakhstan", which owns 100% of the shares. The authorized capital of the Company is 9,166,960,0 (nine million one hundred sixty-six thousand nine hundred sixty) thousands of tenge, of which the paid-up capital is 7,724,361,1 thousand tenge, unpaid 1,442,598,9 thousand tenge (land plots that were included in the evaluation of the State Property and Privatization Committee).

### Structure of assets

Type	At the beginning of the period	At period end	Changing
<b>Non-current assets, thous.tg</b>			
Fixed assets	10 003 422,6	9 828 985	-1,8%
Intangible assets	26 439,4	33 620,6	21,3%
Construction in progress	362 683,6	723 512,1	50,1%
Land lease	21 178,6	20 720,7	-2,2%
Accounts receivable	30 982,5	15 231,3	- 49,1%
<i>Total</i>	<i>10 444 706,7</i>	<i>10 622 069,7</i>	<i>1,7%</i>
<b>Circulating assets, thous.tg</b>			
Funds	1 950 730,6	2 210 579,2	13,3%

Type	At the beginning of the period	At period end	Changing
Stock	248 661,8	243 979,2	-1,9%
Deferred expenses	114 987,0	150 331,6	30,7%
Short-term receivables	74 327,0	304 141,9	309,2%
<i>Total</i>	<i>2 388 706,4</i>	<i>2 909 031,9</i>	<i>21,8%</i>
<b>Total</b>	<b>12 833 413,1</b>	<b>13 531 101,6</b>	<b>5,4%</b>

In the structure of assets, 78.5% are non-current assets, where the main share is fixed assets.

In 2021, there was a significant more than three times short-term receivable, which was formed as a result of no additional payment for educational services and program-targeted funding of scientific activities.

## REPORT ON THE IMPLEMENTATION OF THE DEVELOPMENT PROGRAM OF "MUK" NCJSC for 2019-2023

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### Mission of "MUK" NCJSC:

Social advancement, improvement of health and quality of life of the population of Kazakhstan by achieving excellence in science, education and practice.

### Vision of "MUK" NCJSC:

A world – class research university serving the benefit of Kazakhstani society.

### Core values of "MUK" NCJSC:

- Traditions
- Academic honesty
- Professionalism
- Innovations
- Civil and social responsibility

The development program of the "Medical University of Karaganda" NCJSC for 2019-2023 was approved by the Government of the Republic of Kazakhstan dated June 27, 2019 No. 453.

The goal of the development program is the formation of "Medical University of Karaganda" NCJSC as a world-class research university through the integration and development of its educational, scientific and research base.

The successful development of a research university and the achievement of its lofty goals are impossible without additional financial assistance to achieve its objectives. "MUK" NCJSC implements the program of development by its own efforts, participating in scientific competitions for republican and international funding, and, despite the difficult time for the country and the world, achieved high results.

The program plans to implement 4 tasks and 14 target indicators, of which 10 indicators (71%) were implemented in 2021.

According to Task 1 «Integration of Education and Science» 3 target indicators are provided, all are fulfilled.

The university staff has published 282 scientific articles in international rating journals indexed by Web of Science or Scopus over the past five years. The average citation rate of scientific articles on the Web of Science database has increased to 1.89.

During the reporting period, the university carried out a strategic partnership with the University of Vilnius (Lithuania) and Kursk State Medical University (Russia).

Within the framework of Task 2 "Development of the scientific and innovative infrastructure of the University", 6 indicators have been provided, of which there are no achievements on 3 indicators.

In total, 31 research projects were carried out in the "MUK" NCJSC in the reporting year, including 6 research projects implemented in the laboratory for collective use. A startup created on the basis of university projects has been implemented.

The indicator "Number of projects for commercialization of the results of scientific and (or) scientific and technical activities" has not been fulfilled. Since 2017, "MUK" NCJSC has been actively participating in competitions for grant financing of commercialization projects. In 2021, the project from "MUK" NCJSC "Antimicrobial Dental Gel" was submitted to the startup project application competition for innovative grants of JSC "Center for Engineering and Technology Transfer" (QazInnovations) with the support of the Ministry of Digital Development, Innovation and Aerospace Industry. According to the results of the competition, the project was selected for presentation, but did not receive funding in the future. Employees of "MUK" NCJSC also participated in the competition under the Grant Program for groups of senior researchers (GSR) and groups of junior researchers (GJR) for the commercialization of technologies in August 2021, however, the submitted project did not pass the preliminary conditions of the environmental assessment competition, since the raw materials used are natural resources of Kazakhstan. In September 2021, two university scientists took part in the seminar "Problems of commercialization of scientific developments and ways to solve them" and presented their projects. Thus, despite the active work, the results in this direction have not yet been received. Currently, work is underway to prepare an application for the grant program "Consortia of the manufacturing sector I: Competence Centers" within the framework of the Project "Stimulating Productive Innovations" (Ministry of Digital Development, Innovation and Aerospace Industry of the Republic of Kazakhstan).

Also, in 2021, the planned values for the indicators "Number of Kazakhstani patents" (5 patents) and "Number of international patents" (1 patent) were not achieved. Obtaining patents is the final result of the implementation of research projects. Thus, in 2020, due to the completion of most grant research works, this indicator was exceeded, 4 patents of the Republic of Kazakhstan and 1 international patent were obtained (with the plan 1 Kazakhstani patent and 0 international patents):

1. Patent of the Republic of Kazakhstan No. 34399 dated 06/19/2020 "A vehicle for moving a wheelchair with a person up the stairs with the help of an assistant",

2. Patent of the Republic of Kazakhstan No. 34571 dated 11.09.2020 "Minimally invasive method for the treatment of chronic post-traumatic osteomyelitis of long tubular bones with a lesion of the medullary canal and a device for its implementation",

3. Patent of the Republic of Kazakhstan No. 34245 dated 03/26/2020 "Method for obtaining an ultrasonic extract from creeping thyme (*Thymus serpyllum* L.s.l.), which has an antibacterial effect against *Helicobacter pylori*",

4. Patent of the Republic of Kazakhstan No. 34162 dated 02/11/2020 "Application of dry thyme extract (*Thymus crebrifolius* Klok.) as a broad-spectrum antimicrobial agent".

5. EAPO International Patent No. 036266 dated 10/20/2020 for the invention "Method for obtaining ultrasonic extract from creeping thyme ("*Thymus serpyllum* L.s.l.), having an antibacterial effect against *Helicobacter Pylori*." Authors: P. Orazbayeva, K. Shakarimova, S. Ivasko, S. Akhmetova, I. Loseva.

The international patent was actually obtained by the university in 2021, but it is not counted in the indicator, since the patent is dated 2020 – the date of the decision on the publication of the patent.

In 2021, 3 applications were filed and 1 Kazakh patent was obtained (Patent of the Republic of Kazakhstan No. 35343 dated 05.11.2021 "Antimicrobial dental gel". Authors: K. Badekova, G. Atazhanova, S. Ivasko, S. Akhmetova, I. Loseva, A. Aitkenova). But since the vast majority of projects were only started based on the results of tenders for republican funding in 2020-2021, their results in the form of objects of industrial property and copyright are possible upon completion of research with a implementation period of up to 2-3 years.

3 indicators are provided for the implementation of Task 3 "Professional development of teaching staff", all indicators are executed.

30% of the teaching staff are involved in the research activities of the university: they are published in journals indexed by Web of Science or Scopus, participate in the implementation of research projects.

10% of the teaching staff have certificates of completion of training on the basis of foreign scientific organizations.

14 graduates of the doctoral program continue their research activities in postdoctoral studies on the basis of the departments of the "MUK" NCJSC.

In Task 4 "Expanding partnership and increasing the international recognition of the university" 2 indicators are provided, 1 indicator is not executed.

In 2021, "MUK" NCJSC participated in 6 international projects, 5 of which were under the program of the European Union ERASMUS+ Increasing the potential of higher education.

The indicator for entering the ranking of the 600 best universities according to QS (by Subject) is not complete. The university is actively working to achieve the high requirements of the global QS rating. In 2020, in order to promote the university in the international QS ranking, analytical trackers of the QS agency "Academic Reputation" and "Reputation of employers" were purchased, the analysis of these trackers allows us to get an idea of the regional, national and global position of our university, identify weaknesses and get recommendations for improving and increasing competitiveness. To strengthen the recognition of "MUK" NCJSC in the international educational space, the university constantly participates in global conferences on education, including in 2020 at the QS Subject Focus Summit – Medicine under the motto "The Future of Medicine: Challenges and Opportunities in this Disruptive Era", in 2021 at the QS Subject Focus Summit Medicine 2021 "New Paradigms for a New Reality: medical education, science, healthcare".

A bibliometric audit of the "MUK" NCJSC was conducted for the purpose of current analysis and further movement of scientometric indicators of the university. The indicators taken into account in the QS rating are included in the indicators of the university, thereby affecting the competitiveness of the university.

However, entering the QS global ranking of a regional narrow-profile university with high competition with world universities requires more time and significant financial resources to meet the high criteria for evaluating university performance, including scientific activity and the share of foreign teachers.



## Information on the implementation of the target indicators of the Development Program:

No	Target indicators	Measurement unit	Plan	Fact	Information on the execution
<b>Task 1. Integration of Education and Science</b>					
1	The ratio of the number of articles published over the past five years in international rating journals indexed by Web of Science or Scopus to the number of production staff	Ratio	1:10	1:5	The indicator is executed (the actual value should not exceed the planned value). The number of scientific articles published over the past five years is 282 articles, the number of production staff is 1,481 people. The formula for calculating the indicator: $1 : [1481/282] = 1:5$
2	Average citation rate of scientific articles published in international rating journals indexed by Web of Science or Scopus	%	0,9	1,89	Indicator completed. According to the abstract database Web of Science, the total number of citations is 318 for 168 publications of authors, affiliated with the university in journals indexed in the database of Web of Science. Calculation formula: $[318/168] = 1.89$
3	Number of education programmes developed with strategic partners	unit	6	6	Indicator completed. The university has joint educational programs with the University of Vilnius (Lithuania): 1) "Nursing", Bachelor's degree, 2) "Nursing", Master's degree, 3) "Nursing Science", doctoral studies, 4) Integrated educational program "General Medicine", 6 years, 5) "Family Medicine", residency, With Kursk State Medical University: 6) "Dentistry", 6 years.
<b>Task 2. Development of science and innovation infrastructure of the university</b>					
4	Total number of research projects	unit	30	31	Indicator completed. The total number of research projects in 2021 represented 31 projects, including projects on program-targeted financing - 2, grant financing - 13, household projects - 4, clinical research - 3, international - 9.
5	Number of Kazakh patents received	unit	5	1	Indicator is not complete. In 2021, 1 Kazakh patents were received: 1. Patent RK 35343 from 5.11.2021.
6	Number of international patents received	unit	1	-	Indicator is not complete.
7	Number of research projects of the Shared Laboratory	unit	6	6	Indicator completed. 1. Immunological aspects of neonatal sepsis. ; 2. Detection of biomarkers bacterial translocation in early diagnosis of infectious-inflammatory complications of patients with intestinal obstruction of tumor genesis. ;

No	Target indicators	Measurement unit	Plan	Fact	Information on the execution
					3. Prognostic assessment of the influence of clinical genetic factors on the risk of development of the course of the disease in spontaneous intracerebral hemorrhage. ; 4. Development of the composition and technology of original herbal medicines for the treatment and prevention of Helicobacter pylori-associated diseases. ; Assessment of the provision of adequate water, sanitation and hygiene (WASH) in rural medical institutions of Karaganda region for an effective response to the COVID-19 pandemic. ; 6. Detection of SARS-CoV-2 in nasal smears using MALDI-MS and machine learning methods.
8	Number of projects to commercialize scientific and (or) scientific and technological activities	unit	1	-	Indicator is not complete.
9	Number of start-ups created on the basis of projects of the University and its organizations	unit	1	1	Indicator completed. 1. The project "Mobile stair lift for people with disabilities". Project developer Pavel Ivachev, author and patent holder of the utility model patent "Vehicle for moving a wheelchair with a person up the stairs with the help of an assistant" No. 3825
<b>Task 3. Professional development of teaching staff</b>					
10	The share of the teaching staff involved in research activities	%	30	30	Indicator completed. The total number of teaching staff is 604. The number of professors involved in research activities is 181. Indicator calculation formula: $[181/604] * 100 = 30\%$
11	Number of post-doctoral students	unit	2	14	Indicator completed. 14 postdoctoral students conduct research activities on the basis of the departments of MUK NCJSC
12	Share of professors and teaching staff trained on the basis of leading foreign scientific organizations (scientific institutes)	%	10	10	Indicator completed. The number of teaching staff with a certificate of training on the basis of foreign organizations was 63, and of the total number of teaching staff - 604. Indicator calculation formula: $[63/604] * 100 = 10\%$
<b>Task 4. Expanding the partnership and increasing the international recognition of the university</b>					
13	Number of international projects	unit	5	6	Indicator completed. 1. TRUNAK (2017- 2021); 2. SPRING (2019-2022); 3. HARMONEE (2021-2024); 4. AccelEd (2021-2023);

No	Target indicators	Measurement unit	Plan	Fact	Information on the execution
					5. FOR21 (2021-2023); 6. TIPH Global Grant Program of ASPPH (Association of Schools of Public Health) (2021-2022).
14	The position of the university in the ranking of the best universities according to QS (by Subject)	Ranking position	550+	-	Indicator is not complete.

## OPERATING RESULTS

### Education

The University implements multi-level training of specialists in the following areas: healthcare and social security (medicine), engineering, natural sciences, interdisciplinary. The training is conducted in Kazakh, Russian and English.

The total contingent was 7072 people. The number of students enrolled under the state educational order from the republican budget is 3,108 people, from the budget of local executive bodies – 260 people, which is 47% of the total contingent. Compared to last year, the contingent increased by 10%. 53% of girls and 47% of boys study at the university.

It should be noted that the number of students on a paid basis increased by 954 people compared to the 2020-2021 academic year, and the number of students at the expense of the state educational order decreased by 341 people.

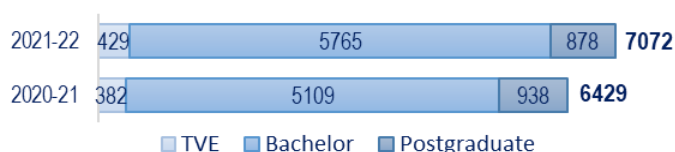
Contingent of students, people.	<b>7072</b> +10%
Share of foreign students in total enrollment in bachelor's degree programmes, %	<b>20</b> +2
Number of educational programs, units.	<b>83</b>
<i>including</i>	
bachelor's degree	10
master's degree	26
doctoral studies	5
residency	35
TVE	7
Number of educational programmes developed in cooperation with strategic partners, units.	<b>6</b>

The reduction of the contingent of students at the expense of the republican budget is due to the fact that in 2020 the contingent of internship graduates consisted almost entirely of students with grant funding. Such a situation was created due to the high level of deductions of students on a grant for academic failure and at their own request and the transfer to their places of students who studied at their own expense. As a result of the measures taken in 2020 to retain the contingent, the number of students enrolled on a fee-based basis began to increase, and the number of newly admitted students at the expense of the republican budget remains stable.

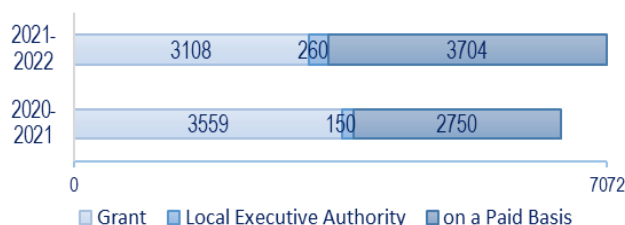
Thus, in 2021, 10% more students were accepted at the expense of the republican budget, 75% more on grants from local executive bodies and 39% at their own expense than in 2020.

The university has 1310 international students from India, China, Armenia, Mongolia, Uzbekistan, Russia, Tajikistan, Georgia, Pakistan, Germany, Azerbaijan, Egypt, Jordan, Yemen, Kyrgyzstan, Palestine, Poland, Ukraine.

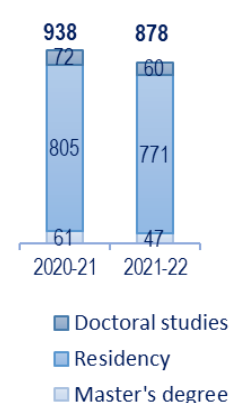
The total contingent of students, people.



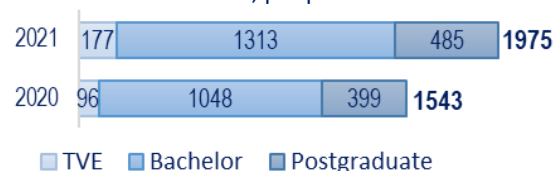
By type of financing, people.



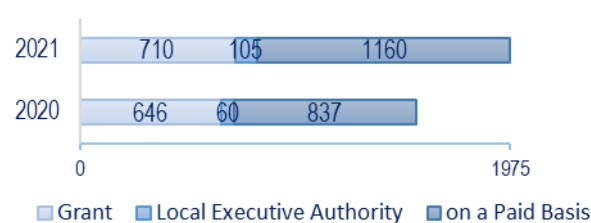
Postgraduate education, people.



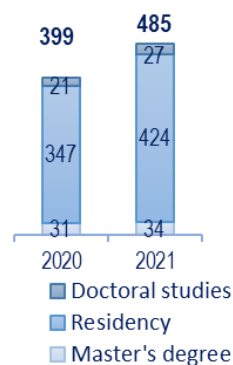
Admission of students, people.



By type of financing, people.



Postgraduate education, people.



The University has 7 schools and 1 faculty: School of Medicine, School of Dentistry, School of Public Health, School of Pharmacy, School of Nursing Education, Research School, School of Professional Development and Residency, International Faculty of Medicine.

In the ranking of educational programs of universities of NCE "Atameken", which has been held since 2018, educational programs of "MUK" NCJSC are invariably included in the list of top ones. In 2020 – 1st place in the educational programs "General Medicine", "Dentistry" and "Pharmacy", 2nd place in the educational program "Nursing", 1st place in the educational program "Biology" (among medical universities of the Republic of Kazakhstan), in 2021 – 1st place in the educational program "Biology", 2nd place in the educational program "General Medicine", 3rd place in the educational programs "Dentistry" and "Public Health".

Together with partner universities, bachelor's, residency, master's and doctoral degree programs are developed and implemented in accordance with international standards. The practice of implementing interdisciplinary educational programs with Kazakh partner universities, such as IT medicine (KARTU), clinical psychology (KarU) and not only is expanding.

"MUK" NCJSC is recognized as an authoritative center of medical education in the international community. Since 2012, the University has been organizing and holding the Central Asian International Conference on Medical Education, the next conference is scheduled for November 2022. Since 2019, "MUK" NCJSC has been a Consultant for the development of medical education in the Republic of Tajikistan.

Graduates of the Karaganda Medical University consistently show high results of the independent examination conducted annually by the National Center for Independent Examination. In 2021, 100% of graduates in residency scored a threshold score the first time.

Employment of graduates was 97% in 2019, 97% in 2020, and 98% in 2021.

Percentage of resident graduates who passed the independent examination on the first time, %	<b>100</b>
Percentage of graduates of higher education institutions who have studied on the state educational order, employed or entered the next level of study in the first year after graduation, %	<b>98</b> +1

Since 2019, the university has been an active member of the League of Academic Integrity and has taken a vector of development for a fair criterion assessment of students' academic achievements. The new version of the Academic Policy stipulates the right of the student to require the teacher to assess, only on the basis of predetermined criteria. All the assessments made by the teachers during the school year are subject to detailed statistical analysis to determine whether the «anomalies» have been exposed.

A step-by-step transition to the final control was carried out in 90% of cases in the form of written work with double-blind verification and automatic verification of originality through anti-plagiarism systems. The level of works with a high degree of originality is more than 75% and this percentage increases annually. The University has created and is constantly modernizing its own information platform for the written exam "Session".

Students are actively involved in the process of making managerial decisions on the educational process and are represented in all collegial bodies for academic work (Senate, School Councils, quality assurance commissions) in the amount of at least 20% of the total composition. Meetings of the Rector, Vice-Rector for Academic Work, deans with students are held regularly. Based on the results of the meetings, decisions are made aimed at ensuring a high level of quality of education and satisfaction of students with the educational process. There are student self-government organizations - the Student Republic "Samruk", the student scientific society, student self-government committees of schools and dormitories.

In 2021-2023 the scientific project «Adaptive educational environment as a condition for the development of flexible skills of students of the university and ensuring continuity of school education» within the funding of the Ministry of Education and Science of the Republic of Kazakhstan Technical projects whose main objective is to define the background, strategies and mechanisms for the success of adaptive training in flexible skills and to create an effective educational environment for higher education, taking into account the role of school education and personal characteristics of students and promoting the development of flexible skills that predetermine the career of a student of higher education.

### **Entrepreneurship education**

According to the plans for the implementation of the project "Ecosystem of Student Entrepreneurship", a number of events were held aimed at developing entrepreneurial education and supporting student projects.

Informational meetings and online seminars were held together with employees of the KSU "Youth Resource Center of the city of Karaganda", NCE "Atameken", Almaty University Management, Probusiness Training Center, JSC "National Agency for Innovation Development "QazInnovations", AIFC Tech Hub, IT hub "Terricon Valley", the Academy of Trackers and others .

The work on immersion of students and teaching staff in the sections "Product management", "Empathy in entrepreneurship", "Technological entrepreneurship", "Social entrepreneurship" continued. 18 students of the university were trained in the "SciTech BootCamp 3.0" program organized by the "Nazarbayev University Research and Innovation System".

The practical result of the intensive business education was the participation of students' projects in republican competitions and business acceleration programs. Thus, a doctoral student of the educational program "Pharmaceutical Production Technology" won the opportunity to study under the business acceleration program.

2 projects of students of "MUK" NCJSC became winners of the Tumar Student Business Challenge student startups and businesses competition among 106 teams from universities and colleges of Karaganda, Aktobe, Kostanay and Pavlodar. The project "OZPHARM+" - a social pharmacy and "PharmExpress" - a local company of vending trade in medical goods and their subsequent disposal were presented.

The project "Filtration for machines" of 2nd year students of the educational program "Pharmaceutical Production Technology" took 3rd place in the competition of student innovative socially significant projects "My real contribution to the innovative development of the country" among 60 projects of students.

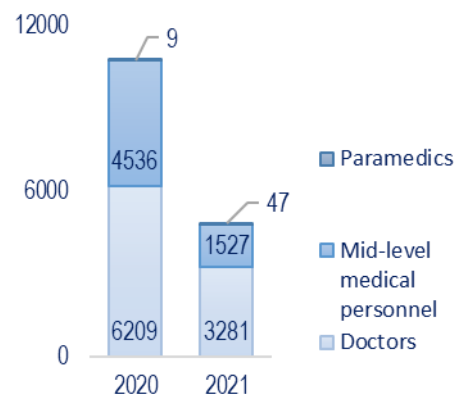
### **Additional education**

The implementation of additional education programs is carried out in 44 specialties. According to the applications of regional health departments, medical organizations and appeals of students, the school of residency and professional development implements educational programs of retraining cycles, advanced training, master classes and training seminars.

In the period from 2020 to 2021, a total of 15,609 trainees were trained, including on a contractual basis, free of charge, according to 005 FBP (within the framework of the 005 budget program "Professional development and retraining of personnel of healthcare organizations"):

## Additional education programs 44

Number of students in additional education, people.



Type of training	Year	Contractual basis	005 FBP	free of charge	Total
Retraining	2020	17	50	-	67
	2021	-	-	-	-
Advanced training	2020	327	1617	43	1987
	2021	746	-	-	746
Master class	2020	5795	-	1092	6887
	2021	354	-	1792	2146
Training seminar	2020	471	-	1342	1813
	2021	764	-	1199	1963
TOTAL	2020	6610	1667	2477	<b>10754</b>
	2021	1864	0	2991	<b>4855</b>

In 2021, training under the 005 budget program was not conducted, since the competition for the allocation of a state order through the public procurement portal was announced only in October, one supplier entered the lot, the competition did not take place.

Training on retraining programs was not conducted in 2021 due to the fact that the training on retraining cycles was abolished (the Code of the Republic of Kazakhstan dated July 7, 2020 "On the health of the people and the healthcare system").

A large number of listeners of master classes in 2020 is associated with the mass training of medical workers on COVID-19 issues.

In 2021, the contingent of students of the contractual basis on professional development cycles has grown.

Despite the decrease in the contingent in 2021, the income on a contractual basis increased by 808,914 tenge compared to 2020.

At the training seminars, there is an increase in the number of listeners, since in 2021 training was conducted within the framework of the Roadmap for improving the provision of comprehensive care to children with disabilities in the Republic of Kazakhstan for 2021-2023, as part of the application of the Health Department of the Karaganda region, and the number of paramedics increased, due to the introduction of the requirement for trainers – mastering the skills of rendering pre-medical care.

During the reporting period, the contingent trained on a gratuitous basis as part of the University's methodological assistance during the COVID-19 pandemic in practical health care in all supervised regions increased.

So, in 2021, in accordance with the requests of the health department of Karaganda, Kostanay, Kyzylorda regions, specialists were trained on the following topics:

- Providing medical care to patients with Covid-19 at the PHC level;

- Providing medical care to patients with Covid-19 at the hospital level;
- Condition after Covid-19 (postcovid syndrome);
- Rehabilitation of patients after coronavirus pneumonia;
- Issues of children's diseases (CVI, ARVI, bronchiolitis, pneumonia);
- Acute respiratory infections and influenza among pregnant women, methods of observation and treatment of patients;
- The procedure for vaccination of pregnant women against coronavirus infection;
- COVID-19, caused by Omicron.



## Scientific activities

The Hirsch index of the "MUK" NCJSC according to the international database Web of Science has grown to 14.

The average Hirsch index of scientific and pedagogical workers of "MUK" NCJSC in 2021 was 0,46.

Every year there is an increase in the number of research and teaching staff and university staff who have the Hirsch index according to the international databases Scopus and Web of Science. In 2021, 263 university employees, including 182 full-time research and teaching staff, had the Hirsch index for the above-listed databases.

The number of scientific and pedagogical staff of the university with a Hirsch index of 4 or more in 2021 amounted to 11 people.

The average level of citation of scientific articles according to the data of the international database Web of Science was 1,89, in 2021, 168 articles of scientists of «MUK» NCJSC were quoted.

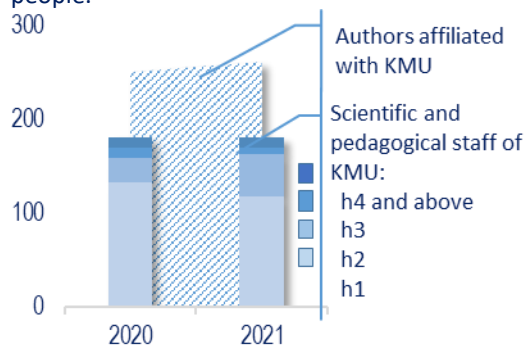
The University demonstrates a trend of an annual increase in articles. The number of articles since 2019 has almost doubled by 2021. The number of articles over the past 5 years has reached 282, including 79 articles during the reporting period. The largest percentage of articles were published in journals of the third quartile and the figures ranged from 41-52% of the total number of articles in all three years.

In 2021, 6 articles were published in Q1 journals: European Journal of Science and Theology (96 percentile), Oncotarget (89 percentile), Journal of Forensic and Legal Medicine (88 percentile), Frontiers in Cellular and Infection Microbiology (83 percentile), International Journal of Inclusive Education (79 percentile), International Journal of Inflammation (77th percentile).

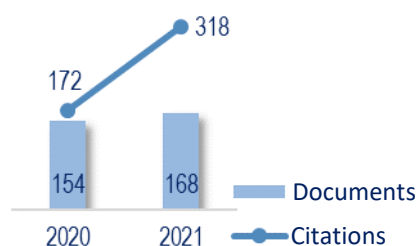
The decrease in the number of abstracts in publications indexed in the Scopus and Web of Science databases in 2020 and 2021 is associated with the pandemic period, which had an impact on the holding of international conferences and forums.

H-index “MUK” NCJSC	<b>14</b>
Hirsch Average Index of Teaching and Scientific Workers	<b>0,46</b> +0,4
Average level of citation of scientific articles (Web of Science)	<b>1,89</b> +0,77

Research and teaching staff with the Hirsch index, people.



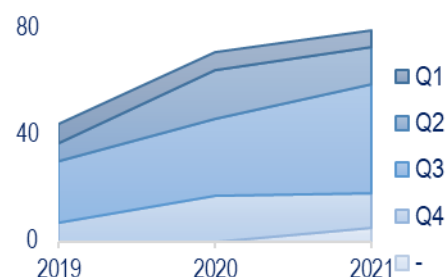
Citations of scientific articles in the Web of Science database, number



Ratio of the number of articles published in the last five years in the Web of Science or Scopus, to the number of full-time scientific and pedagogical staff	<b>1:3</b>
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Abstracts in publications indexed in the Scopus database and Web of Science	<b>10</b>
Number of patents	<b>2</b>

Articles in journals indexed by Web of Science or Scopus, by quartile, units.



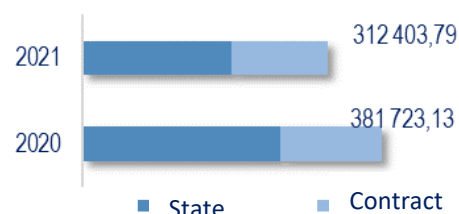
In 2021, "MUK" NCJSC conducted scientific research within the framework of program-targeted, grant funding, as well as contractual research commissioned by domestic and foreign organizations, including clinical trials:

Program-targeted financing	2
Grant financing	13
Contractual financing (including clinical trials)	9
International projects	7

Income from scientific activities in 2021 decreased by 18% compared to 2020.

Research projects, units.	<b>31</b>
Share of revenues from scientific activities in the general budget, %	<b>3,5</b> -1,7
Percentage of teaching staff involved in research activities, %	<b>30</b> +5

Income from scientific activity, thous.tg



Scientists of "MUK" NCJSC on an ongoing basis take part in competitions for program-targeted and grant funding of scientific research at the expense of the republican budget. In 2021, "MUK" NCJSC participated in competitions:

- Competition for program-targeted financing for scientific, scientific and technical programs for 2021-2023 (Ministry of Health of the Republic of Kazakhstan) - 1 application was submitted, which was approved for financing by the decision of the National Tax Service;
- Competition for grant funding of young scientists for scientific and (or) scientific and technical projects for 2022-2024 (MES RK) - 5 applications have been submitted, 4 applications have been examined, which are under consideration by the National Scientific Council.

In 2021, the university carried out the following activities:

- VI International Scientific and Practical Forum «Shipajay-2021». The Forum was held on October 1, 2021 in Saryagash. Within the framework of the forum, the conference «Resort medicine: post-covid recovery, medical rehabilitation, prevention», the seminar «New ways of using unique natural healing resources in the sanatorium and resort industry» and the master class were held «Restoration technologies in the conditions of the sanatorium: innovative approaches».
- Scientific and practical conference «Social-oriented health care: issues of medical and social technologies, preventive and restorative medicine in the light of the protection of patients' rights». The conference was held on November 4-5, 2021 in Karaganda. The forum was organized by «Medical University of Karaganda» NCJSC together with the National Association «Primary Health Care» and the National Resort Association of Kazakhstan, by providing a platform for presentations to leading domestic specialists, healthcare practitioners, leaders of professional and patient organizations.
- Seminar-meeting on topical issues of expertise in profpathology, which took place on November 16, 2021 in Karaganda in the Institute of Public Health and Professional Health of "MUK" NCJSC on November 16 held a seminarmeeting on topical issues of expertise in profpathology.

## Clinical activity

**The clinical work of teaching staff** consists in performing medical work at clinical departments, organizing practical training of students at clinical departments, introducing best practices in ensuring public health into practical healthcare, creating conditions for advanced training and retraining of medical personnel.

Teaching staff of clinical departments working within the framework of SFMA and MSHI, %	<b>77</b> +2
Clinical departments, units.	<b>12</b>
Clinical bases of Karaganda and Karaganda region, units.	<b>59</b> S 9083m <sup>2</sup>

The main objectives of the treatment work of the teaching staff of the clinical departments are:

- Clinical training of trainees and formation of practical skills;
- Organization of joint activity of the departments of «MUK» NCJSC with medical organizations to provide preventive, diagnostic, therapeutic, counseling and rehabilitation of patients who are on treatment in the medical organization, which is the clinical base of the university;
- Development and implementation of new methods and technologies for prevention, diagnosis, treatment and rehabilitation.

100% of teachers who carry out medical diagnostic and advisory work within the educational process have a specialist certificate giving admission to clinical practice. 100 employees combine medical positions in their own clinics of the university.

The medical work of the teaching staff of clinical departments is carried out according to the following types: consultations, participation in consultations, clinical reviews, patient rounds, participation in expert work (expert assessment of medical histories according to the quality control system of medical care), participation in clinical and anatomical conferences (as a supervisor or expert), participation in joint medical conferences, work in the commission for the study of fatal outcomes (as an expert), work in medical control commissions for the analysis of fatal cases (as an expert), examination of medical histories, etc.

Employees of clinical departments are members of the formulary commission of the Ministry of Health of the Republic of Kazakhstan, members of working groups of headquarters, permanent commissions under the Regional Health Department, and are also chairmen of 5 professional associations of the Karaganda region: NGO "Karaganda Association of Pediatricians and Pediatric Specialists", NGO "Karaganda Association of Therapists and Therapeutic Specialists", NGO "Union of Independent Experts of KSMU", NGO "Surgical Association of Karaganda region", NGO "Association of traumatologists-orthopedists of Karaganda region".

### Monitoring the implementation of treatment work of teaching staff of clinical departments

No	Indicators	2020	2021
1.	Concilium	2014	2017
2.	Number of patients in care	23142	23150
3.	Number of diagnostic and advisory services	31303	31408
4.	Number of prenatal consultations	4906	4910
5.	Outpatient care	56206	56210
6.	Number of night shifts	1645	1648
7.	Number of operations	5573	5580
8.	Air ambulance visits	41	45
9.	Independent expertise: in Karaganda/ on the road	171/98	173/101
10.	Medical records were examined	4057	4061
11.	Number of CPDT approved	5	7

On the basis of the Occupational Health Clinic of the "MUK" NCJSC, from 03/19/2021 to 09/04/2021, an infectious hospital with 150 beds, including 6 intensive care beds, was deployed (order of the Health Department of the Karaganda region No. 236 o dated 03/17/2021). The staff consisted of 69 university employees. 1150 patients were treated.

The university staff provided analytical, methodological and expert assistance:

- Assistance in reducing maternal mortality (on the road);

- Work in the commissions of the Ministry of Health of the Republic of Kazakhstan on the examination of fatal cases, on complaints – an examination was carried out with a visit to Almaty;
- 33 examinations of maternal deaths have been prepared, including from COVID-19 (Kyzylorda – 4, Almaty and Almaty region – 15);
- As part of the working groups of the Department of the Committee of Medical and Pharmaceutical Control of the Ministry of Health of the Republic of Kazakhstan in the Karaganda region for unscheduled inspections on the appeals of individuals and legal entities – 32 requests.
- Teaching staff of the University are part of 3 multidisciplinary groups of the Health Department of the Karaganda region to assist patients with COVID-19. 15 consultations were held for severe patients, including in the Intensive Care Unit, 10 consultations for pregnant women, 10 Commissions for the study of fatal outcomes.
- Teaching staff of clinical departments were part of the working groups on the development of clinical protocols:
  - Diagnosis and treatment of coronavirus infection in adults
  - Diagnosis and treatment of coronavirus infection in pregnant women
  - The second stage (continued) of medical rehabilitation "Community-acquired pneumonia, including covid-19-pneumonia (adults)
  - The third stage (late) of medical rehabilitation. "Community-acquired pneumonia, including COVID-19 pneumonia" (adults)
  - Diagnosis and treatment of "The condition after COVID-19 (postcovid syndrome) in adults"

In addition, teaching staff of clinical departments participated in the development of proposals for 12 regulatory legal acts:

- On amendments to the Resolution of the Government of the Republic of Kazakhstan dated June 20, 2019 No. 421 "On approval of the list of medical care in the system of compulsory social health insurance";
- "On some issues of financial support for employees of healthcare organizations involved in anti-epidemic measures in the fight against the COVID-19 coronavirus";
- On amendments to the Order of the Minister of Health and Social Development of the Republic of Kazakhstan dated January 30, 2015 No. 44 "On approval of the Rules of medical and social expertise";
- Draft Order of the Minister of Health of the Republic of Kazakhstan "On Amendments and Additions to the Order of the Minister of Health and Social Development of the Republic of Kazakhstan dated May 18, 2015 No. 360 "On approval of the Rules for lifetime voluntary donation of tissues (parts of tissue) and (or) organs (parts of organs) after death for the purpose of transplantation";
- Standard of organization of medical care for HIV infection in the Republic of Kazakhstan;
- Proposals for the project from SUE "Cardiology": On the approval of the Standard for the organization of cardiological and cardiac surgical care in the Republic of Kazakhstan;
- Sanitary Rules "Sanitary and epidemiological requirements for the organization and conduct of sanitary and anti-epidemic, sanitary and preventive measures to prevent infections associated with the provision of medical care";
- Proposals on the draft order of the Ministry of Health of the Republic of Kazakhstan "On approval of the standard of providing neurosurgical care to the population of the Republic of Kazakhstan";
- On the approval of the Standard for the organization of perinatal ultrasound screening in the Republic of Kazakhstan;
- Regulations on the activities of the Republican Coordination Center "Integrated Management of childhood diseases\Universal progressive model of patronage supervision" in the Republic of Kazakhstan, regional centers;
- On approval of the instructions on the implementation of a pilot project for neonatal selective screening for hereditary metabolic diseases by tandem mass spectrometry in the Republic of Kazakhstan in a pilot mode;
- On invalidation of the Order of the Minister of Health of the Republic of Kazakhstan dated November 19, 2009 No. 753 "On approval of the Rules for training persons without medical education (paramedics) to provide pre-medical medical care".

### Medical University Clinic

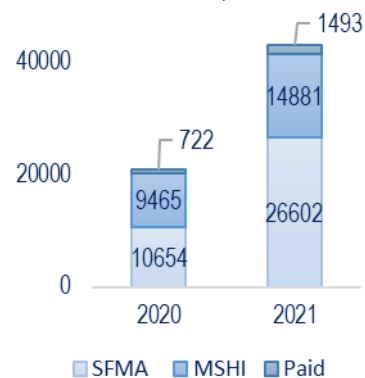
The clinic of the Medical University provides inpatient, inpatient replacement and consultative diagnostic assistance to the adult population of the region at the level of national and international standards within the statutory free medical assistance and mandatory social health insurance.

Types of medical care:

- Inpatient and inpatient replacement care within the framework of SFMA and MSHI: surgical profile, therapeutic profile,
- Emergency trauma care,
- Consulting and diagnostic assistance,
- Pathoanatomic autopsy (autopsy).

The proportion of surgical interventions using endovideosurgical technologies, %	<b>87</b>
Average level of patient satisfaction, %	<b>99</b>
Justified complaints, units.	<b>0</b>

Number of services rendered, units.



The clinic of the Medical University is accredited for a period of 3 years in the field of healthcare for compliance with the accreditation standards for medical organizations providing inpatient care with the assignment of the first category.

A multispiral CT scanner of the latest generation Canon Aquilion PRIME SP was purchased by Chevron as part of a large-scale program initiated by the Ministry of Health of the Republic of Kazakhstan to provide humanitarian assistance to Kazakhstan in the fight against the pandemic.

Every year there is an increase in the increase in funding for all types of medical care. In 2021, compared with 2020, the percentage of increase in financing under the SFMA and MSHI amounted to 55% and revenue from paid services increased significantly.

The clinic provides inpatient, inpatient substituting services within the framework of SFMA and MSHI in the surgical profile (general surgery, pediatric surgery, urology for adults and children, gynecology, thoracic surgery, otorhinolaryngology, maxillofacial surgery for adults and children), as well as in the therapeutic profile (general therapy, neurology, cardiology). In 2021, a total of 3386 patients were treated, of which 3027 cases were treated in the round-the-clock hospital, 2394 surgical interventions were performed using the unique equipment of the clinic, which is 102% of surgical activity.

#### Information on cases of round-the-clock hospital according to the profile

Profile name	2020	2021
Surgical for adults	835	1047
Surgical for children	0	45
Otolaryngological profile for adults	249	506
Otolaryngological profile for children	1	6
Thoracic Surgery for Adults	32	23
Urological profile for adults	238	319
Urological profile for children	0	85
Maxillofacial surgery (dental) for adults	0	24
Maxillofacial surgery (dental) for children	0	6
Gynaecological profile for adults including abortion	117	307
General therapy	90	194
Cardiology for adults	164	272
Neurological for adults	144	193
Total 24-hour facility:	1870	3027
Day hospital	283	359
TOTAL	2153	3386

Also, compared to 2020, there is a positive increase in the number of treated patients in all profiles, with the exception of the thoracic profile.

Consultative and diagnostic assistance is provided by full-time narrow specialists, as well as teaching staff of the Medical University of Karaganda. Consulting services are carried out in two directions: surgical profile, therapeutic profile. Consulting and diagnostic assistance is provided in external directions according to the concluded co-execution agreements and on a contractual basis according to the approved price list of medical services.

There has been an increase in the number of advisory and diagnostic services provided, especially histological examination, as well as computer diagnostics in connection with the acquisition of a multispiral computed tomograph of the latest generation, compared with 2020.

In stationary activity in 2021, there is a positive dynamics of bed operation, bed turnover, significantly reduced bed downtime compared to 2020. The opening of emergency hospitalization by ambulance of patients in extremely serious condition led to an increase in the number of deaths.

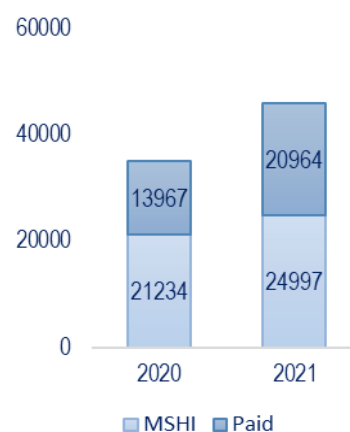
**Dental Clinic**

Types of medical care:

- Dental;
- Consultative and diagnostic assistance.

Average patient satisfaction, %	<b>99</b>
Justified complaints, units.	<b>0</b>

Number of services rendered, units.



**Occupational Health Clinic**

The Occupational Health Clinic of the Institute of Public Health and Occupational Health of the "MUK" NCJSC provides specialized medical care with the examination of the connection of diseases with the profession. Since 2019, the outpatient polyclinic service of the Medical University clinic has been part of the clinic.

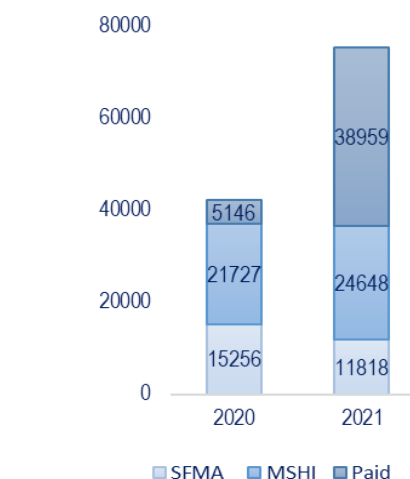
The clinic provides a guaranteed amount of free medical care and MSHI to citizens at the expense of budgetary funds and includes preventive, diagnostic and curative medical services that have the greatest proven effectiveness in accordance with the regulatory legal acts of the Republic of Kazakhstan. It also provides paid services to legal entities and individuals on the basis of a contract, a price list of paid services.

Types of medical care:

- outpatient care,
- consulting and diagnostic assistance,
- inpatient care
- inpatient replacement care.

Attached population, people	<b>3119</b>
Average level of patient satisfaction, %	<b>96</b>
Justified complaints, units.	<b>0</b>

Number of services rendered, units.



Primary health care in the clinic is provided to the attached population, while the age of the main population is 15-29 years (96-99%) – these are students of the "MUK" NCJSC and "KSTU" NCJSC, the rest of the attached population are employees of the "MUK" NCJSC aged 30-69 years (1-4%).

#### Structure of the attached population

	2020r.	2021r.
The total population attached to the RAP	3879	3119
men	1621	1375
women	2258	1744
Teens	145	40
Children	0	0
Number of adult population	3723	3079
Women of fertile age	2166	1735
Working	820	642

The number of advisory and diagnostic services provided to the population as part of outpatient care in 2021 increased by 14%, compared to 2020, funding increased by 22%.

The income from paid services for 2021 increased by 56% than in 2020 and the main part of the income was "Medical examination services of citizens when conscripted for military service."

In 2021, the occupational health clinic did not work at full capacity due to the opening of a dispensary, an infectious hospital on the basis of the clinic during periods of exacerbation of the epidemiological situation in the CVI, which led to a decrease in the average annual number of beds. In addition, the incomplete capacity of the clinic at the end of 2021 was due to the lack of funding for the inpatient program 067.

## International cooperation

The international activity of the "Medical University of Karaganda" NCJSC is aimed at expanding cooperation with universities and scientific organizations of the near and far abroad. Currently, 65 organizations of higher and postgraduate education from 29 countries are partners of the university. "MUK" NCJSC is a member of 7 international associations and consortium.

Cooperation with	
<b>65</b>	Organizations from
<b>29</b>	countries

During the reporting period, the following activities were carried out within the framework of cooperation with organizations of near and far abroad

Russian Federation	<p>115 students of the specialty "General Medicine", "Dentistry", "Pharmaceutical Production Technology" took part in the program of external academic mobility. They were trained at the Ryazan State Medical University named after Academician I.P. Pavlov; Kursk State Medical University and Bashkir State Medical University.</p> <p>The invited professors conducted lectures and practical classes for undergraduate students of the specialty "General Medicine", residents of the 1st and 2nd year of the specialty "Oncology (adult)", 1st year of the specialty "Pediatrics", 2nd year of the specialty "Biomedicine", 4th year of the specialty "Pharmaceutical Production Technology", 1, 2 year of the master's degree of the specialty "Pharmaceutical production Technology", 1st year of specialty "Pharmacy" (Bashkir State Medical University, Novosibirsk State University, Altai State Medical University, Kazan State Medical University, Tyumen State University).</p>
France	<p>Courses have been organized for students and employees of "MUK" NCJSC with the support of the French Alliance of Karaganda and the Embassies of France.</p> <p>An application has been submitted for the International Master's Program in Bioinformatics (University of Poitiers (France), School of Leadership in Life Sciences (France), Vilnius University (Lithuania)) within the framework of the program "Development of Joint Master's Programs of Erasmus Mundus".</p>
Turkey	<p>Master student of specialty «Biomedicine» was trained at Muş Alparslan University under the program Erasmus+ credit mobility.</p> <p>There was an exchange of teachers with Muş Alparslan University.</p>
Greece	<p>The doctoral student of the specialty «Public Health» was trained at the Aristotle University in Thessaloniki under the program Erasmus+ credit mobility.</p> <p>The exchange of teachers and employees with the Aristotle University in Thessaloniki on the program Erasmus+ credit mobility</p>
Romania	<p>There was an exchange of teachers and employees with Vasile Goldish Western University in Arad under the program Erasmus+ ICM.</p>
Portugal	<p>Professor of the University of Porto held lecture and practical sessions on discipline «Biostatistics» for students of «MUK» NCJSC.</p>
Finland	<p>The professor of the University of Applied Sciences Jyväskylä held practical classes in the discipline «Research in Management and Leadership in Nursing» for doctoral students of 1-3 courses «Nursing Science», «Public Health».</p>
Spain	<p>Doctoral student of specialty «Medicine» was trained at the University of Granada.</p>
Bulgaria	<p>Professor of Plovdiv University trained students of the 7th course of specialty «General medicine» on discipline «Diabetology for general practitioners».</p>
Hungary	<p>Professor of the University Debrecen conducted online training of students of the 4th course of specialty «Dentistry».</p>
New Zealand	<p>Professor of the University of Otago conducted online training for students of the 2nd course of specialty «General medicine» at the Department of Clinical Pharmacology and Evidence Medicine.</p>
Republic of Belarus	<p>The professor of the Belarusian Medical Academy of postgraduate education trained students of the 4th course of specialty «Dentistry».</p>



USA	The professor of the Central University of Michigan conducted online training in the discipline «Reading Skills and Critical Analysis of Publications» for doctoral students of the 2nd course «Medicine».
Lithuania	Professor of Vilnius University conducted online training in the disciplines «Methods of scientific research» and «Research in nursing education» of doctoral students of the 1st-2nd year, studying under the educational program «Nursing science» as part of the program to attract foreign specialists. Application for the International Master's Program in Bioinformatics (Poitiers University (France), Life Sciences Leadership School (France), Vilnius University (Lithuania)) in the framework of the program «Development of Joint Master Programs Erasmus Mundus».
Tajikistan	Outgoing academic mobility of 1 teacher to the Tajik Abuali ibn Sino State Medical University became the fourth year students of the Faculty of Medicine.

Academic mobility of students and research and teaching staff of "MUK" NCJSC is one of the important directions of the international activity of the university and contributes to improving the quality of education, the development of scientific research, as well as the internationalization of the university.

The University is a participant and coordinator of several Erasmus+ projects funded by the European Union within the framework of the Erasmus+ International Credit Mobility projects, as well as the Consortium of Universities to Increase the Potential of Higher Education Erasmus Capacity Building. To date, the University has signed 3 new interinstitutional agreements within the framework of Erasmus+ International Credit Mobility with Alexandru Ioan Cuza University of Iasi, Romania (2021-2023), Universitatea De Vest "Vasile Goldis", Romania (2021-2027), University of Crete, Greece (2021-2027).

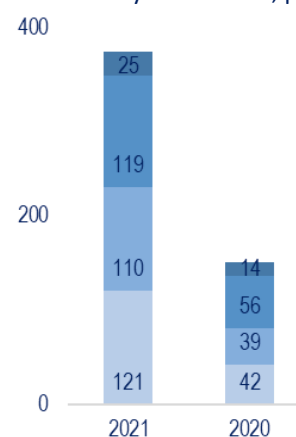
Within the framework of the project "Solidarity Fund for Innovative Projects" of the Ministry of Europe and Foreign Affairs of France, cooperation is being implemented in the field of training and advanced training of medical personnel through the scholarship program "Abai-Vern" and SSHN postdoctoral research scholarships for young Kazakhstani scientists. Within the framework of cooperation, the Embassy of France organized French language courses for 19 students, undergraduates, doctoral students and applicants of the "MUK" NCJSC.

"Medical University of Karaganda" NCJSC implements 5 projects to increase the potential of higher education within the framework of the Erasmus+ program:

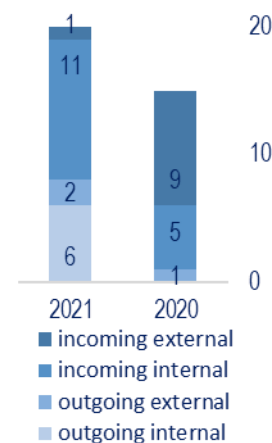
1. TRUNAK - Transition to university autonomy in Kazakhstan (2017- 2021);
2. SPRING - Setting peer review instruments and goals for medical (health) education (2019-2022);
3. HARMONEE – "Harmonization And mutual Recognition of Master programs in Occupational and Environmental health" (2020-2023);
4. AccelEd – "Accelerating Master and PhD level Nursing Education Development in the Higher Education System in Kazakhstan" (2020-2023);
5. FOR21 – "Fostering the doctor of the 21st century:

Percentage of students participating in academic mobility programs, %	<b>3,4</b>
Percentage of teaching staff participating in academic mobility programs, %	<b>3,3</b>
The share of invited foreign teachers in the total number of teaching staff, %	<b>1,8</b>

Academic mobility of students, people.



Academic mobility of teaching staff, people.



Education for patient-centered communication" (2020-2023).

12 applications were submitted for the 2022-2027 competition, 7 of them for Erasmus+ International Credit Mobility and 5 for improving the potential of higher education. As part of the development of joint Erasmus Mundus Master's programs, an application has been submitted for an International Master's Program in Bioinformatics (University of Poitiers (France), School of Leadership in Life Sciences (France), Vilnius University (Lithuania)).

## Youth policy and achievements of students

The youth policy in the "MUK" NCJSC is aimed at creating conditions for the development of active citizenship and creative potential of young citizens, interaction of students with public youth associations of state institutions of the city and region.

The university has 30 student clubs and creative associations. These are the Student Republic "Samruk", the Local Committee of the Kazakhstan Medical Students' Association "KazMSA", the Local Committee of the Republican movement "Alliance of Students of Kazakhstan", the Club of Initiative students (CIS), the student scientific society, the discussion club "Namys", the discussion club "Insight", the author's and poetic club "Zhyr Zhauhar", women's Akzhunis club, youth health center "Zhuldyz", Club of the cheerful and resourceful (Kazakh league) and (Russian league), club of young journalists "KMU Life", Student Support Service, volunteer organization "Next Generation", "StudMedvolunteer", the team "Enactus KMU", the student club "Sanaly Urpak", the circle "Entertainer", the Folk ensemble of oriental dances "Karakoz", the dance theater "Golden step", the circle of modern dance "New wave", dombra orchestra, vocals, choral singing, theater studio, fine arts circle, as well as support service students, student self-government committees of faculties and dormitories of the university.

Student achievements	
Intellectual activities	
<b>40</b>	prize places
<b>12</b>	winners of international Olympiads
<b>7</b>	international conference winners
<b>4</b>	winner of international competitions
Startups	
<b>2</b>	prize places
Creative activities	
<b>6</b>	prize places
Sporting activity	
<b>45</b>	prize places

Educational work was carried out in the following directions:

1. Formation and development of students' active citizenship, social responsibility,
2. Promotion of the ideas of the Patriotic Act "Mangilik El" and the program "Rukhani zhangyru" (about 50 events),
3. Development of scientific and innovative potential of students,
4. Development of aesthetic and moral qualities of the personality of the future specialist, the skill of working in a team,
5. Development of healthy lifestyle skills, education of personal qualities that contribute to the fulfillment of professional duty,
6. Development of socio-political qualities that make it possible to resist the ideas of terrorism and extremism,
7. Development of the student volunteer movement (more than 1000 participants),
8. Environmental education.

The total number of events held in 2021 increased by more than 2 times compared to 2020 and amounted to 371, including 111 events dedicated to the 30th anniversary of Independence of the Republic of Kazakhstan.

As part of the formation of an anti-corruption culture and academic integrity, organizational meetings, conferences and seminars, legal education and actions with a total coverage of more than 3 thousand participants were held in the reporting year.

Activists of the Sanaly Urpaq club won the regional essay contest on anti-corruption topics and the regional competition of anti-corruption projects. In addition, they took part in the republican meeting of student clubs "Sanaly Urpaq" and school clubs "Adal Urpaq".

## FINANCIAL RESULTS

### Structure of incomes of "MUK" NCJSC

*Thous.tenge*

№	Indicator name	2020 (fact)	2021 (planned)	2021 (fact)	deviation from 2020 (%)	deviation from plan (%)
<b>1</b>	<b>Income from educational activities</b>	<b>5 240 045,8</b>	<b>5 913 698,5</b>	<b>5 876 715,2</b>	<b>12,15</b>	<b>-0,63</b>
1.1	Income from educational activities under a state order under an agreement with the State Institution of the Ministry of Health of the Republic of Kazakhstan	2 119 449,50	1 898 835,40	1 897 375,20	-10,48	-0,08
1.2	Income from educational activities by state order under an agreement with the State Educational Institution of the Ministry of Education and Science of the Republic of Kazakhstan	284 361,10	383 124,80	383 393,20	34,83	0,07
1.3	Income from educational activities by state order under an agreement with local executive bodies	87 783,00	175 791,80	212 702,10	142,30	21,00
1.4	Income from retraining and advanced training of medical workers by state order under contracts with local executive bodies	60 183,70	0,00	0,00	-100,00	0,00
1.5	Income from educational activities on a paid basis	2 688 268,50	3 455 946,50	3 383 244,70	25,85	-2,10
<b>2</b>	<b>Income from medical services</b>	<b>1 160 809,8</b>	<b>1 915 086,4</b>	<b>1 987 349,0</b>	<b>71,2</b>	<b>3,77</b>
2.1	Income from state-ordered medical services under the SFMA	316 329,30	217 658,67	165 653,50	-47,63	-23,89
2.2	Income from medical services for paid services	150 152,90	211 103,22	226 833,00	51,07	7,45
2.3	Income from medical services for paid services h/c retraining and advanced training	50 718,30	30 907,20	46 348,10	-8,62	49,96
2.4	Income from medical services under the state order within the framework of the MSHI	490 472,30	622 891,03	698 068,90	42,33	12,07
2.5	Income from medical services under the state order within the framework of the CVI	153 137,00	832 526,28	850 445,50	455,35	2,15
<b>3</b>	<b>Income from scientific activities</b>	<b>381 723,3</b>	<b>296 950,54</b>	<b>312 403,8</b>	<b>-18,16</b>	<b>5,2</b>
3.1	Income from scientific activity by state order	252 559,00	184 931,30	184 138,30	-27,09	-0,43
3.2	Income from scientific activity on economic agreements	26 530,70	46 122,50	46 707,60	76,05	1,27

№	Indicator name	2020 (fact)	2021 (planned)	2021 (fact)	deviation from 2020 (%)	deviation from plan (%)
3.3	Income from scientific activities under international grants (World Bank)	56 439,40	11 229,10	11 229,10	-80,10	0,00
3.4	Income from scientific activities under international grants (Erasmus)	46 194,20	54 667,64	70 328,80	52,25	28,65
4	Income from other paid services (accommodation, catering, compensation com.services for rent)	171 021,10	211 096,80	208 566,40	21,95	-1,20
5	Income from remuneration	90 534,90	95 000,00	104 397,10	15,31	9,89
6	Foreign exchange gains	133 557,30	30 000,00	41 982,30	-68,57	39,94
7	Income from gratuitously received assets	81 454,40	364 622,83	365 547,70	348,78	0,25
8	Income from government subsidies (depreciation of fixed assets)	72 884,10	65 857,90	65 857,90	-9,64	0,00
9	Other income (from lawsuits, other deductions, guaranteed monetary contributions for public procurement, penalties, penalties under public procurement contracts, sum difference in currency exchange, library services)	43 882,20	17 965,70	19 886,40	-54,68	10,69
	<b>TOTAL</b>	<b>7 375 912,9</b>	<b>8 910 278,67</b>	<b>8 982 705,8</b>	<b>21,78</b>	<b>0,81</b>

The income of the Medical University of Karaganda in 2021 amounted to 8,982,705.8 thous.tg, which is 21.8% higher than in 2020. In 2021, the income from educational activities increased due to the training of medical personnel commissioned by local executive bodies. At the same time, no income was received for advanced training and retraining programs due to the absence of competitions under the 005 budget program.

The university's income from scientific activities in 2021 amounted to 381,723.30 thous.tg, which is 18.2% lower than in 2020. The reason for the decrease in income from scientific activities was the completion of most scientific projects in 2020, the absence of a new competition for projects under the Erasmus+ program.

In 2021, the university opened an infectious diseases hospital for the treatment of COVID-19 patients, which led to an increase in income from medical activities by 71.2%.

The transition from distance learning to the usual format contributed to an increase in income from paying for living in a dormitory.

One of the important events in the life of the university was the transfer of a CT scanner worth 365 547.70 thous.tg to the ownership on a gratuitous basis, as a result of which the income from gratuitously received assets increased by 348.8% compared to the previous year.

## Structure of expenses of "MUK" NCJSC

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№	Indicator name	2020 (fact)	2021 (planned)	2021 (fact)	deviation from 2020 (%)	deviation from plan (%)
1	Wage	3 934 737,50	5 145 804,97	4 902 698,50	24,60	-4,72
2	Wage deduction	381 991,00	491 109,94	456 510,20	19,51	-7,05
3	Material costs	310 485,30	407 465,19	421 910,80	35,89	3,55
4	Expenditure on taxes and other obligatory payments to the budget	10 180,70	19 164,40	23 651,53	132,32	23,41
5	Depreciation	684 227,30	1 154 783,45	990 112,90	44,71	-14,26
6	Travelling expenses	23 661,80	33 128,50	21 075,90	-10,93	-36,38
7	Communication costs	56 316,60	49 143,50	43 606,10	-22,57	-11,27
8	Training expenses	4 064,20	5 000,00	4 841,40	19,12	-3,17
9	Other expenses	1 478 723,00	1 216 309,70	1 426 490,27	-3,53	17,28
10	Security service	56 648,30	58 849,00	57 385,10	1,30	-2,49
11	Land lease costs	1 534,30	1 591,70	1 530,20	-0,27	-3,86
12	Municipal expenditure	202 108,70	277 658,06	287 836,50	42,42	3,67
13	Audit expenses	1 180,00	5 100,00	5 100,00	332,20	-
14	Bank services	5 893,60	6 253,00	7 139,40	21,14	14,18
15	Compulsory insurance	3 576,80	3 437,60	3 850,20	7,64	12,00
16	Repair expenses	218 333,10	32 978,00	14 978,90	-93,14	-54,58
	<b>TOTAL</b>	<b>7 373 662,2</b>	<b>8 907 777,01</b>	<b>8 668 717,9</b>	<b>17,56</b>	<b>-2,68</b>

In the structure of expenses, the salary fund is 56.6%. In 2021, the salaries of the teaching staff were increased, which led to an increase in the salary fund by 24.6% compared to 2020. In 2021, the project funded by the European Commission under the Erasmus+ program was completed, which required additional audit costs and led to an increase in audit costs by more than 3 times compared to 2020.

In 2021, expenses for the repair of buildings were reduced by 93.1% and the amount of expenses under this item amounted to 14,978.9 thous.tg compared to the amount of 218,333.1 thous.tg used for repairs in 2020.

The profit in 2021 amounted to 313,987,9 thous.tg, which was formed at the expense of gratuitously received assets in the form of a CT scanner.

## BOARD ACTIVITY REPORT

The Management Board performs its functions in accordance with the legislation of the Republic of Kazakhstan, the Charter of the Company, «Regulation on the Management Board of «MUK» NCJSC, approved by the Board of Directors decision of 28.04.2019 (Decision 4) «Regulations on remuneration and rewarding of members of the Board of «Medical University «Karaganda» NCJSC, approved by the decision of the Board of Directors from 24.08.2019 (Decision 4) with amendments and additions from 18.11.2019 (Protocol 6) from 2.03.2020 (Protocol 11) and other internal documents.

In accordance with paragraph 18) of Article 36, paragraph 1 of the Law of the Republic of Kazakhstan «On Joint-Stock Companies», Article 88 of the Charter appointment (election) of the Board Chairman - Rector is in the competence of the Sole Shareholder.

Order of the Minister of Health of 28.05.2020 20 zh/v «About appointment» to the position of the Board Chairman - Rector of the Company was appointed Dosmagambetova R.S., the term of office 1 year.

In accordance with paragraph 8) of paragraph 2 of Article 53 of the Law of the Republic of Kazakhstan «On joint-stock companies», subparagraph 5) of Article 66 of the Charter, decisions of the Board of Directors from 26.05.2020 (Protocol 13), dated 30.09.2020 (Protocol 20) The Board was composed of five members: the Board Chairman, the Rector, and four members of the Board, with a term of three years.

The members of the Board of the Company were elected:

1. Anar Akyzbekovna Turmukhambetova - Vice-Rector for Strategic Development and Science;
2. Bakhyt Nurgaliyevna Kosherova - Vice-rector for clinical work;
3. Victor Petrovich Riklefs - Vice-Rector for academic work;
4. Zakir Zakaryanovich Bekturganov - Managing Director.

Order of the Minister of Health of 28.05.2021 68 zh/ v terminated the powers of the Board Chairman - Rector R.S. Dosmagambetova in connection with the expiration of the term of the contract.

By order of the Ministry of Health of the Republic of Kazakhstan 70 zh/v from 03.06.2021 the functions of the Board Chairman - Rector are entrusted to the vice-rector for strategic development and science – A.A. Turmukhambetova.

As part of the Company's operational day-to-day activities, 34 meetings of the Management Board were held in person during the reporting period. Meetings in absentia were not held.

On average, meetings were held at intervals of 3-4 meetings per month.

Participation of Board members in meetings (number of meetings)	
R.S. Dosmagambetova	16
Z.Z. Bekturganov	31
A.A. Turmukhambetova	34
B.N. Kosherova	31
V.P. Riklefs	32

The most important issues considered by the Management Board during the reporting period:

- Approval of internal regulatory documents of "MUK" NCJSC, amendments and additions.
- Adjustment of the development plan in accordance with the legislation.
- Approval of the Public Procurement Plan for Goods, Works and Services for 2021.
- Approval of the Corrective Action Plan on the recommendations of the audit of the Internal Audit Department of the Ministry of Health of the Republic of Kazakhstan in November 2020.
- Selection of an accreditation body to conduct specialized accreditation of educational programs.
- Preliminary approval of applicants for transfer to vacant educational grants.
- Approval of the price list for educational services and accommodation in dormitories of "MUK" NCJSC.
- The question of the organization of the educational process in the 2021-2022 academic year.
- Awarding of Rector's grants for residency training.
- Participation in the tender organized by the local executive body for the transfer of the object to trust management.
- Approval of the list of objects for transfer to the property lease of "MUK" NCJSC.
- Approval of the staffing table of "MUK" NCJSC.
- Approval of the draft structure of the "MUK" NCJSC.
- Write-off of fixed assets from the balance of "MUK" NCJSC.
- Approval of the Operational Plan of "MUK" NCJSC.

- Approval of the Action Plan for the implementation of the Risk Management System.
- Approval of key performance indicators for employees of the Occupational Health Clinic, the Medical University Clinic and the Dental Clinic for 2021.
- Approval of key performance indicators for employees of departments, schools and international medical faculty, Centers for the 2021-2022 academic year.
- Approval of the key performance indicators of the members of the Management Board for 2021 and submission of the issue to the Board of Directors for consideration.
- Preliminary review of the Annual Financial Statements for 2020.
- The issue of placing temporarily available funds.
- Awarding of employees of "MUK" NCJSC.
- Increase of official salaries of employees of "MUK" NCJSC.
- Opening of an infectious diseases hospital.

In accordance with subparagraph 8) of paragraph 2 of Article 53 of the Law of the Republic of Kazakhstan "On Joint Stock Companies", subparagraph 6) of Article 66 of the Charter, the competence of the Board of Directors includes the issue of determining the size of official salaries and conditions of remuneration and bonuses of the Board Chairman – Rector and members of the Management Board.

The terms of remuneration of members of the Management Board are provided for by the "Regulations on remuneration and bonuses of members of the Management Board of the "Medical University of Karaganda" NCJSC, approved by the decision of the Board of Directors of 24.08.2019 (Decision No. 4), with amendments and additions dated 18.11.2019 (Protocol No. 6), dated 2.03.2020 (Protocol No. 11).

The remuneration of the head and members of the Management Board consists of a permanent (official salary) and a variable part (an annual bonus based on the results of achieving efficiency and 2 bonuses per year for holidays in the amount of no more than 10 MCI).

The amount of the annual bonus is determined on the basis of an individual approach to evaluating the activities of each member of the Company's Management Board and is paid based on the results of the financial year.

Members of the Management Board of the Company in order to increase labor motivation, within the framework of the wage fund, bonuses are paid in a fixed amount – 10 MCI by the Day of Medical Workers and Independence Day of the Republic of Kazakhstan.

Bonuses are paid to the members of the Management Board of the Company on the basis of a decision of the Board of Directors.

In accordance with the Decisions of the Board of Directors dated 05/26/2020 (Minutes No. 13), dated 06/19/2020. (Protocol No. 14) the official salaries of the Board members are set at 800,000 tenge per month, the official salary of the Board Chairman – Rector is 1,000,000 tenge per month.

Based on the results of the evaluation of the activities of executives for 2020 by the decision of the Board of Directors dated 26.05.2021 (Minutes No. 29), dated 24.06.2021 (Decision No. 30) The Board of Directors approved the maps of achievement of key performance indicators with actual values and decided to pay an annual bonus to the members of the Management Board for 2020 in the amount of 13,619,501 tenge.

### KPI maps of Board members with actual values for 2021

#### Board Chairman – Rector

No	Name of KPI	Unit of measure	Weight (%)	Threshold	Purpose	Challenge	Fact	Performance	Final performance
Corporate KPI (Performance 111.25%)									
1.1	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the	%	40	96	98	100	98	100,0	40



	next level of study in the first year after graduation								
1.2	Average citation of scientific articles published in international ranking journals indexed by Web of Science or Scopus	%	30	1,12	1,2	1,3	1,89	125,0	37,5
1.3	Share of foreign students in total enrollment in bachelor's degree programs	%	30	18	19	21	20	112,5	33,75
Functional KPI (Performance 116.5%)									
2.1	Average patient satisfaction	%	25	85	90	99	98	122,2	30,55
2.2	Staff satisfaction	%	25	85	90	95	90	100,0	25
2.3	Staffing of scientific, pedagogical and medical staff	%	25	80	82	90	88	118,8	29,7
2.4	Level of turnover of scientific-pedagogical and medical personnel	%	25	15	14	12	12	125,0	31,25

## Vice-rector for Strategic Development and Science

№	Name of KPI	Unit of measure	Weight (%)	Threshold	Purpose	Challenge	Fact	Performance	Final performance
Corporate KPI (Performance 111.25%)									
1.1	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the next level of study in the first year after graduation	%	40	96	98	100	98	100,0	40
1.2	Average citation of scientific articles published in international ranking journals indexed by Web of Science or Scopus	%	30	1,12	1,2	1,3	1,89	125,0	37,5
1.3	Share of foreign students in total enrollment in bachelor's degree programs	%	30	18	19	21	20	112,5	33,75
Functional KPI (Performance 82,5%)									
2.1	Share of income from scientific activities in the general budget	%	20	5	5,2	6	3,5	0,0	0
2.2	Ratio of the number of scientific articles published in the last five years in the international rating journals indexed by Web of Science or Scopus, to the number of staff scientific and pedagogical workers	ratio	30	1:4	1:3	1:2	1:3	100,0	30
2.3	Number of international projects	units	20	5	6	7	6	100,0	20

2.4	Average index Hirsch scientific - pedagogical workers based on Web of Science or Scopus	index	30	0,39	0,44	0,5	0,46	108,3	32,49
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## Vice-rector for Academic Work

№	Name of KPI	Unit of measure	Weight (%)	Threshold	Purpose	Challenge	Fact	Performance	Final performance
<b>Corporate KPI (Performance 110,6%)</b>									
1.1	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the next level of study in the first year after graduation	%	40	96	98	100	98	100,0	40
1.2	Average citation of scientific articles published in international ranking journals indexed by Web of Science or Scopus	%	25	1,12	1,2	1,3	1,89	125,0	31,25
1.3	Share of foreign students in total enrollment in bachelor's degree programs	%	35	18	19	21	20	112,5	39,375
<b>Functional KPI (Performance 118,75%)</b>									
2.1	Percentage of interns who passed the independent examination on the first occasion	%	25	95	98	100	100	125,0	31,25
2.2	Percentage of students participating in academic mobility programs	%	25	2,5	2,7	3,3	3,4	125,0	31,25
2.3	Percentage of teaching staff participating in academic mobility programs	%	25	2,2	2,5	2,7	3,3	125,0	31,25
2.4	Number of education programs developed with strategic partners	unit	25	5	6	7	6	100,0	25

## Vice-Rector for Clinical Work

№	Name of KPI	Unit of measure	Weight (%)	Threshold	Purpose	Challenge	Fact	Performance	Final performance
<b>Corporate KPI (Performance 111,25%)</b>									
1.1	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the next level of study in the first year after graduation	%	40	96	98	100	98	100,0	40
1.2	Average citation of scientific articles published in international	%	30	1,12	1,2	1,3	1,89	125,0	37,5

	ranking journals indexed by Web of Science or Scopus								
1.3	Share of foreign students in total enrollment in bachelor's degree programs	%	30	18	19	21	20	112,5	33,75
Functional KPI (Performance 106,4%)									
2.1	Proportion of substantiated complaints to total complaints	%	20	2	0	0	0	100,0	20
2.2	The share of teaching staff of clinical departments working within the framework of SFMA and MSHI	%	20	70	75	82	77	107,1	21,42
2.3	Number of clinical studies carried out at the university	unit	20	3	3	4	3	100,0	20
2.4	The proportion of surgical interventions using endovideosurgical technologies	%	20	80	87	95	87	100,0	20
2.5	The proportion of residency graduates who successfully passed the independent examination the first time	%	20	95	98	100	100	125,0	25

## Managing Director

№	Name of KPI	Unit of measure	Weight (%)	Threshold	Purpose	Challenge	Fact	Performance	Final performance
Corporate KPI (Performance 111,25%)									
1.1	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the next level of study in the first year after graduation	%	40	96	98	100	98	100,0	40
1.2	Average citation of scientific articles published in international ranking journals indexed by Web of Science or Scopus	%	30	1,12	1,2	1,3	1,89	125,0	37,5
1.3	Share of foreign students in total enrollment in bachelor's degree programs	%	30	18	19	21	20	112,5	33,75
Functional KPI (Performance 100%)									
2.1	The share of teaching staff trained on the basis of leading foreign scientific organizations (scientific institutes)	%	20	9	10	11	10	100,0	20
2.2	The share of invited foreign teachers in the total number of teaching staff	%	20	1,6	1,8	2	1,8	100,0	20
2.3	Percentage of teaching staff under 45 years of age who speak English (TOEFL certificates –	%	30	40	42	44	42	100,0	30

	525, IELTS – 5.5, National Testing Center – 75, diploma of academic degree in universities abroad)								
2.4	The ratio of the average monthly salary for 1 doctor's rate to the average monthly nominal salary in the economy of the region	ratio	30	1,3	1,4	1,5	1,4	100,0	30

## GOALS AND PLANS FOR THE FUTURE

Target indicators of the Development Program and Development Plan of "MUK" NCJSC for 2019-2023

No	Indicator name	Unit of measure	Plan 2022
<b>Strategic direction 1. Leadership in research</b>			
1	Average index of Hirsch scientific and pedagogical workers based on the Web of Science or Scopus	Index	0,48
2	The ratio of the number of articles published in the last five years in international rating journals indexed by Web of Science or Scopus to the number of staff scientific and pedagogical workers	Ratio	1:3
<b>Task 1.1 Integration of Education and Science</b>			
3	Average citation of scientific articles published in international ranking journals indexed by Web of Science or Scopus	Unit	1,9
4	Number of education programs developed with strategic partners	Unit	7
<b>Task 1.2 Development of Science and Innovation Infrastructure of the University</b>			
5	Total number of research projects	Unit	30
6	Number of Kazakh patents obtained	Unit	5
7	Number of international patents obtained	Unit	1
8	Number of research projects in the Shared Laboratory	Unit	7
9	Number of projects to commercialize the results of scientific and (or) scientific and technical activities	Unit	2
10	Number of start-ups created on the basis of projects of the University and its organizations	Unit	2
<b>Task 1.3 Professional Development of Teaching Staff</b>			
11	Share of professors involved in research	%	40
12	Number of post-doctoral students	Unit	3
13	Share of professors and teaching staff trained on the basis of leading foreign scientific organizations (scientific institutes)	%	15
<b>Task 1.4 Expanding the Partnership and International Recognition of the University</b>			
14	Number of international projects	Unit	6
15	The position of the university in the ranking of the best universities by QS (by Subject)	Position in the ranking	500+
<b>Strategic direction 2. Excellence in education and student life</b>			
16	Share of graduates of higher education institutions, trained on the state educational order, employed or enrolled on the next level of study in the first year after graduation	%	97
<b>Task 2.1 Development of Educational Programs Demanded by Society in Accordance with International Quality Standards</b>			
17	Percentage of residency graduates who passed the independent examination on the first occasion	%	95
18	Share of foreign students in total enrollment in undergraduate programs	%	21
19	Number of supplementary education programs included in the catalogue of educational programs	Unit	7
<b>Task 2.2 Improving the quality of services</b>			
20	Satisfaction with the quality of services provided (meals for students and employees)	%	80
21	Satisfaction with service delivery (operating lease)	%	80

<b>Strategic direction 3. Supporting the health system in promoting and maintaining health</b>			
22	Proportion of surgical interventions using endovideosurgical technologies	%	88
<b>Task 3.1 Compliance of quality and safety of medical services with international standards</b>			
23	Average patient satisfaction	%	80
24	Rate of justified requests for quality of health services	Unit, no more than	2
25	Percentage of deaths in scheduled hospitalization	%	0,1
<b>Task 3.2 Effective Development of the Trinity of Education, Science and Practice</b>			
26	Share of teaching staff of clinical departments working within the framework of SFMA and MSHI	%	77

Events:

- Increasing the publication activity of research and teaching staff in high-ranking journals: approval of the plan for the publication of articles in high-ranking journals for 2022-2024, inclusion in the university development plan of expenses for the publication of articles in high-ranking journals, conducting training activities to improve the quality of publications.
- Increase of the university's income from scientific activities: approval of priority directions of scientific research for 2022-2026, organization of preparation of projects for financing scientific research from domestic and foreign sources on a permanent basis,
- Assistance to young scientists in participating in competitions for grant funding of postdoctoral studies.
- Increasing the activity of the university's participation in competitions for funding from international funds: identifying priority areas of international projects, approving the application preparation plan and identifying potential partners, submitting applications for participation in internationally funded programs.
- Approval of the Internationalization Strategy, which includes a model of strategic partnership with foreign universities and a mechanism for implementing joint educational programs.
- Further development of digitalization of the educational process
- Further development of the risk management and data analysis system for making managerial decisions on the educational process
- Implementation of integrated continuing education in the educational programs "General Medicine", "Pediatrics", "Dentistry"
- Improving the mechanisms of internal autonomy of schools and faculties for the management of educational programs with the effective involvement of teachers and students in decision-making
- Development of an effective system of providing the educational process with resources (clinical bases, center for simulation and educational technologies, electronic educational resources)
- Improvement of methods of final control, "alignment" with the results of training, the content of the EP and the criteria of the League of Academic Integrity
- Improvement of mechanisms for selecting and supporting students, assistance in planning their career and employment
- Pilot implementation of an integrated GPA to take into account the academic, scientific and social competencies of students
- Further improvement of the mechanisms of student-centered learning, flexibility and openness of the learning trajectory focused on practice and scientific research.