

Accreditation Council of the  
Eurasian Center for Accreditation  
and Quality Assurance in  
Higher Education and Health Care  
June 16, 2023

**REPORT  
OF THE EXTERNAL EXPERT COMMITTEE  
FOLLOWING THE EVALUATION OF  
8D07201 - INDUSTRIAL PHARMACEUTICAL TECHNOLOGY  
PHD DOCTORAL EDUCATIONAL PROGRAM  
OF KARAGANDA MEDICAL UNIVERSITY  
NON-COMMERCIAL JOINT-STOCK COMPANY  
FOR COMPLIANCE WITH ACCREDITATION STANDARDS FOR PHD  
DOCTORAL EDUCATIONAL PROGRAMS  
IN HEALTH CARE**

**period of external expert evaluation: May 22-26, 2023**

**Karaganda, 2023**

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## LIST OF DESIGNATIONS AND ABBREVIATIONS

| <b>Abbreviation</b> | <b>Designation</b>                                                                          |
|---------------------|---------------------------------------------------------------------------------------------|
| AIDS                | Automated Information Data System                                                           |
| AMP                 | Administrative and managerial personnel                                                     |
| HEI                 | higher educational institution                                                              |
| EEC                 | external expert committee                                                                   |
| SCES                | State Compulsory Education Standard                                                         |
| DLT                 | distant learning technology                                                                 |
| M.D.                | Doctor of Medicine                                                                          |
| ECAQA               | Eurasian Centre for Accreditation and Quality Assurance in Higher Education and Health Care |
| IT                  | information technology                                                                      |
| SME                 | State Municipal Enterprise                                                                  |
| Ph.D.               | Doctorate Degree in Medicine                                                                |
| MH RK               | Ministry of Health of the Republic of Kazakhstan                                            |
| MES RK              | Ministry of Education and Science of the Republic of Kazakhstan                             |
| MTB                 | material and technical base                                                                 |
| NJSC                | Non-profit joint-stock company                                                              |
| NAS RK              | National Academy of Sciences of the Republic of Kazakhstan                                  |
| KMU NJSC            | Karaganda Medical University Non-profit Joint-Stock Company                                 |
| RW                  | Research work                                                                               |
| DSRW                | Doctoral Student Research Work                                                              |
| DSERW               | Doctoral student's experimental and research work                                           |
| L&R                 | laws and regulations                                                                        |
| STP                 | science and technology programs                                                             |
| EP                  | educational program                                                                         |
| HETP                | Higher-Education Teaching Personnel                                                         |
| RK                  | Republic of Kazakhstan                                                                      |
| MM                  | mass media                                                                                  |
| PhD                 | Doctor of Philosophy                                                                        |

## LIST OF SYMBOLS AND ABBREVIATIONS

### 1. Composition of the External Expert Committee

In accordance with ECAQA Order No. 15 dated May 05, 2023, an External Expert Committee (hereinafter - EEC) has been formed to conduct an external evaluation of 8D07201 – “Industrial Pharmaceutical Technology” PhD doctoral educational program in the period of May 24-26, 2023, with the following composition:

| No. | Status as a member of the EEC | Full name                      | Academic degree, academic title, position, place of work/place of study, course, specialty                                                                                                                                                                                                                                                                                                                                                                                     |
|-----|-------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Chairman                      | Kudabaeva Khatimya Ilyasovna   | Candidate of Medical Sciences, Professor of the Department of Internal Diseases No. 1 of the West Kazakhstan Medical University named after Marat Ospanov NJSC                                                                                                                                                                                                                                                                                                                 |
| 2   | Foreign expert                | Ryzhkin Sergey Alexandrovich   | MD, Head of the Department of Radiotherapy and Radiology named after Academician A.S. Pavlov, Head of the Department of Additional Professional Education of the Russian Medical Academy of Continuous Professional Development (Moscow), Scientific Secretary of the Department of Medical and Biological Sciences of the Academy of Sciences of the Republic of Tatarstan, accredited expert of the Federal Service for Supervision of Education and Science (Rosobrnadzor). |
| 3   | Foreign expert                | Afrikyan Shushanik Georgievna  | PhD in Pharmacy/Candidate of Pharmaceutical Sciences, Associate Professor of the Department of Pharmacy, Head of the Department of Organization of Computer Examinations of Yerevan State Medical University named after M. Heratsi, Republic of Armenia                                                                                                                                                                                                                       |
| 4   | Academic expert               | Urazova Saltanat Nurgozhayevna | MD, Head of the Department of Family Medicine No. 3 of the Astana Medical University NJSC                                                                                                                                                                                                                                                                                                                                                                                      |
| 5   | Academic expert               | Shabdarbayeva Daria Muratovna  | MD, Professor, pathologist of the highest category, medical examiner of the highest category, head of the department of the pathological anatomy and forensic medicine named after Professor Y.V. Pruglo of the Semey Medical University NJSC                                                                                                                                                                                                                                  |
| 6   | Academic expert               | Ramazanov Raigul Mukhanbetovna | MD, Professor of the Department of internal diseases in Kazakh National Medical University named after S.D. Asfendiyarov NJSC                                                                                                                                                                                                                                                                                                                                                  |
| 7   | Academic expert               | Zhumalina Akmaral Kanashevna   | MD, Professor, Head of the Department of Pediatric Diseases with Neonatology of the West Kazakhstan Medical University named after Marat Ospanov NJSC                                                                                                                                                                                                                                                                                                                          |
| 8   | Academic expert               | Tuleutaeva Raykhan             | MD, Ph.D., Head of the Department of                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|    |                                     |                                   |                                                                                                                                                                                     |
|----|-------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                     | Yesenzhanovna                     | Pharmacology named after MD, Prof. M.N.Musina in Semey Medical University NJSC                                                                                                      |
| 9  | Academic expert                     | Baigozhina Zaure Alpanovna        | PhD, Dean of the School of Nursing in Astana Medical University NJSC, Member of the Association for Medical Education in Europe (Association for Medical Education in Europe/ AMEE) |
| 10 | Academic expert                     | Ramazanov Sholpan Khamzaevna      | MD, PhD, Acting Associate Professor of the department of clinical disciplines of Al-Farabi Kazakh National University                                                               |
| 11 | Academic expert                     | Yeralieva Bibikhan Abdalievna     | Candidate of Medical Sciences, assistant of the Department clinical pharmacology Kazakh National Medical University named after S.D. Asfendiyarov NJSC                              |
| 12 | Academic expert                     | Isposunova Gulnara Akhmetkazyevna | urologist of the highest qualification category, assistant of the Department of Urology Kazakh National Medical University named after S.D. Asfendiyarov NJSC                       |
| 13 | Academic expert                     | Doshakanova Asel Baidauletovna    | PhD, Head of the Department of Postgraduate Education Kazakh Order "Badge of Honor" Scientific Research Institute of Eye Diseases LLP                                               |
| 14 | Academic expert                     | Dosanova Asem Kalelovna           | PhD, Associate Professor of the Department of Pediatric Surgery of the Astana Medical University NJSC                                                                               |
| 15 | Representative of employers         | Daniyarova Bayan Lashinovna       | Deputy Director for Strategic Development Regional Clinical Hospital SME of the Health Department of the Karaganda region;                                                          |
| 16 | Representative of doctoral students | Orazbay Aknur Daurenkyzy          | first-year doctoral student in specialty "Biology" in Karaganda University named after E.A. Buketov NJSC                                                                            |
| 17 | Representative of doctoral students | Kurak Aidan                       | resident of the first year of study in the specialty "Endocrinology adult, children" in Astana Medical University NJSC                                                              |

The observer from ECAQA is Umarova Makpal Aldibekovna, Head of the Accreditation and Monitoring Department.

The work of the EEC was carried out in accordance with the Regulation on the EEC (Order of the General Director of the ECAQA No. 4 dated February 13, 2017).

The EEC report contains the evaluation of the PhD educational program in specialty 8D07201 – “Industrial Pharmaceutical Technology” for compliance with Accreditation Standards for PhD educational programs in health care and conclusions (hereinafter - Accreditation Standards), EEC recommendations for further improvement of approaches and conditions for the implementation of the above doctoral studies and recommendations for the ECAQA Accreditation Council.

## 2. General Part of the Final Report

## 2.1 Presentation of the PhD Doctoral Educational Program in the Specialty 8D07201 – “Industrial Pharmaceutical Technology”

|                                                                                                                   |                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name of organization, legal ownership form, BIN                                                                   | «Қарағанды медицина университеті» коммерциялық емес акционерлік қоғамы<br>Некоммерческое акционерное общество «Медицинский университет Караганды»<br>“Karaganda Medical University” Non-Commercial Joint-Stock Company |
| Management authority                                                                                              | Ministry of Health Care of the Republic of Kazakhstan                                                                                                                                                                  |
| Full name of the first executive                                                                                  | Turmukhambetova Anar Akyzbekovna                                                                                                                                                                                       |
| Location and contact details                                                                                      | 100008, 40 Gogol str., Karaganda city, Karaganda region, Republic of Kazakhstan                                                                                                                                        |
| State license for educational activity in PhD doctoral studies (date, number)                                     | No. KZ32LAA00016018 dated May 06, 2019                                                                                                                                                                                 |
| Year of the accredited educational program (EP) implementation                                                    | 2013                                                                                                                                                                                                                   |
| Length of schooling                                                                                               | 3                                                                                                                                                                                                                      |
| Total number of graduates since EP implementation                                                                 | 7                                                                                                                                                                                                                      |
| Number of doctoral students at the EP from the beginning of the current year                                      | 1                                                                                                                                                                                                                      |
| Full-time teachers/ part-time teachers involved in EP implementation, including % of academic degree holders rate | 4/0, 100%                                                                                                                                                                                                              |
| Link to the University website, containing information about the educational program                              | <a href="https://www.qmu.edu.kz/ru/contents/view/1277">https://www.qmu.edu.kz/ru/contents/view/1277</a>                                                                                                                |

KMU NJSC is one of the leading universities of the country providing postgraduate training of specialists in the field of “Industrial Pharmaceutical Technology” through bachelor's, master's and doctoral studies, which is carried out on the basis of the state license.

Having obtained the right to conduct educational activities on PhD doctoral programs, the KMU NJSC in 2012 made the first enrollment of doctoral students in 8D07201 “Industrial Pharmaceutical Technology” educational program (EP) (at that time 6D074800 “Industrial Pharmaceutical Technology”). There was 1 doctoral student enrolled in the 2014-15 academic year, 2 in 2015-16, 1 in 2016-17, and 6 in 2017-18, 1 in 2019-2020, 1 in 2020-2021, 1 in 2021-2021, 0 in 2021-2022, and 3 doctoral students in 2022-2023.

The implementation of 8D07201 “Industrial Pharmaceutical Technology” program is carried out on the basis of a license to engage in educational activities in an educational environment that meets the regulatory requirements and needs of personal development, and the needs of modern health care. The 8D07201 “Industrial Pharmaceutical Technology» program is designed in accordance with the principles of fundamental training, combining the educational process and scientific research.

Every year at the end of the academic year, doctoral students undergo an academic evaluation for the fulfillment of the individual work plan. At the end of each academic period, the results of the research and development work are formalized by the doctoral student in the form of a short report. The final result of doctoral student's DSRW is a doctoral dissertation. Since the beginning of the educational program implementation, for 10 academic years in KSMU (2013-2023), a total of 21 doctoral students

have studied and/or continue to study in the doctoral program in the specialty “Industrial Pharmaceutical Technology”. The first graduation in the specialty of 6D074800 “Industrial Pharmaceutical Technology” PhD-doctoral studies took place in 2017 (Kishkentayeva A.S.), the defense took place in August 2019. The total number of enrolled in doctoral studies in this specialty - 25 doctoral students.

The EP is implemented in an educational environment that meets both the regulatory requirements and the needs of the doctoral student's personal development, as well as the needs of modern health care. The 8D07201 “Industrial Pharmaceutical Technology” program is based on the principles of fundamental training, combining the educational process and scientific research.

In order for PhD doctoral students to acquire the necessary knowledge and competencies, the KMU NJSC creates favorable conditions for the study of core and principal subjects. Development of skills and abilities of doctoral students of the 8D07201 “Industrial Pharmaceutical Technology” program takes place during professional internship and research work performance. The subdivisions of the University have good material and technical, scientific and technical, methodological bases, all necessary arrangements for experimental work during doctoral studies have been put in place.

All teachers who teach classes on 8D07201 “Industrial Pharmaceutical Technology” program, research advisors, and consultants of doctoral students have a doctoral or candidate degree, extensive experience in the field of education and science, involvement in the implementation of research programs and projects. So, for the last five years teachers and doctoral students of the 8D07201 “Industrial Pharmaceutical Technology” specialty participated in the implementation of 4 scientific and technical programs funded from the national budget (Ministry of Education and Science of the Republic of Kazakhstan, Ministry of Health Care of the Republic of Kazakhstan). There were 7 projects for 5 years.

The teachers who conduct classes in 8D07201 – “Industrial Pharmaceutical Technology” educational program and/or are research advisors of doctoral dissertations have a non-zero Hirsch index (Web of Science, Scopus, Google Scholar, and RSCI). For example, Doctor of Chemical Sciences, Professor, G.A. Atazhanova has a Hirsch index of 9, Doctor of Pharmaceutical Sciences, S.A. Ivashenko - 5, Doctor of Chemical Sciences, D.M. Khrustalev - 4.

According to the annual ratings of educational organizations in the field of health care, conducted by the Ministry of Health Care of the Republic of Kazakhstan, in 2018-2019, KMU NJSC took the second place in the performance of scientific and innovative activities.

Faculty and doctoral students in the 8D07201 “Industrial Pharmaceutical Technology” program completed an international grant in 2022: “Oxygen requirements and approaches to respiratory support in patients with COVID-19 in low- and middle-income countries: a WHO study”. Research advisor - candidate of chemical sciences Yedilbayeva T.T. (customer - World Health Organization).

Doctoral students of KMU NJSC during the reporting period did not participate in academic mobility programs. The University concluded a number of memorandums on cooperation in the field of health care, medical education and science with medical universities of Kazakhstan, universities of neighboring CIS countries (Ukraine, Uzbekistan, Tajikistan, Russian Federation, Moldova, Lithuania, Latvia, Kyrgyzstan, Georgia, Armenia, Belarus) and far abroad countries (Bulgaria, Great Britain, Hungary, Greece, Germany, Spain, Italy, India, Israel, Malaysia, Poland, USA, Taiwan, Thailand, Turkey, Finland, France, Croatia, Czech Republic, Sweden). Doctoral students of 8D07201 “Industrial Pharmaceutical Technology” presented the results of their dissertation research at international scientific forums and conferences in far and near abroad countries: 18th International Congress on Infectious Diseases, Buenos Aires, Argentina, 2018 (moderated poster presentation), IV (XII) International Botanical Conference of Young Scientists, St. Petersburg, 2018 (oral reports), XXV International Scientific and Practical Conference of Young Scientists and Students “Topical Issues of New Drug Development”, Kharkiv, Ukraine, 2018.

Doctoral students take part in 10 competitions for intra-university funding of KMU NCJSC, grant funding of scientific and (or) scientific-technical projects by the Committee of Science of the Ministry of Education and Science of the Republic of Kazakhstan.



In 2021, K. Badekova, a doctoral student, developed a project on the topic “Antimicrobial Dental Gel”. The project on behalf of KMU NJSC was submitted to the startup project competition to receive an innovation grant from the Engineering and Technology Transfer Center JSC (QazInnovations) with the support of the Ministry of Digital Development, Innovation and Aerospace Industry.

KMU NJSC has a dissertation council, which consists of well-known scientists and educators, including 1 Academician of the National Academy of Sciences of the Republic of Kazakhstan, 1 Corresponding Member of the National Academy of Sciences of the Republic of Kazakhstan, 2 Doctors of Pharmaceutical Sciences, 2 Candidates of Pharmaceutical Sciences.

On the website of the University, on the “Education” page, there is all the necessary information about the doctoral educational programs, where doctoral candidate can review the Academic Policy of the University, academic mobility programs, class schedule and go to the student portal to get information on the EP subjects.

The University is rich in highly qualified, experienced scientific and pedagogical staff, all necessary arrangements have been put in place to improve the educational and intellectual level of doctoral students. In addition, the cooperation of the University with universities of Kazakhstan, CIS countries and foreign countries testify to the demand for this educational program at the national and international level.

## **2.2 Information on previous accreditation**

The 8D07201 Industrial Pharmaceutical Technology educational program is accredited for the first time in 2018 by the Independent Agency for Accreditation and Rating (IAAR), validity period is from June 14, 2018 - June 13, 2023.

## **2.3 Opinion following the self-evaluation report reviewing of the 8D07201 – “Industrial Pharmaceutical Technology” educational program for compliance with accreditation standards for PhD doctoral educational programs in health care and conclusions**

The report on self-evaluation of 8D07201 “Industrial Pharmaceutical Technology” doctoral educational program (hereinafter - the Report) is presented on 53 pages of the main text, copies or electronic versions of 30 documents, hosted at the link <https://drive.google.com/drive/folders/1pdCvvFIzipqSvbyN9b9UVEg5NIvvJdId?usp=sharing>

The Report is characterized by completeness of answers to all 8 main accreditation standards and criteria, structured taking into account the recommendations of the Guidelines for conducting self-evaluation of the educational program provided to the educational organization by the accreditation center - ECAQA, as well as internal unity of information. The report is accompanied by a cover letter signed by the President, Turmukhambetova A.A., certifying the reliability of the quantitative information and data included in the self- evaluation report.

The report has a list of 9 members of the internal self-evaluation committee with the indication of responsibility of each employee, information about the representative of the organization responsible for self- evaluation of the educational program - Ernazarova M.A., Chief Specialist of the Department of Strategic Development and Quality Management.

Self-evaluation of 8D07201 “Industrial Pharmaceutical Technology” educational program was carried out on the basis of the order of the Head No. 274 dated September 16, 2022 “On approval of the composition of the self- evaluation committee”.

The report was reviewed by Accreditation Expert, Tuleutayeva R.E. The review highlights strengths and areas for improvement, as well as recommendations for additions and changes. In feedback with the representative of the educational organization, the Expert received answers to the arisen questions and made appropriate changes and additions to the self-evaluation report according to the recommendations of the reviewers.

The real practice of Karaganda Medical University NJSC on doctoral students training in the “Industrial Pharmaceutical Technology” specialty with regard to the enrollment of students in 2013, reasoned data, examples of implementation of educational program objectives, national and international



activities, methodological support, confirming compliance with the requirements of accreditation standards are given in all standards. The description in the self-evaluation report is complete and updated in terms of the number of doctoral students, faculty, administration, information on selection and admission, training results, results of knowledge and skills evaluation, material and technical base of the University practice bases, contractual obligations with partners (universities, associations, bases), financial information, there are plans for the development and improvement of the EP.

The report is submitted to ECAQA in a completed form, with data corrected according to the above recommendations, written in literate language, wording for each standard is clear and understandable and described in accordance with the standards criterion, tables are referenced in the text and numbered cross-numbered.

The quality of the self-evaluation report served as a basis for the transition to the next stage of the accreditation procedure - external evaluation. The experts planned validation of the report data, comparison of information from the report with the information that will be obtained during the visit to the educational organization, i.e. verification of quantitative and qualitative indicators.

### 3. Description of the external expert evaluation

External expert work within the framework of the evaluation of 8D07201 “Industrial Pharmaceutical Technology” educational program was arranged in accordance with the Guidelines for the external evaluation of educational organizations and educational programs of ECAQA and according to the program approved on May 11, 2023 by the General Director of ECAQA, Sarsenbayeva S.S. and agreed with the President, Turmukhambetova A.A. Dates of visit to the organization: May 24-26, 2023.

External evaluation is aimed at validation of the self-evaluation report data and verification of indicators indicating the degree of compliance with the criteria of accreditation standards.

The sequence of the visit within 3 days is presented in detail in the Visit Program (hereinafter referred to as the Program), which is in the documentation of the accreditation center. The Program is the proof of implementation of all planned activities within the framework of the external expert evaluation.

In order to obtain objective information, the following methods and their results were used by EEC members:

- interview with management and administrative staff - 35 people;
- interviews with master's and doctoral students - 10 people;
- study of the <https://qmu.edu.kz> website;
- interviewing of 15 staff members, 9 teachers, 6 tutors;
- questionnaire survey of teachers and doctoral students - 9 and 10, respectively;
- observation of doctoral students' training: due to the schedule, attendance of practical classes and lectures did not take place;
- review of resources in the context of meeting accreditation standards: 3 internship bases were visited, including “Research Park of Biotechnology and Ecomonitoring of Ye.A. Buketov Karaganda University”, “Faculty of Biology and Geography, Karaganda Pharmaceutical Plant”, “International Scientific and Production Holding Phytochemistry” JSC, Center of Simulation and Educational Technologies of KMU NCJSC, where training on 4 educational programs is conducted with the participation of 4 full-time teachers;
- study of academic and methodological documents in the amount of 37 items both before the visit to the organization and during the visit to the subdivisions (the list of studied documents is in **Appendix 2**).

The staff of the accredited organization ensured the presence of all persons specified in the visit program and according to the lists of interview and survey sites (Table 1).

**Table 1 - Information on the number and category of participants of meetings, interviews, surveys with EEC members**

| No. | Function | Quantity |
|-----|----------|----------|
|-----|----------|----------|

|    |                                                                            |    |
|----|----------------------------------------------------------------------------|----|
| 1  | Chairperson of the Board - President                                       | 1  |
| 2  | Vice-President for Academic Affairs                                        | 1  |
| 3  | Vice-President for Scientific and Clinical Work                            | 1  |
| 4  | Head of Career Development                                                 | 1  |
| 5  | Deans of Schools                                                           | 6  |
| 6  | Director of the Institute of Life Sciences                                 | 1  |
| 7  | Heads of Educational Programs                                              | 5  |
| 8  | Members of the Academic Senate Committee                                   | 22 |
| 9  | Director of the Department of Human Resource Management                    | 1  |
| 10 | Chief Specialist of the Department of Human Resources Management           | 1  |
| 11 | Chief Specialist of the Center for Simulation and Educational Technologies | 1  |
| 12 | Director-Chief Accountant of the Department of Economics and Finance       | 1  |
| 13 | Deputy Director of the Department of Economics and Finance                 | 1  |
| 14 | Higher-Education Teaching Personnel                                        | 9  |
| 15 | Students (master's students)                                               | 2  |
| 16 | Students (doctoral students)                                               | 8  |
| 17 | Graduates (master's program)                                               | 9  |
| 18 | Graduates (doctoral program)                                               | 8  |
| 19 | Employers of master's and doctoral students                                | 6  |

In the process of visiting the University subdivisions, the accreditation experts noted the strengths of the educational organization in relation to the accredited educational program, including: compliance of resources with the expectations of students, strong staffing-100% academic degree holders rate of HETP in “Industrial Pharmaceutical Technology” doctoral program, high level of HETP professionalism, scientific directions of the University that meet the modern trends in science, participation of HETP and doctoral students in STP, rich library and access of doctoral students to databases, including fee-based, accredited laboratories equipped with state-of-the-art equipment. Thus, the University subdivisions have material and technical base to provide training in doctoral studies and scientific and technical, scientific and methodological, clinical, experimental work in the framework of scientific research in the field of pharmacy and technology of pharmaceutical production, corresponding to the qualification requirements for the activities of educational organizations implementing educational programs of postgraduate education with the award of the degree of Doctor of Philosophy (PhD) and doctoral degree in “Industrial Pharmaceutical Technology” field.

The University has subdivisions directly related to 8D07201 “Industrial Pharmaceutical Technology” educational program, which can be noted as the best practice in education: “Institute of Life Sciences”, where all the processes from the planning of the dissertation work to its completion take place; “Institute of Public Health and Professional Health”; “Bioethics Ethical Committee” and “Ethical Committee for the evaluation of scientific works of HETP and doctoral students”. When meeting with the staff, as well as visiting these subdivisions, EEC members were given the opportunity to see the workplaces, capabilities and functional responsibilities of the staff of all subdivisions.

On the last day of the visit to the organization, a meeting of the EEC members on the results of the external evaluation was held. Final discussion of the external evaluation of the educational program, study of documents, results of interviews, surveys, and questionnaires was held. The EEC members started designing the final report of the EEC. The results of the external evaluation were summarized. Experts individually filled in the “Quality profile and criteria of external evaluation of the PhD doctoral educational program, 8D07201 “Industrial Pharmaceutical Technology” to the ECAQA accreditation

standards”. No remarks were made by the EEC members. Recommendations to improve the educational program were discussed and the Chairperson, Kudabayeva H.I. conducted the final open voting on the recommendations for the ECAQA Accreditation Council on the accreditation period for 5 years.

Comfortable conditions were created for EEC work; access to all necessary information and material resources was organized. The Committee notes a high level of corporate culture of the University, a high degree of openness of the staff in providing information to the members of the EEC, during the interview and during the visit to the practice bases the evidence of the data given in the self-evaluation report was obtained, at the request of the members of the Committee the necessary documents were provided, all the requested documentation was placed on Google disk.

At the end of the visit program, the EEC Chairperson announced recommendations on the results of external evaluation within the framework of specialized accreditation for the management and staff of the educational organization.

#### **4. Analysis for compliance with accreditation standards following the external evaluation of 8D07201 – “Industrial Pharmaceutical Technology” educational program**

##### **Standard 1: SCIENTIFIC RESEARCH ENVIRONMENT**

###### **Proof of compliance:**

According to the results of interviews with the Chairperson of the Board - President - Rector - Turmukhambetova Anar Akyzbekovna, members of the Board of KMU NJSC - Vice-Presidents for Academic, Scientific and Clinical Work, Director of the Institute of Life Sciences, in interviews with doctoral students and teachers, compliance with the criteria of **standard 1** was established. During the interviews, the experts were able to confirm that all participants of the educational process know the mission of the organization and the main goals of the educational program, participated in the development of proposals for the mission formulation.

The participants of the meeting noted that the content of strategic documents is brought to the attention of applicants for doctoral studies through the University website, social networks, and newsletters to medical and scientific organizations. The experts reviewed the University Development Program for 2019 - 2023, which includes such areas as: preventive environment as the basis of public health; personalized approach in the management of a number of significant diseases; comprehensive research aimed at the development and introduction of pharmaceuticals based on domestic plant raw materials into pharmaceutical production; medical and social issues of the elderly and old age; research in the field of medical education; which confirms the implementation of the standard.

In addition, the 2023 Operating Plan identifies three strategic directions: 1. Leadership in Research; 2. Excellence in Education and Student Life; and 3. Supporting the Health System in Health Promotion and Retention. In addition, for each direction, target indicators are provided and tasks are defined. 15 employees of the University participated in the preparation of this document.

The experts, during their visit to the University and visits to the SRW bases, received confirmation that the existence of a strong and effective research environment that fosters the development and research skills of PhD doctoral students ensures the success of 8D07201 “Industrial Pharmaceutical Technology” program in the School of Pharmacy.

Five academic buildings house 13 specialized educational and scientific laboratories (biochemical laboratory, physiological laboratory, microbiological laboratory, pathomorphological laboratory, sanitary and hygienic laboratory, etc.). The experts visited laboratories and vivariums where the research works of doctoral students are realized. The laboratories are equipped with supply and exhaust ventilation with mechanical induction and separate (autonomous) ventilation devices for air suction from fume hoods in accordance with the requirements of the current SNiP. According to the employees during the interview, as well as during the visit, the EEC experts were convinced that the material and technical base of the laboratories is constantly being expanded and updated with modern equipment.

Laboratory of KMU NJSC conducted joint projects with scientific and scientific-practical and clinical organizations of the Republic of Kazakhstan: Semey Medical University NCJSC; Karaganda Regional and City Children's Hospitals; National Center of Labor Hygiene and Occupational Diseases; International Scientific and Production Holding "Phytochemistry" JSC; National Center of Biotechnology; National Scientific and Medical Center, Medical Center of the Presidential Administration, which is confirmed by the availability of documentation.

According to self-reporting data, the Institute of Life Sciences (ILS) has 25 high-tech devices and a full range of auxiliary equipment to provide the necessary range of biomedical research, which was confirmed during the meeting and interview with the Director of ILS, Klyuyev Dmitry Anatolievich. The equipment undergoes scheduled mandatory service support, confirmed by entries in the laboratory logs.

The experts were convinced that the main subdivisions of the University - School of Pharmacy, research laboratory of the Research Center, vivarium - have modern equipment, sufficient material and technical base for doctoral students to perform research work in the framework of PhD theses, scientific and technical programs and grant funding projects.

Doctoral students' dissertations undergo ethical review by the Local Bioethics Committee and the Ethical Committee for the Evaluation of Scientific Research. The work of the Local Bioethics Committee is regulated by the Statute approved by the decision of the Board of Directors on July 27, 2022, Resolution No. 17.

In accordance with the individual work plan, the doctoral student is given the opportunity to undergo scientific internship, including in foreign universities.

In 2018-2019, doctoral students underwent internship: Shaimerdenova Zhanar in Turkey, Bokayeva Asemgul and Shakarimova Kuanysh in Poland, Tursynova Shynar in Tashkent and Dushanbe, Okasov Didar in France.

From March 2020 to the present, due to the pandemic, there have been no doctoral student visits, and counseling is done using remote technologies. Within the framework of academic mobility memorandums on cooperation in the field of health care, medical education and science were concluded with medical universities of Kazakhstan, universities of near and far abroad.

*During the previous accreditation, there was a recommendation to establish joint educational programs, but currently the 8D10140 Pharmacy program has not implemented this recommendation and has not established a joint program with domestic and foreign medical and scientific institutions.*

During the meeting with the Vice-President for Scientific and Clinical Work, Turgunov Ye.M. and the Vice-President for Academic Work, Toleubekov K.K., the EEC members asked what the University management is doing to increase the scientific potential of the University, to increase the publication activity of teachers and students. One of the measures contributing to the fulfillment of indicators of the University on scientific and research work is the implementation of research at the expense of intra-university grants, which is of great importance for obtaining preliminary results for subsequent participation in competitions held in the Republic of Kazakhstan and abroad, *but despite the successes there are certain difficulties in this matter.*

Over the last 5 years, 7 projects have been implemented at the University, currently 1 project is being implemented. According to the results of scientific research 27 patents were obtained, including 3 patents of the Eurasian Patent Office, more than 400 certificates of state registration of rights to the object of copyright, published more than 200 articles in foreign editions indexed in the database Scopus and Web of Science. The share of the University's income from research activities from the total income of the University amounted to 6.6% in 2022. This indicator is an indicator of the effective activity of the University.

During interviews with employers - Director of Karaganda Pharmaceutical Plant, Tolokonnikov Ye.G., Head of Research Park, Ishmuratova M.Yu., during visits to the School of Pharmacy, production bases (Research Park of Biotechnology and Ecomonitoring of Karaganda University named after Ye.A. Buketov, Karaganda Pharmaceutical Plant, International Scientific and Production Holding "Phytochemistry" JSC) experts were able to make sure of the full compliance of practice bases with the



training program, accessibility for teachers and doctoral students. There are professionals working in the production facilities, who are consultants to the doctoral students, and who contribute in every possible way to the mastering of the skills required for the researcher. The experts obtained strong evidence that **Standard 1** has been met, as well as validation of the information in the self-evaluation report.

When surveying teachers, 90.6% of them responded that they “completely agree” that the University has the opportunity to engage in research work and publish the results of SRW, and 9.3% responded, “partially agree”. 92.1% of respondents answered that they have access to participate in the research work of the University.

When surveying doctoral students on the question – “In the educational organization there is access to the participation of students in research work”, 92.1% of respondents are completely agree with this statement, 6.4% of respondents are partially agree and 1.6% of are completely disagree with this statement.

About 92.1% of the respondents are fully satisfied with the library collection/resources, 6.4% are partially satisfied, and 1.6% has no answer.

About 93.7% of respondents are fully satisfied with “Access to electronic educational resources”, 4.8% are partially satisfied, and 1.6% is not fully satisfied.

“Are you satisfied that you study in this particular educational organization?” - yes, fully - 90.5% and partially satisfied - 8% of respondents.

“Is the University management accessible to students” - 100% of respondents answered in the affirmative.

On the question, “In this educational organization I have an opportunity to realize myself as a professional in my specialty” - 93.8% of surveyed teachers answered that they fully agree, 6.3% - partially agree.

“Evaluate the timeliness of execution of requests for the purchase of methodical and didactic materials, office equipment, and stationery to ensure the educational process in the organization” - 93.8% responded that it is executed in a timely manner, 6.3% responded, “I have nothing to do with it”.

The following answers were given to the question “The University supports my participation in conferences (international, national)”: by paying for travel, travel expenses, registration fee - 62.5%, by paying only for travel - 9.4%, does not pay for any expenses - 3.1%, I do not address the management on this matter -15.6%, no answer -9.4% of respondents.

“My publication activity is evaluated by me personally on a scale of 5 points (from 1- low to 5 - high)”, 1 point -3.1%, 2 points -6.25%, 3 points -31.3%, 4 points -25%, 5 points -34.4%.

The answers to the question “Are social support programs for teachers implemented in the University?” were as follows: yes, there are such programs - 78.1%, yes, I have already used it - 3.1%, no - 3.1% and do not know about it - 15.6%.

**EEC conclusions on the criteria.** Comply with 6 standards: fully compliant - 5, partially compliant -1, not compliant - 0

**Standard 1:** fulfilled

**Recommendations for improvement identified during the external visit:**

1) Foreign internships of doctoral students to be carried out on a regular basis (Standard 1.4 Basic Standard/BS)

## **Standard 2: FINAL RESULTS**

### **Proof of compliance:**

The requirements for the level of the doctoral student's competence at KMU NJSC are determined on the basis of the Dublin descriptors of the third level of higher education (doctoral studies) and reflect the mastered competences expressed in the achieved learning outcomes. The 8D07201 “Industrial Pharmaceutical Technology” Educational Program contains data on competencies, competency-based learning outcomes. Teaching methods are described in detail in the self-evaluation report of the educational program.

The expected competencies of doctoral students are divided into general and professional competencies, with clearly stated learning outcomes for each competency.

From the interviews with doctoral students it was found that before the beginning of classes the teachers inform about the mission, work plans of the educational organization, tell where to get the necessary information about the educational program, teachers, training bases. This demonstrates compliance with **Standard 2** in terms of adapting training to the needs of doctoral students.

While visiting KMU NCJSC, the experts were presented with syllabuses, TM with a defined goal, taken into account the integration of practical and theoretical components, and independent work. The compliance of the educational program with the SCES and standard requirements was established. During the external visit to the University, the experts were not able to attend practical classes, as in accordance with the schedule doctoral students' classes were completed. However, the experts were able to see the doctoral students at workplaces in manufacturing facilities where they performed their research work.

The University ensures compliance with ethical aspects in the implementation of the educational program. The experts studied the "Code of Business Ethics" approved on August 24, 2019, Resolution No. 4. The resident and teachers convinced the experts that they are informed about the content of this document.

The final results of doctoral studies in "Industrial Pharmaceutical Technology" specialty are: an appropriate number of credits; publication of the main results on the research topic in recognized scientific periodicals in accordance with the requirements of the "Rules for Awarding Degrees"; defense of the dissertation work. Achievement of the final learning outcomes takes place according to the planning and support of the doctoral student, both by the academic advisor and consultant, and by the University management.

During the visit, the experts were presented individual work plans of doctoral students, which reflect the entire trajectory of doctoral studies: individual education plan; Doctoral Student Research / Experimental and Research Work (DSRW/DSERW); internship with indication of the program, base, timing and form of reporting; topic of doctoral dissertation with justification and structure; plan of doctoral dissertation implementation; plan of scientific publications and internships.

In order to evaluate the doctoral student's progress in achieving the results of the educational and scientific components of the educational program, the Platonus AIS program provides a personal account of the student, where his/her data, individual study plan, history of educational achievements, publications, doctoral student's mobility, internships, personal achievements, such as participation in competitions, contests, etc., are placed..

The scientific component in the training of doctoral students was studied, and the following evidence was obtained: doctoral students participate in competitions for funding of scientific research as academic advisors of projects, took part in the competition for grant funding of research of young scientists on Zhas Galym project for 2022-2024.

There were 24 applications for grant funding competitions for young scientists on research and (or) research and technology projects in 2019-2020, of which 13 received high scores during the state scientific and technical evaluation. In 2022, out of 5 applications for grant funding for postdoctoral studies in "Industrial Pharmaceutical Technology" specialty, 3 applications received high scores in the evaluation and received grants (Badekova K.Zh., Zholdasbayev M. and Okasov D.).

Specific competencies are developed at the level of the individual discipline. The content of 8D07201 "Industrial Pharmaceutical Technology" program reflects the social competence and the opportunity for personal development of doctoral students: the desire for professional improvement, the ability for self-learning and professional mobility; knowledge, concepts, methods, skills and attitudes necessary to understand the social, socio-economic, demographic and cultural conditioning of the causes of the spread and consequences of medical issues.

During the conversation with doctoral students, the experts were convinced that the University promotes the development of research, practice and pedagogical competencies of future PhD doctors, including in alternative organizations, doctoral students have the opportunity to work part-time at the

practice bases in the industry. The doctoral students shape and deepen their theoretical knowledge obtained in undergraduate studies, develop communication skills, in particular doctoral students teach as undergraduate lecturers in the School of Pharmacy, which does not contradict the L&R.

The analysis of educational activity has shown that the scientific basis and all achievements of science on advising disciplines are taken into account, additions are made to the bibliography of methodical materials, and academic advisors apply them when working with doctoral students.

No deficiencies were identified during the analysis of the self-evaluation report and during the visits to the practice bases. *There are favorable conditions for the implementation of the educational program. 95,24% of students noted that the content of the EP (the list of disciplines) satisfies them completely; 96,8% of respondents noted that the University allows them to acquire the necessary knowledge and skills in the chosen specialty..*

*To the question of the survey "Do you think that the University allows you to acquire the necessary knowledge and skills in your chosen specialty?" a 96.8% of students answered yes, I am sure of it.*

*During the survey of HETP on the question "I am satisfied with the educational process arrangement at the University" a total of 87.5% responded fully agree, 12.5% agreed partially agreed.*

**EEC conclusions on the criteria.** Comply with 5 standards: fully compliant - 5

**Standard 2:** fulfilled

**Recommendations for improvement identified during the external visit:** none

### **Standard 3: ENROLLMENT POLICY AND CRITERIA**

#### **Proof of compliance:**

The students' enrollment in 8D07201 "Industrial Pharmaceutical Technology" doctoral program at KMU NJSC is carried out on the basis of the "Students' Enrollment Policy", which is a part of the Academic Policy of the University. The experts familiarized themselves with this document.

The enrollment policy and procedure of admission of citizens to doctoral studies is determined by the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600 "On Approval of the Standard Rules of Enrollment in Educational Organizations Implementing Educational Programs of Higher and Postgraduate Education". The enrollment policy is updated annually.

Doctoral students are enrolled by the Admissions Office, the composition of which is approved by the Chairperson of the Board - the President. The Admissions Office consists of an odd number of members; the Chairperson of the Admission Committee is the Chairperson of the Board - the President of KMU NCJSC. By order of the Chairperson of the Board - the President, an executive secretary of the Admissions Office is appointed. Acceptance of applications for enrollment in doctoral studies is conducted by the Admissions Office within the terms established by the "Standard Rules for Enrollment in Educational Organizations Implementing Educational Programs of Higher and Postgraduate Education", approved by the Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600. The persons having the Master's degree and work experience of not less than 1 (one) year are enrolled in the doctoral program. The previous education level of persons wishing to master the 8D07201 "Industrial Pharmaceutical Technology" educational program assumes the completion of Master's degree in 7M07201 – "Industrial Pharmaceutical Technology" specialty.

Dean of the School of Pharmacy, Candidate of Biological Sciences Loseva I.V., Doctor of Pharmaceutical Sciences, Professor Abdullabekova R.M., Doctor of Chemical Sciences, Professor Atazhanova G.A. and Doctor of Pharmaceutical Sciences, Associate Professor Ivasenko S.A. were involved in the work of Admissions Office. All members of the Office have experience in the development and implementation of scientific research as leaders and responsible executors of research and technical programs and projects of the University, publication of articles and theses in international indexed journals, participation in scientific conferences for the last 5 years.



When approving the topics of dissertation research, the provision of the material and technical and laboratory base of KMU NJSC with the use of its own resources is taken into account. If necessary, resources of republican and foreign universities and scientific organizations are attracted on the basis of existing memorandums of cooperation in the field of health care, medical education and science.

Since 2018, to develop the material and technical base of the Institute of Life Sciences, equipment with a total cost of 350 million KZT was purchased for scientific research and dissertation research of doctoral students.

Implementation of the research is reflected by the doctoral student in the individual work plan, which is prepared for the entire 3-year period of study and includes the “Research work” section. This section reflects the work plan for the dissertation, including the main activities with deadlines, the plan of scientific publications with indication of the type of scientific publication, planned periodical and deadlines, the plan of internships with indication of the place, purpose and objectives of the internship and deadlines.

The individual work plan of a doctoral student reflects the doctoral student's personal contribution to the fulfillment of the dissertation research. The individual plan of the doctoral student is prepared under the guidance of academic consultants. The experts have familiarized themselves with these documents and evaluated their completeness.

During the period of 5 years, 7 doctoral students were enrolled in doctoral programs “Industrial Pharmaceutical Technology” and “Pharmacy”, 6 people were trained, 2 PhD dissertations were successfully defended, 2 graduates were awarded PhD degree, 3 PhD dissertations were submitted to the dissertation council, 1 person is still studying. There were no cases of expulsion or academic leave during the period of study.

It is possible to trace the training trajectory, evaluate the doctoral student work, his/her growth and development, educational and scientific achievements through a personal account in the Platonus AIS system, which was confirmed by doctoral students when they met with EEC experts.

*88.9% of surveyed students noted that the University has and implements social programs to support students. When interviewed, doctoral students expressed their confidence in employment upon completion of their doctoral studies; when surveyed, 85.7% indicated that there are career-counseling services available to students.*

Both during the analysis of the self-evaluation report of the educational program and during the visit to KMU NCJSC, no shortcomings and remarks in the implementation of the “Final Results” standard were identified.

**EEC conclusions on the criteria.** Comply with 6 standards: fully compliant -6

**Standard 3:** fulfilled

**Recommendations for improvement identified during the external visit:** none

#### **Standard 4: PhD DOCTORAL PROGRAM**

##### **Proof of compliance:**

During the visit to the University, the experts were acquainted with the “Regulations on Doctoral Studies”, approved by the decision of the Board on August 26, 2019, Resolution No. 8, “Regulations on the Management of the Educational Program”, approved by the decision of the Board on September 09, 2020, Resolution No. 14.

According to the above documents, the educational program (EP) is managed through the following components: 1) strategic management; 2) organizational management; 3) operational management.

The Regulations detail the procedure for developing, approving and updating the educational program, the concept of the educational program, the development of the educational program, and the educational program development plan.

Updating of the EP is carried out if it is necessary to make changes in the EP less than 70%, if more than 70% of changes are made, re-approval as a new EP is carried out. The basis for updating the

EP can be the results of quality evaluation of the EP and changes in the L&R. The implementation of the updated EP is carried out from the next academic year.

The quality of the EP is ensured by the participants of its implementation: Dean of the School, Head of the EP, module coordinators, those responsible for the discipline, Heads of Departments, teachers.

Quality assurance at the level of the educational program is carried out by the Quality Assurance Committee of the School of Pharmacy, at the institutional level by the Department of Strategic Development and Quality Management.

Control and improvement of the quality of EP are carried out through internal audit; external quality evaluation procedures take place during accreditation in accordance with the documented procedure "Organization of Preparation for Institutional and Specialized Accreditation in KMU NCJSC" and other external inspections by authorized bodies.

8D07201 "Industrial Pharmaceutical Technology" program undergoes quality monitoring once every 3 years, in preparation for specialized accreditation quality monitoring was conducted unscheduled.

The Head of the educational program Atazhanova Gayane Abdulkhakimovna has academic authority in her professional field, Candidate of Biological Sciences, scientist with a long professional and scientific-pedagogical experience. Atazhanova G.A. is responsible for the organization of ensuring and controlling the fulfillment of requirements for the implementation of the EP, established by the legislation. In addition, the Head of the EP is responsible for the coordination of work on the design, implementation, monitoring and development of the program.

The experts were presented the academic and methodological complex of the discipline.

When meeting with doctoral students, the experts found out that doctoral students' academic activities consist of attending lectures, seminars, group classes, practical and laboratory work, independent work, including under the supervision of a teacher, practice at the production site, scientific internship, research / experimental and research work, and, at the end of their studies, writing and defending a doctoral dissertation.

The doctoral students have the opportunity to participate in international conferences and forums at home and abroad in their specialty area. During the reporting period, 5 doctoral students of 8D07201 "Industrial Pharmaceutical Technology" made reports and published in the materials of research in the collections and journals of international conferences. The results of work of doctoral students were reported at forums in Kazakhstan, Argentina, Ukraine, Tajikistan, and Russia.

Doctoral student K. Badekova took advanced training courses on "Modern Manufacturing of Soft Dosage Forms and Cosmetics with regard to GMP Regulations" at St. Petersburg State Chemical and Pharmaceutical University (December 2021). Doctoral student Badekova K.Zh. won a grant for training under the Business Acceleration Program.

123 credits are given for research work within the 8D07201 "Industrial Pharmaceutical Technology" program in accordance with the State Standards of Higher and Postgraduate Education.

The doctoral student's progress is evaluated through: interim certification; preliminary discussion of the dissertation work (approbation) in the 6th semester, oral presentation of the dissertation work, discussion at an extended meeting of the department; final certification, which involves writing and defense of the dissertation work in the Dissertation Council.

During the visit to the departments, the experts made sure that the working programs, TM defined the objective, took into account the integration of practical and theoretical components, independent work, and there is full compliance with the SCES and Standard Requirements.

The analysis of academic activity has shown that the scientific basis and all achievements of science on advising disciplines are taken into account, additions are made to the bibliography of TM and syllabuses, and teachers apply them in classes.

In order to validate the implementation of the self-evaluation report data and to obtain evidence about the quality of programs, an interview with doctoral students and graduates of 8D07201 "Industrial Pharmaceutical Technology" accredited program (Bekisheva Pernesh, Nurkadirov Darkhan, Remetova

Nazigul, Turdiyeva Zhanel, and Lakomkina Yekaterina) was conducted. The experts asked questions about satisfaction with education, sufficient time for collecting material for the dissertation, work with documentation, satisfaction with teaching methods and qualification of teachers, social and moral support for doctoral students who need it, participation in scientific work, and availability of resources of international databases of professional literature. Skills in using these resources were evaluated by visiting the Library, Gymnasium, Student Services Center, and the Department of Academic Affairs.

In general, doctoral students are satisfied with the study and academic advising, evaluation methods, and purposefully enrolled in this organization because they believe that the University has good resources, image and international connections. *At the same time, the wishes of doctoral students include an increase in the state order for doctoral studies in Pharmacy, the possibility of foreign internships and participation in academic mobility programs in the country and abroad.*

Doctoral students of 8D07201 "Industrial Pharmaceutical Technology" showed their commitment to the University, were active in answering the questions of external experts, demonstrated their point of view on the educational organization and the provision of conditions for performing dissertation research, submission of the dissertation for defense, evaluation of their skills, advisory support, opportunity to participate in the activities of the educational organization, funding. The experts studied the documents of doctoral students (evaluation results, questionnaire results, abstracts, dissertations).

Interviews with 6 potential employers of graduates of 8D07201 "Industrial Pharmaceutical Technology" program were conducted offline and included such questions as: knowledge of the University mission, participation in the development of the mission and proposals to the strategic plan, participation in the work of advisory bodies, satisfaction with the basic knowledge and skills of doctoral students, providing the supervising department located in the clinic and doctoral students with the necessary resources for scientific and practical training and the formation of critical and research thinking, on issues of interaction with departments, 100% employment of graduates upon completion of doctoral studies, etc. Tolokonnikov Ye.G. and Ishmuratova M.Yu., on the basis of which doctoral students undergo professional internship, perform their RW, noted the high commitment and responsibility of doctoral students to both training and development of professional skills at workplaces.

The experts did not find any deficiencies in evaluating the fulfillment of this standard when analyzing the self-report and when visiting the University.

*92,06% of respondents are fully satisfied with the schedule of classes in the disciplines of the educational program.*

*95.24% of the respondents answered that the content of the educational program (list of disciplines) in the chosen specialty fully meets their expectations.*

*"Program heads and teachers are aware of learners' issues related to learning" - 82.5% of the respondents completely agree with this statement, 15.9% partially agree, and 1.6% completely disagree. "The educational organization has access to the participation of students in research work" - 92.1% of respondents completely agree with this statement, 6.35% partially agree, 1.6% completely disagree with this statement.*

*In the teachers' survey "Students have free access to the resources of practice bases to improve their practical skills", 96.9% responded strongly agree, 3.1% partially agree.*

*"Do the heads of the organization listen to your opinion regarding issues on the academic process, RW" - answered "yes, systematically" - 84.4%, answered "yes, sometimes" - 12.5% of respondents.*

*"What teaching methods do you most often apply in the process of teaching doctoral students?" - Lectures are used by 18.8% of respondents, Oral discussion of the subject topic - 59.4%, Copying of thematic information from monographs - 6.3%, Problem-oriented learning - 71.9%, Interactive learning - 43.8%, Making and solving cases - 56.3%, Oral questioning of students - 59.5%, Work in small groups - 59.4%, Written assignments - 50%.*

**EEC conclusions on the criteria.** Comply with 10 standards: fully compliant -10

**Standard 4: fulfilled**

**Recommendations for improvement identified during the external visit: none**

## **Standard 5: ACADEMIC ADVISING**

### **Proof of compliance:**

Within two months after enrollment, a doctoral student is assigned an academic advising team of at least two academic consultants, including a foreign consultant.

This is necessary to provide research and methodological assistance in the work on the dissertation, control over the implementation of the work, if necessary, and psychological support, recommendations on the participation of doctoral students in the academic process in 8D07201 “Industrial Pharmaceutical Technology” specialty.

During interviews with HETP, doctoral students found out that candidates for academic consultants are reviewed and discussed at the Research School Council and approved by the University Senate in accordance with the Regulations on Doctoral Studies and the Academic Policy of KMU NCJSC.

The interviewees noted that when selecting academic consultants for doctoral students, the main requirement is high professional competencies, active research practice in the field of health care and pharmaceutical sciences, an academic degree (Doctor of Science or Candidate of Science) or a PhD degree.

The experts reviewed the Regulations on Doctoral Studies in KMU NJSC (Board Decision " on November 18, 2020, Resolution No. 24), which clearly stipulates the organization of the work of scientific consultants to supervise the doctoral dissertation and the responsibilities of the academic consultant. The academic consultant supervises the fulfillment of the doctoral student's individual work plan, discusses the results of the work together with the doctoral student, corrects the prepared publications and assists in their publication. He/she also provides methodological assistance in the preparation of the dissertation work with its subsequent verification.

The staff of HETP, training doctoral students in 8D07201 “Industrial Pharmaceutical Technology” is represented by scientists who have a long record of scientific and pedagogical work, with publications in peer-reviewed journals:

Adekenov S.M., International Scientific and Production Holding “Phytochemistry” JSC, Doctor of Chemical Sciences, Professor, total experience of 45 years, research and pedagogical is 30 years, 65 publications in peer-reviewed journals for 5 years, prepared 3 doctoral students.

Tuleuov B.I., International Scientific and Production Holding “Phytochemistry” JSC, Doctor of Chemical Sciences, Professor, total experience of 40 years, research and pedagogical is 10 years, 17 publications in peer-reviewed journals for 5 years, prepared 1 doctoral student.

Atazhanova G.A., KMU NCJSC, Doctor of Chemical Sciences, Professor, total experience of 38 years, research and pedagogical is 5 years, 18 publications in peer-reviewed journals for 5 years, prepared 7 doctoral students.

Khrustalev D.P., KMU NCJSC, Doctor of Chemical Sciences, total experience of 25 years, research and pedagogical since October 2022, 8 publications in peer-reviewed journals for 5 years, prepared 1 doctoral student.

Tabynov Kaisar Kazybaevich, Candidate of Veterinary Sciences, Professor, total experience of 30 years, research and pedagogical is 30 years, 12 publications in peer-reviewed journals for 5 years, prepared 1 doctoral student.

Ivasenko Svetlana Aleksandrovna, Doctor of Pharmaceutical Sciences, Associate Professor, total work experience of 30 years, research experience is 15 years, advisor of 3 doctoral students, 10 articles published in peer-reviewed journals. In 2013-2020 Ivasenko S.A. participated in the implementation of 5 STPs: O.0660 “Integrated Approaches in the Management of Public Health in the Aral Sea Region”; O.0769 “Development of Scientific Fundamentals of Formation of Preventive Environment for the Preservation of Public Health”; O.0821 “Personalized Approach in Management of a Number of Significant Diseases” of the Ministry of Education and Science of the Republic of Kazakhstan; Grant



Financing Project “Development and Application of Antibiotic Impregnated Allograft Procured by Marburg Bone Bank System for Treatment of Osteomyelitis” of the Ministry of Education and Science of the Republic of Kazakhstan; Intra-University grant “Formulation and Technology Development of New Drugs of Antimicrobial and Expectorative Action Based on Some Thymus L. Representatives”.

Abdullabekova Raisa Musalmambekovna, Doctor of Pharmaceutical Sciences, Professor, total work experience of 40 years, research experience is 40 years, advisor of 2 doctoral students, published 4 articles in peer-reviewed journals, participation in the intra-university grant “Pharmaceutical Development of Medicines from Dipsacaceae Plant Family” for 2017, KMU NCJSC.

Loseva Irina Viktorovna, School of Pharmacy, Candidate of Biological Sciences, total work experience of 37 years, scientific experience is 20 years, advisor of 1 doctoral student, published 6 articles in peer-reviewed journals, participation in STPs: Grant funding project “Development of a Plant-Derived Drug Technology with Antitumor Activity Against the Human Prostate Cancer Cell Line PC-3”, 2022-2024; Intra-University grant “Comprehensive Study of Biologically Active Substances of Certain Representatives of the Genus Thymus L. Growing in Kazakhstan for the Creation of Effective Domestic Phytopreparations Based on Them”, 2017.; Intra-University grant “Formulation and Technology Development of New Drugs of Antimicrobial and Expectorative Action Based on Some Thymus L. Representatives”, 2018-2020.

The appeal system of the dissertation defense results is reflected in the document "On Approval of the Rules for Awarding Degrees", in accordance with the Order of the Minister of Education and Science of the Republic of Kazakhstan dated March 31, 2011 No. 127 and during the period of work of the educational organization, there were no precedents of appeals.

During the visit to the organization and during the interview with Ivasenko S.A., the doctoral advisor, the committee verified that there is a documentation system that is transparent and accessible to all faculty/academic advisors and staff, and includes documents such as annual operating plans, annual reports, unit regulations, faculty contracts, Individual Work Plans for doctoral students, and teaching and learning documentation (work program, working curriculum, syllabi, journals), evaluation tools (checklists, records), certification documents, certificates and other documents. A review of the website showed that its pages contain documents required for doctoral students.

The conversation with Abdullabekova R.M. included such issues as the working environment for HETP and academic advising at the University and allowed the experts to learn about the approaches to attracting employees of International Scientific and Production Holding “Phytochemistry” JSC as academic advisors (there are 2 such teachers in total), about the strategy and tactics of enrolling doctoral students in this major, information support of the educational program, as well as to identify issues of human resources management and development, as the creation of a favorable environment for the development of human resources..

Formation of the pool of academic advisors is carried out in accordance with the Requirements for Academic Advisors, which are specified in the “Regulations on Doctoral Studies”. The academic advisors are appointed leading scientists of the University who have an appropriate academic degree and have 2 publications in international peer-reviewed scientific journals that are in the 1st, 2nd, 3rd quartile according to JCR (JCR) in Web of Science Core Collection or have a CiteScore percentile of at least 35, or a Hirsch index of 2 or more.

Interviews with 5 faculty members, including 4 full-time faculty members, revealed that there are both successes and problems in educational management, depending on the specific base (doctoral students' access to equipment and office equipment, sufficient material for dissertation, time for medical records, independent work). The experts received answers about the professional development program for teachers and academic advisors, teachers' certification in teaching and research methods. The teachers were trained on the following topics: “Ethics of Biomedical Research”, “Effective Teacher”, “Researcher and Scientist”; “Topical Issues of Management in Pharmacy”, “Designing Competence-oriented Modular Educational Programs Based on Employers' Requirements”; “Training of Specialists according to the Requirements of International Certificate ISO 37001:2016”.



The experts reviewed materials on doctoral student enrollment and faculty selection and determined compliance with Standard 5. The experts found that doctoral students enter the educational organization with a previously defined topic for dissertation research, and academic advisors provide regular consultations and stimulate the need for additional training and independent work with the literature. The department carries out planning of the educational trajectory on the basis of the catalog of elective disciplines and the working curriculum, develops a plan of step-by-step work on the dissertation and publication of its results, deadlines for submission of intermediate and final forms of control over the progress of the dissertation. Thus, academic advisors consult with their doctoral students at least 5-6 times a month. During such consultations, the degree and quality of the performed scientific research, its compliance with the individual work plan, recommendations on theoretical and experimental issues of research, etc. are evaluated.

The achievements and experience gained in relevant courses at other educational and scientific institutions are taken into account at KMU NCJSC. The University's policy in this direction is lifelong learning.

***A shortcoming is that, to date, academic advisors of doctoral students have not received formalized training in academic advising. The experts noted the need to improve professional and pedagogical qualifications in international programs in far and near abroad countries.***

*When surveyed on the question "Program Heads and faculty are aware of issues related to training" - 82.5% of students responded that they strongly agree, 15.9% of partially agree and 1.6% of strongly disagree with this statement.*

*95.2% of respondents are satisfied with the activity of their tutors, academic advisors.*

*During the survey of HETP on the question "In this educational organization I have the opportunity to do research work and publish the RW findings" - 90.6% of respondents answered that they fully agree, 9.38% - partially agree.*

*"Do the University management listen to your opinion on issues related to the educational process, research and development, clinical work" - 84.4% of respondents answered "yes, systematically", 2.5% - "yes, sometimes". 87.5% of respondents answered the question "I have attended professional development courses (programs)" - "during this year", 9.4% - "studied more than 5 years ago.*

***EEC conclusions on the criteria.*** Comply with 11 standards: fully compliant -10, partially compliant -1, not compliant – 0

***Standard 5: fulfilled***

***Recommendations for improvement identified during the external visit:***

1) Provide for the signing of a contract between the academic advisor, the doctoral student, and the doctoral program director for academic advising. (5.9, Improvement Standard/IS)

## **Standard 6: PhD DISSERTATION**

### **Proof of compliance:**

During the study period at 8D07201 "Industrial Pharmaceutical Technology" doctoral program the following evaluation of dissertation works is provided and implemented: preliminary discussion of the dissertation work at the department; procedure of discussion of the dissertation work of the doctoral student at the Scientific and Expert Council of the University; defense of the dissertation work in the Dissertation Council (DC). University professors and scientists from other universities and scientific organizations with a academic degree/degree in the relevant major who have no conflict of interests with the doctoral student and academic advisors of the doctoral student are involved as independent reviewers.

For 2018-2022, 4 leading scientists of the Republic of Kazakhstan in the field of pharmacy have been appointed as reviewers.

The EEC experts studied the protocols in which doctoral students at the end of each semester provide reports on the results of scientific research, which are reported and discussed at the meetings of

the School of Pharmacy, including discussion of the dissertation work progress and contribution of the doctoral student. The dissertation of doctoral students for the degree of Doctor of Philosophy (PhD) in “Industrial Pharmaceutical Technology” is being reviewed.

The doctoral students of 8D07201 “Industrial Pharmaceutical Technology” program demonstrated to the EEC experts how the procedure of submitting documents at the end of the doctoral student's dissertation work is carried out, showed the list of documents.

During the interview doctoral students described the modes of training, counseling and evaluation, doctoral students noted that the University has an evaluation practice of completed works (materials for publications, dissertations) by the academic advisors and doctoral students for self-control and verification of their own works through licensed information programs (until 2018 Anti-Plagiarism information resource under the contract with Anti-Plagiarism CJSC (Russian Federation). The Turnitin program has been applied since 2018 and the Strikeplagiarism.com program since 2021, which avoid the risks associated with the originality of the work performance. The doctoral students indicated that they are fully satisfied with the opportunity to conduct research work at the University and fully receive assistance and support from academic advisors and consultants. They also stated that they receive regular feedback from faculty and academic advisors.

The approval and defense of dissertations of 8D07201 “Industrial Pharmaceutical Technology” doctoral program at KMU NJSC is open to the public and to the staff, faculty and students of the University. KMU NJSC has information technologies for holding meetings on approval and defense of dissertations, if necessary, in a distant format.

There are 6 members in DC in pharmacy field (6D114400) and industrial pharmaceutical technology (6D074800), 50% of members of dissertation councils are representatives of other universities, scientific and (or) other organizations ( Ministry of Health Care of the Republic of Kazakhstan, Astana Medical University, Asfendiyarov KazNMU). However, the DC does not include scientists - representatives of foreign universities. The DC includes 1 Academician of the National Academy of Sciences of the Republic of Kazakhstan, 1 Corresponding Member of the National Academy of Sciences of the Republic of Kazakhstan, 2 Doctors of Pharmaceutical Sciences, 2 Candidates of Pharmaceutical Sciences.

In order to expand international relations and internationalization, the possibility of including one representative of a foreign country in the Dissertation Council is being considered.

The Regulations on the DC provide for the avoidance of conflicts of interests if a doctoral student's academic advisor is a member of the DC.

The dissertation can be improved/corrected at the stage of review by 3 experts from among the members of the dissertation council (eligibility of the dissertation for defense). Terms of submission of the corrected dissertation are 3-4 days.

The study of the “Regulations on Doctoral Studies at KMU NCJSC” approved by the decision of the Board dated August 26, 2019 (Resolution No. 8), demonstrated that the University has implemented a proper evaluation policy, which allows for a comprehensive evaluation of doctoral students' academic achievements and submission of the dissertation to the DC.

The meeting with members of the Industrial Pharmaceutical Technology DC demonstrated the existence of a sustainable practice at the University to review, discuss and make a decision on the dissertation.

The review of the resources showed that they correspond to the goals and objectives of academic activities, so, the research facilities were visited, in particular, EEC members were shown the preparation of ultrasonic extracts from *Spirea serpyllum* L. medicinal plant by a doctoral student, the technology of the original drug for the treatment and prevention of *Helicobacter pylori* - associated diseases on the basis of *Thymus serpyllum* L. ultrasonic extract and its standardization..

Warm and collegial relations between the University staff, industrial staff, doctoral students, all the conditions created to achieve the final results of doctoral students' education were demonstrated. A sufficient amount of dissertation material is provided, state-of-the-art equipment is available to young

researchers, and the staff, who serve as both teachers and academic advisors, provide quality learning in an ethical and deontological manner.

During the visit, the experts received positive feedback, praising the doctoral students both in terms of study and in terms of ethics, intelligence and compliance with the status of a doctoral student.

*As a recommendation for improvement, since there are doctoral students with high English proficiency, the dissertation might be written and defended in English.*

*On the survey question “In the educational organization there is access to the participation of students in research work” - the 92.1% of respondents answered that they fully agree with this statement, 9.5% - partially agree with this statement.*

*A total of 92.1% of respondents are fully satisfied with library resources, and 4% are partially satisfied.*

*93.7% of respondents are fully satisfied, 4.76% of respondents are partially satisfied, and 1.6% of respondents are not fully satisfied with access to electronic educational resources.*

*To the question “There is time for practical training, work in laboratories, in pharmaceutical manufacturing”, the 90.5% of respondents fully agreed, 9.5% partially agreed.*

**EEC conclusions on the criteria.** Comply with 9 standards: fully compliant - 8, partially compliant -1, not compliant – 0

**Standard 6: fulfilled**

**Recommendations for improvement identified during the external visit:**

1) Develop and implement mechanisms to stimulate the writing and defense of dissertations in English. (6.1 IS)

## **Standard 7: EVALUATION**

### **Proof of compliance:**

The system of evaluation of students is summative. In the approved WC near each discipline is presented the form of examination. For example, the WC for 1st year IPT doctoral students includes a **written examination** for the following disciplines: Academic Writing, Project Management, Research Ethics, Fundamentals of Pharmaceutical Research, GLP in Pharmaceutical Development, Phytochemical Study of Medicinal Plants, Modern Technologies and Manufacture of Medicinal Products.

The WC No. 101/425 dated February 02, 2022 for 2022-2025 academic years, WC No. 101/2476 dated June 02, 2021 for 2021-2024 academic years (SCES 2018), WC No. 101/1524 dated April 09, 2021 for 2021-2024 academic years; “Fundamentals of Pharmaceutical Development” syllabus, and “Research Ethics” syllabus, approved on August 31, 2022 by the Head of the educational program, G.A. Atazhanova, were reviewed during the visit to the University. The experts reviewed the maintenance of electronic academic journals, statements, which are stored in Platonus AIS. The experts were introduced to the academic policy of KMU NCJSC.

Examination of the test instruments (exam questions and essays) revealed that the organization has implemented an appropriate evaluation policy that allows for a versatile evaluation of resident learning achievements. When interviewed, the doctoral students talked about forms of evaluation, such as written papers and that, they were satisfied with everything, receiving regular feedback from the faculty.

The appeal system of evaluation results is reflected in the Platonus and Session AIS document in electronic form and there were no precedents of appeal during the work period of the educational organization. Thus, compliance with Standard 7 has been established.

During the visit to the University and during the interview with the Director of the Institute of Life Sciences, Klyuyev D.A., the expert committee was convinced that there is a documentation system that is transparent and accessible to all faculty and staff and includes all necessary documents.

At the end of each semester, the doctoral students of 8D07201 “Industrial Pharmaceutical Technology” program provide reports on the results of dissertation research, which are reported and

discussed at the meetings of the School of Pharmacy, including a discussion of the progress of the work and the doctoral student's contribution (protocols). In addition, discussions of the dissertation approval of doctoral students for the degree of Doctor of Philosophy (PhD) in “Industrial Pharmaceutical Technology” (resolution No. 12 dated May 31, 2022) are held.

During the period of doctoral studies the following evaluation of dissertation works is envisaged and implemented: preliminary discussion of the dissertation work is held at the meeting of the department/subdivision of the University, the procedure of discussion of the dissertation work of the doctoral student at the Scientific and Expert Council of the University, defense of the dissertation work in the Dissertation Council.

*When surveying students on the question “The teachers provide students with methodological and didactic materials, additional literature to prepare for classes” 90.5% of students have fully agreed with this statement, 9.5% have partially agreed with this statement.*

*To the question: “Evaluate the organization of practical training” - 87.3% of respondents answered “excellent”, 11.1% - “good”, and 1.6% - “satisfactory”.*

*“I am satisfied with the methods of evaluating my knowledge and skills” - the 93.7% are strongly agree with this statement, 6.35% are partially satisfied.*

*“The teachers use active and interactive teaching approaches in their classes” - the 92.1% of respondents answered “regularly”.*

*“After completing the lessons, does the teacher give you feedback (listen to your opinion, conduct a mini questionnaire, and work on mistakes)?” - a total of 92.1% of respondents answered “yes, all the time”, 7.94% - “sometimes”.*

**EEC conclusions on the criteria.** Comply with 7 standards: fully compliant - 7

**Standard 7:** fulfilled

**Recommendations for improvement identified during the external visit:** none

## **Standard 8: ORGANIZATION STRUCTURE**

### **Proof of compliance:**

The management and planning of finances in KMU NJSC is carried out on the basis of the current legislation of the Republic of Kazakhstan, Strategic Plan and Development Plan of KMU NCJSC, Operational Plan for the realization of the Mission, goals and objectives of the University.

The experts examined the above-mentioned documents and verified that the process of forming the University budget for the current year includes the determination of revenue and expenditure base. The income part of the University budget is formed at the expense of the state educational order, income from the provision of paid educational services, research and development and other works not contrary to the legislation, international funds, organizations, grants, etc.

The expenditure part of the budget is formed on the basis of a consolidated calculation of the need for staffing of HETP, academic and auxiliary, administrative and managerial and service personnel, consolidated requests of departments and structural subdivisions, equipping classrooms with equipment and materials for the educational process, updating the book fund of the library, professional development of HETP, AMP. The expenditures are also aimed at development of research and clinical activities, reconstruction and capital investments, acquisition of computers, photocopying equipment and software, licenses, patents and other intangible assets.

The University has successfully practiced separate accounting of finances for educational programs. The budget of educational services programs for the training of bachelors, masters, doctoral students is based on the needs necessary for the educational process: equipment of material and technical base for the development of technology of drug substances and preparations, the cost of scientific training in near and far abroad, the cost of academic mobility, participation in scientific conferences.

Since 2017, the University has had an Internal Audit Service, which reports to the Board of Directors and the Internal Audit Department of the Ministry of Health Care.



According to the work plan approved by the Board of Directors, the Internal Audit Service audits educational programs and, based on the results of the audit, makes recommendations to improve financial and academic integrity.

KMU NJSC has all the necessary resources for the proper implementation of doctoral programs: Admissions Office for the selection of doctoral students, departments/subdivisions, laboratories, library, clinical facilities for the implementation of the educational part of the program, Dissertation Council for the evaluation and defense of the dissertation.

When meeting with EEC experts, the staff of KMU NCJSC, Vice-President for Science and Clinic, Academic Affairs, Head of Career Development Department, Dean of School of Pharmacy, Director of Institute of Life Sciences, members of the Academic Committee noted that the University takes into account the achievements and experience gained in other educational and scientific institutions. HEI policy supports lifelong learning.

The order of development, approval, updating and management of educational programs is determined by the “Regulations on the Management of KMU NJSC Educational Program” (Resolution No. 14 dated September 09, 2020), approved by the decision of the Management Board of KMU NJSC in 2020.

The decision to update the educational program is made if it is necessary to make at least 70% of the changes.

The basis for updating the EP can be: the results of quality evaluation of the EP (recommendations/comments on quality evaluation; internal and external) and objective changes in the conditions of the EP implementation (changes in legislation, scientific achievements).

Quality evaluation at the level of EPs is ensured by the Committee for Quality Assurance, at the institutional level by the Division for Strategic Development and Quality Management. Internal audit and external quality evaluation procedures are carried out: accreditation in accordance with the documented procedure “Organization of Preparation for Institutional and Specialized Accreditation in KMU NCJSC”, external inspections by authorized bodies. The HEI has developed a checklist of quality control of EP implementation.

The results of the survey of doctoral students to evaluate their satisfaction with the quality of education, administrative and economic conditions, level of teaching, organization of internships and the results of the survey of HETP and academic advisors to evaluate their satisfaction with working environment, which are conducted on a regular basis, were presented to the EEC experts.

The HEI has functioning bodies, conciliation committees, dealing with the resolution of conflicts between stakeholders. Their work is carried out on the basis of developed and approved Regulations based on the legislation of the Republic of Kazakhstan.

In case of any problems, doctoral students have the opportunity to directly contact the Dean's Office of the Research School, leave a message on the blog of the Dean, President when any kind of violation of the rights of the student is revealed.

The doctoral students of the 8D07201 “Industrial Pharmaceutical Technology” program have the possibility of oral/written appeal to the Dean or supervising Vice-President, as well as to the blogs of the President, Dean on the University's website.

The Policy on Respect for the Rights and Responsibilities of University Employees and Students guarantees confidentiality when advising doctoral students about the doctoral program, academic advising, and personal matters.

KMU NJSC has an appeal mechanism at all stages of enrollment and training in doctoral programs. The procedure of consideration of addresses/appeals of doctoral students is carried out in accordance with the internal regulatory documents: Academic Policy, Regulations on the Rating System of Student Evaluation, which prescribe the official procedures of doctoral students' appeals. The appeal procedure is conducted by a committee of faculty members of the department in the presence of a member of the Dean's office. The review results in a decision, which is communicated to the doctoral student.



The 8D07201 “Industrial Pharmaceutical Technology” program is implemented by the School of Pharmacy, Life Science Institute, laboratories, School of Pharmacy departments, Department of Academic Affairs, Career Development Office, Academic Senate Committee, School of Pharmacy Quality Assurance Committee, Department of Human Resource Management, Department of Economics and Finance, Library.

During a visit to the University and an interview with employees of the above departments of the University, the members of the EEC received comprehensive information about the role of each of these sectors in the implementation of the EP, received feedback about doctoral students, their work in the field. Each department in the implementation of the EP works within the framework of its official duties.

The doctoral students take part in the Council of the Institute, the Senate and the Committee on Quality Assurance of the School.

*To the question of the questionnaire “Program directors and teachers involve students in the work of advisory bodies (methodological council, academic council, committees of educational programs)”, respondents answered as follows: “yes, constantly” - 79.4%, “no, they do not involve” - 4.8%, “I do not know anything about it” -11.1%, “I doubt the answer” - 4.8%.*

**EEC conclusions on the criteria.** Comply with 9 standards: fully compliant - 7, partially compliant - 2, not compliant - 0

**Standard 8: fulfilled**

**Recommendations for improvement identified during the external visit:**

- 1) Conduct benchmarking to evaluate and update the educational program. (8.4 BS)
- 2) Systematize mechanisms for monitoring and evaluating changes in the educational program. (8.5 BS)

Thus, of the 63 accreditation standards, 58 are fully fulfilled, 5 are partially fulfilled, including 3 basic standards (BS) and 2 improvement standards (IS).

## **5. Recommendations for improvement of 8D07201 – “Industrial Pharmaceutical Technology” educational program:**

1. Foreign internships of doctoral students to be carried out on a regular basis. (1.4 BS)
2. Provide for the signing of a contract between the academic advisor, the doctoral student, and the doctoral program director for academic advising. (5.9 IS)
3. Develop and implement mechanisms to stimulate the writing and defense of dissertations in English. (6.1 IS)
4. Conduct benchmarking to evaluate and update the educational program. (8.4 BS)
5. Systematize mechanisms for monitoring and evaluating changes in the educational program. (8.5 BS)

## **6. Recommendation to the ECAQA Accreditation Council**

The EEC members established the compliance of the 8D07201 “Industrial Pharmaceutical Technology” educational program with the Standards of Accreditation and came to the unanimous opinion to recommend to the ECAQA Accreditation Council to accredit this program for a period of 5 years.

#### 6. Рекомендация Аккредитационному совету ЕЦА

Члены ВЭК пришли к единогласному мнению рекомендовать Аккредитационному совету аккредитовать образовательную программу **8D07201 «Технология фармацевтического производства» НАО «Медицинский университет Караганды»**, соответствующую Стандартам аккредитации образовательных программ PhD докторантуры медицинских организации образования на период 5 лет.

**Председатель Внешней экспертной комиссии**  
КУДАБАЕВА ХАТИМЯ ИЛЬЯСОВНА

**Зарубежный эксперт**  
РЫЖКИН СЕРГЕЙ АЛЕКСАНДРОВИЧ

**Зарубежный эксперт**  
АФРИКЯН ШУШАНИК ГЕВОРКОВНА

**Национальный академический эксперт**  
УРАЗОВА САЛТАНАТ НУРГОЖАЕВНА

**Национальный академический эксперт**  
ШАБДАРБАЕВА ДАРИЯ МУРАТОВНА

**Национальный академический эксперт**  
РАМАЗАНОВА РАЙГУЛЬ МУХАНБЕТОВНА

**Национальный академический эксперт**  
ЖУМАЛИНА АКМАРАЛ КАНАШЕВНА

**Национальный академический эксперт**  
ТУЛЕУТАЕВА РАЙХАН ЕСЕНЖАНОВНА

**Национальный академический эксперт**  
БАЙГОЖИНА ЗАУРЕ АЛПАНОВНА

**Национальный академический эксперт**  
РАМАЗАНОВА ШОЛПАН ХАМЗАЕВНА

**Национальный академический эксперт**  
ЕРАЛИЕВА БИБИХАН АБДАЛИЕВНА

**Национальный академический эксперт**  
ИСПОСУНОВА ГУЛЬНАРА АХМЕТКАЗЫЕВНА

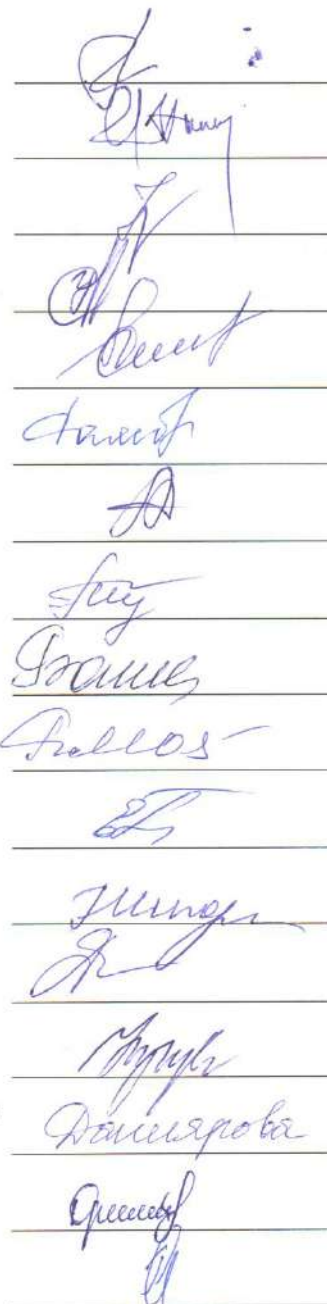
**Национальный академический эксперт**  
ДОШАКАНОВА АСЕЛЬ БАЙДАУЛЕТОВНА

**Национальный академический эксперт**  
ДОСАНОВА АСЕМ КАЛЕЛОВНА

**Эксперт- представитель практического здравоохранения**  
ДАНИЯРОВА БАЯН ЛАШИНОВНА

**Эксперт – представитель докторантов**  
ОРАЗБАЙ АҚНҰР ДӘУРЕНҚЫЗЫ

**Эксперт – представитель резидентов**  
ҚҰРАҚ АЙДАНА ЖАНАЙДАРОВНА



**Quality profile and criteria of external evaluation of 8D07201 “Industrial Pharmaceutical Technology” educational program of Doctoral studies (summary)**

| Standard | Evaluation criteria             | Number of standards | Evaluation      |                     |               |
|----------|---------------------------------|---------------------|-----------------|---------------------|---------------|
|          |                                 |                     | Fully compliant | Partially compliant | Not compliant |
| 1.       | SCIENTIFIC RESEARCH ENVIRONMENT | 6                   | 5               | 1                   |               |
| 2.       | FINAL RESULTS                   | 5                   | 5               |                     |               |
| 3.       | ENROLLMENT POLICY AND CRITERIA  | 6                   | 6               |                     |               |
| 4.       | PhD DOCTORAL PROGRAM            | 10                  | 10              |                     |               |
| 5.       | ACADEMIC ADVISING               | 11                  | 10              | 1                   |               |
| 6.       | PhD DISSERTATION                | 9                   | 8               | 1                   |               |
| 7.       | EVALUATION                      | 7                   | 7               |                     |               |
| 8.       | ORGANIZATION STRUCTURE          | 9                   | 7               | 2                   |               |
|          | <b>Total:</b>                   | <b>63</b>           | <b>58</b>       | <b>5</b>            |               |
|          |                                 |                     | <b>63</b>       |                     |               |

**List of documents reviewed by the EEC members within the framework of external evaluation of the educational program**

| <b>No.</b> | <b>Names of documents</b>                                                                                                                                               | <b>Quantity</b> | <b>Date of approval</b> |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------|
| 1.         | Organizational structure and management structure of the organization                                                                                                   | 1               | 03.10.2022              |
| 2.         | Mission of the University                                                                                                                                               | 1               | 22.10.2019              |
| 3.         | The development program of the Research University for 2019-2023.                                                                                                       |                 | 27.06.2019              |
| 4.         | Operational plan of KMU NJSC                                                                                                                                            | 1               | Not specified           |
| 5.         | Academic policy of KMU NJSC                                                                                                                                             | 1               | 27.08.2021              |
| 6.         | Charter of the League of Academic Integrity;                                                                                                                            |                 | 28.08.2018              |
| 7.         | Doctorate EO - Pharmacy                                                                                                                                                 | 1               | 25.05.2021.             |
| 8.         | Regulations on doctoral studies                                                                                                                                         | 1               | 26.08.2019.             |
| 9.         | Regulations on the Local Bioethics Commission                                                                                                                           |                 | 27.07.2022              |
| 10.        | Contract for joint consulting of doctoral students                                                                                                                      | 2               | 30.10.2020              |
| 11.        | Extract from the minutes of the Extended Cathedral Meeting                                                                                                              | 1               | 29.10.2021              |
| 12.        | Protocol of the School of Pharmacy                                                                                                                                      | 1               | 28.11.2022              |
| 13.        | Individual work plan of a doctoral student                                                                                                                              | 1               | 21.08.2020              |
| 14.        | Self-assessment report of the PhD Pharmacy (Rus, kaz, English)                                                                                                          | 3               | 16.09.2022              |
| 15.        | Material and technical base for the implementation of the accredited educational program (to Standard 1.2)                                                              | 1               | 16.09.2022              |
| 16.        | Brief description of the information resources available to the departments and PhD doctoral students of the educational program "8D10140 "Pharmacy"" (to Standard 1.2) | 1               | 16.09.2022              |
| 17.        | Library (to Standard 1.2)                                                                                                                                               | 1               | 16.09.2022              |
| 18.        | Characteristics of clinical bases, organizations of doctoral students' training (to Standard 1.2)                                                                       | 1               | 16.09.2022              |
| 19.        | List of foreign organizations that have concluded an agreement on joint training of PhD doctoral students (to Standard 1.4)                                             | 1               | 16.09.2022              |
| 20.        | Expected competencies of PhD doctoral students (to Standard 2.1)                                                                                                        | 1               | 16.09.2022              |
| 21.        | The contingent of PhD doctoral students in the educational program "Pharmacy" (to Standard 3.2)                                                                         | 1               | 16.09.2022              |
| 22.        | Characteristics of doctoral students (to Standard 3.3)                                                                                                                  | 1               | 16.09.2022              |
| 23.        | Information about the disciplines of the doctoral program 8D10140 "Pharmacy" (to Standard 4.5)                                                                          | 1               | 16.09.2022              |
| 24.        | Syllabuses                                                                                                                                                              | 9               | 16.09.2022              |
| 25.        | Information about the participation of doctoral students in scientific events (to Standard 2.4)                                                                         | 1               | 16.09.2022              |
| 26.        | Information about teachers of profile departments who have been trained in professional skills (to Standard 5.5)                                                        | 1               | 16.09.2022              |

|     |                                                                              |   |            |
|-----|------------------------------------------------------------------------------|---|------------|
| 27. | Indicators of research activity (to Standard 5.4)                            | 1 | 16.09.2022 |
| 28. | Information about the employment of PhD doctoral graduates (to Standard 5.7) | 1 | 16.09.2022 |
| 29. | List of external financing of research work (to Standard 8.1)                | 1 | 16.09.2022 |

ECAQA