



«АККРЕДИТТЕУ ЖӘНЕ РЕЙТИНГТІҢ
ТӘУЕЛСІЗ АГЕНТТІГІ» КЕМ

НУ «НЕЗАВИСИМОЕ АГЕНТСТВО
АККРЕДИТАЦИИ И РЕЙТИНГА»

INDEPENDENT AGENCY FOR
ACCREDITATION AND RATING

REPORT

on the results of the work of the external expert commission for assessment
for compliance with the requirements of specialized accreditation standards
Karaganda State Medical University of educational programs

in the specialties of doctoral studies

6D074800 "Technology of pharmaceutical production" and 6D110400 "Pharmacy"
from "02" to "04" May 2018

Karaganda 2018

INDEPENDENT AGENCY OF ACCREDITATION AND RATING
External expert commission

*Addressed to the
IAAR
Accreditation Council*



Независимое агентство
аккредитации и рейтинга

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May "4th", 2018

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(I) LIST OF SYMBOLS AND ABBREVIATIONS

RSE “KSMU”, University, Higher institution – The Republican State Enterprise "Karaganda State Medical University"
PhD – doctor of philosophy
SWOT – Strengths, weaknesses, opportunities, threats
AC – academic council
AMS – administrative and managerial staff
JSC IRPH "Phytochemistry" – Joint Stock Company "International Research and Production Holding" Phytochemistry"
SCSE RK – State compulsory standard of education of the Republic of Kazakhstan
DAW – Department of Academic Work
DHRM – Department of Human Resources Management
DSD and IC – Department of Strategic Development and International Cooperation
DOW – Department of Operational Work
IEP – individualized education program
KSMU – Karaganda State Medical University
CED – catalogue of elective disciplines
CUL – collective use laboratory
MH RK – Ministry of Healthcare of the Republic of Kazakhstan
MES RK – Ministry of Education and Science of the Republic of Kazakhstan
MAP – modular academic program
IS ISO – ISO international standard
MTB – material and technical base
SAC – State Attestation Commission
RW – research work
RWDS – research work of a doctoral student
RLA – regulatory legal acts
CPD – continuous professional development
SEC – scientific expert commission
SEC – scientific expert council
DSIAM – Department of Scientific and Innovative Activity Management
EP – educational program
ATS – academic teaching staff
OC – operational curriculum
CE – council of employers
MC – model curriculum
TPP – technology of pharmaceutical production
EMCD – educational and methodological complex of disciplines
AB – academic board

(II) INTRODUCTION

In accordance with the order of the IAAR No.25-18-ОД dated 19.03.2018 a visit of an external expert commission (EEC) was held in the Republican State Enterprise "Karaganda State Medical University" from 02 to 04 May, 2018. The correspondence of the educational programs of doctoral studies 6D074800 "Technology of pharmaceutical production" and 6D110400 "Pharmacy" to the standards of specialized accreditation of IAAR was evaluated:

Chairman of the Commission – Botagoz Saitovna Turdalieva, Head of the Department of Healthcare Policy and Management with a course in medical law and forensic medicine, Kazakh National Medical University named after S.D. Asfendiyarov. (Almaty);

1. **Foreign expert** –Valentina Alexandrovna Markova, Associate Professor of the Department of Management and Economics of Pharmacy, St. Petersburg Chemical and Pharmaceutical University (St. Petersburg, Russia));
2. **Expert** – Botagoz Ongarovna Torlanova, Head of the Department of Pharmaceutical Production Technology, JSC South Kazakhstan Medical Academy (Shymkent);
3. **Expert** –Nurila Amangaliyevna Maltabarova, Head of the Department of Emergency Medical Care and Anesthesiology, Reanimatology, Candidate of Medical Sciences, associate professor, JSC "Medical University Astana" (Astana);
4. **Expert** – Akmaral Kanashevna Zhumalina, Head of the Department of Children's Diseases No.1 with neonatology, MD, Professor, West Kazakhstan State University named after M. Ospanov (Aktobe);
5. **Expert** – Assiya Erbulatovna Iglukova, Head of Strategic Development and QMS of the Kazakh Medical University of Continuing Education (Almaty);
6. **Expert** –Ardak Nazylovna Zhumagalieva, Assistant of the Department of Therapy Internship, Semey State Medical University (Semey);
7. **Employer** – Bayan Lashinovna Daniyarova, Deputy Director for Clinical Work, PSE "Regional Clinical Hospital" HDKO (Karaganda).
8. **Student** – Diana Ravilievna Makhmutova , Resident of the 1st year of study in the specialty "Anesthesiology, reanimatology, including children's", JSC "Medical University Astana" (Astana);
9. **The observer from the Agency** – Alisa Satbekovna Dzhakenova, Head of medical projects (Astana).

The EEC report contains an assessment of the adequacy of the educational programs submitted by the organization of education to the criteria of the IAAR, the recommendations of the EEC for the further improvement of educational programs and the profile parameters of the educational programs.

(III) PRESENTATION OF THE ORGANIZATION OF EDUCATION

Karaganda State Medical University was established in 1950 on the basis of the Resolution of the Council of Ministers of the Kazakh SSR No. 65 of January 20, 1950 "On the organization of the Karaganda State Medical Institute" in accordance with the decree of the Council of Ministers of the USSR dated December 5, 1949 No. 19630-p. Since that time a highly professional team of 11 departments of the Medical Faculty has started its teaching activity. The university progressively developed annually: new departments were opened, educational buildings, hostel buildings, dispensaries, rest areas were built. In 1959, the Sanitary and Hygienic Faculty was opened (now the Faculty of Preventive Medicine, Biology and Pharmacy), in 1962 the Pediatric Faculty was organized, in 1978 - the Dental Faculty. In 1992, the first in Central Asia and the third in the CIS Medical Biology Faculty was founded. In 1992, the Faculty of Advanced Training of Medical-preventive and Clinical Disciplines (FAT) was founded, and in 1993 - the Faculty of Pedagogical Qualification Improvement (FPQI). In 2002, the specialties "Oriental Medicine" and "Pharmacy" were opened. In 2013 - the specialty "Biology" and "Technology of pharmaceutical production".

The quality of education and research is provided by a high level of infrastructure: 4 educational buildings with classrooms equipped with interactive equipment; a scientific library with reading rooms and a hall of an electronic library, the fund of which at the moment is 858,805 copies, including 372,893 copies in the state language; Scientific-research center and molecular-genetic laboratory of collective use; 6 dormitories, 57 clinical bases, polyclinic, student sports and recreation camps and recreation areas.

Students and staff are provided with a high-speed Wi-Fi network covering the area of all the university's academic buildings and dormitories. KSMU is the first Kazakhstan university with 64 virtual servers, 14 physical servers and a data processing center with a total capacity of 193 Tb.

Each student and employee has a personal corporate e-mail Outlook and a personal account to enter the information system of the university (IS UNIVERSITY), employees have personal access to the corporate portal based on SharePoint for the implementation of electronic workflow.

Within the framework of the implementation of the "State Program for the Development of Health Care of the Republic of Kazakhstan" Salamatty Kazakhstan for 2011-2015", the Ministry of Health of the Republic of Kazakhstan in the structure of the research center of the KSMU opened a collective use laboratory in 2012 for gene-molecular research in the North-Western region of the Republic of Kazakhstan.

In KSMU, in accordance with state license No. KZ78LAA00009866 of August 14, 2017, training is provided in Kazakh, Russian and English languages at 54 departments and courses at the undergraduate and postgraduate levels of study.

The staff of the university is represented by highly qualified teachers, including 70 doctors of science, 7 doctors of PhD and 265 candidates of science. Twenty teachers of the university are correspondents of the National Academy of Sciences, the Academy of Medical Sciences, the Academy of Military Sciences, the National Academy of Natural Sciences of the RK, the Russian Academy of Natural Sciences, the International Academy of Informatization, the Eurasian International Academy of Sciences.

Within the framework of integration into the European educational space in the context of the Bologna Process on September 17, 2010, the KSMU signed the Great Charter of Universities in Bologna (Italy). In 2011 - in the directory of medical schools "Avicenna" of the World Health Organization (World Directory of Medical Schools, WHO).

KSMU is a member of the Association for the Study of Medical Education in Europe (AMEE) of the Association for the Study of Medical Education in Europe (ASME), the Association of Medical Education in Asia (AMEA), the Organization for the Protection of PhD in Biomedicine and Health in the European System (ORPhEUS), the Organization for Academic Mobility Pacific and South-Eastern region (UMAP), the European Association of Universities (EUA).

The University carries out active international cooperation in the field of medical education, science and practice with medical universities and scientific centers of the countries of near and far abroad. Among the partners of KSMU are universities such as: University in Albany (USA), University of Poitiers (France), University of Gothenburg (Sweden), University of Madrid (Spain), University of Lund (Sweden), University of Maastricht (Holland), University of Leicester (Great Britain), The University of Porto (Portugal), the University of St. George (London, Great Britain), the Karolinska Institute (Sweden), the University of Mazarik (Czech Republic), Aristotle University (Greece), the National University of Malaysia (Malaysia).

In 2015, the University joined the European Association of Universities and became the first grantee of the Erasmus + Project on capacity building in the field of higher education among medical universities in Kazakhstan.

The University participates in the implementation of republican programs and projects of scientific research in the field of health, international multicenter studies SMART, METALL, UTIAP. Over the past three years, the number of publications in publications indexed in authoritative databases of scientific information by Thomson Reuters and Scopus has increased 6-fold. In addition, over 30 grant financing projects have been implemented by the Ministry of Education and Science of the Republic of Kazakhstan. From 2004 to the present, more than 50 scientific and technical programs and projects in the field of public health and medical education were implemented.

Since 2017, KSMU has become a participant in the Eurasian project on the introduction of entrepreneurial education in higher education institutions of the Republic of Kazakhstan (ERG). Within the framework of this project, the academic teaching staff (ATS) was trained to develop entrepreneurship in the university.

The accreditation committee for simulation training of the Association of Medical Education in Europe (AMEE) recognized the simulation program of the university and noted the ASPIRE award "Excellence simulation-based healthcare education" in 2017.

The effectiveness of the university is confirmed by the reports of the commission for assessing the activities of the university in 2016-2017 academic year, the successful specialized accreditation.

There were conducted:

- in 2017, the certification of the university in accordance with the standards of ISO 9001: 2015 and ISO 50001: 2011 "Energy Management" (Association for certification "Russian Register", Russia);
- accreditation in the field of healthcare for compliance with accreditation standards for medical organizations providing inpatient care (2016);
- accreditation and supervisory audit of the Scientific and Research Sanitary and Hygienic Laboratory of the Scientific Research Center of the KSMU for compliance with the requirements of AUSS ISO / IEC 17025 "General Requirements for Testing and Calibration Laboratories".
- certification for compliance with the standard of good clinical practice (GCP) by the Committee of Pharmacy of the Ministry of Health of the Republic of Kazakhstan.
- specialized accreditation of 36 specialties in the national agency of IKAQAE.

In the same year, the 1st prize was awarded at the "Meykaton" contest among students' innovation projects of the Republic of Kazakhstan.

The percentage of graduates' employment from year to year remains at a high level (97%), which undoubtedly speaks about the recognition, demand and competitiveness of our specialists in the labor market.

In 2012, KSMU obtained the right to conduct educational activities under PhD programs for doctorates in the specialties "Pharmacy", "Technology of pharmaceutical production". For the period of study from 2012 to the present, no doctoral candidate has been expelled or completed an academic leave.

In the 2013-2014 academic year, 2 students enrolled in doctoral studies in the 6D110400 "Pharmacy" specialty and also 2 students – in the 2015-2016 academic year.

For 4 academic years in KSMU (2013-2017), a total of 4 people have studied and continue to study in the doctoral studies in the specialty "Pharmacy". The first issue of doctoral students in the specialty "Pharmacy" was held at KSMU in 2016 (E.S. Zhunusov , A.S. Adekenova). Both doctoral students successfully completed the training program, defended their dissertations, they were awarded PhD degrees in the specialty "Pharmacy". E.S. Zhunusov was employed at the department of KSMU, A.S.Adekenova - in JSC IRPH "Phytochemistry".

At the EO in the 2014-15 academic year 1 doctoral student enrolled in the specialty PhD-doctoral studies 6D074800 "**Technology of pharmaceutical production**", in the 2015-16 academic year - 2 doctoral students, in 2016-17 academic year - 1 doctoral student, in 2017-18 academic year - 6 doctoral students.

The first issue of the specialty PhD-doctoral studies 6D074800 "Technology of pharmaceutical production" was held in 2017 (A.S.Kishkintaeva), defense of the thesis should be held in 2018.

The Department of Pharmaceutical Disciplines and Chemistry is the graduating department.

Teachers who provide the educational process for the PhD program "Technology of pharmaceutical production" and "Pharmacy" meet the qualification requirements, 100% of the teaching staff have the scientific degrees of a candidate or doctor of science.

(IV) DESCRIPTION OF THE EEC VISIT

The work of the EEC was carried out on the basis of the Program of the visit of the expert commission for the specialized accreditation of educational programs at the KSMU, from 02 to 04 May 2018.

In order to obtain objective information about the quality of educational programs and the entire infrastructure of the KSMU, the meetings with the rectors, pro-rectors, heads of the departments of accredited EO, the dean of the Faculty of Public Health, Biology and Pharmacy, the teaching staff, doctoral students, graduates, employers were held to clarify the content of self-assessment reports. In total 41 people participated in the meeting.

During the meeting, the commission determined such positions as the administration of the educational process in the specialties of doctoral studies, the correspondence of the training organization in doctoral studies to the requirements of the RK in this field, the possibility of using international experience through the implementation of strategic partnership, the support of the ATS, doctoral candidates from the AMS, the resource support of the scientific and educational process in high school on accredited specialties, the demand for graduates in the labour market and their assessment by employers, fate stakeholders in the development mission of the institution, OP and other issues.

During the visual inspection of the university EEC visited the dean's office, the research center, the computer center, the assembly hall, the library, the sports hall, the Academic Work Department, the Registrar's office, the Student Service Center, the KSMU Museum, and the Practical Skills Center.

In the second day of the EEC visited the Department of Pharmaceutical Sciences and Chemistry and JSC "ISPH" Phytochemistry". In the course of the meeting, conversations were held with the main ATS and part-time employees, including Doctor of Pharmaceutical Sciences S.A. Ivasenko, Doctor of Chemical Sciences D.P. Khrustalev, , Ph.D. L.M. Vlasova, Ph.D. B.M. Kokzhalova, Ph.D. A.N. Zhabaeva, Ph.D. G.H. Tuleuova, Ph.D. G.A. Atazhanova, Ph.D. Zh.R. Shaymerdenova, K.K. Shakarimova, M.A. Zhunusova, G.M. Baysarov, K.A. Kanapin.

During the visit, the Commission visited the classes conducted by the department, clinical sites where doctoral students are trained and undergo research practice.

All teaching materials, providing educational process have been studied: EMCD, methodical departments, calendar-thematic plan.

During the work of the commission meetings were held with the head of the department, employees, doctoral students. Doctoral students demonstrated skills of research work in laboratories, actively answered questions of the commission members.

The third day the commission analyzed the documents regulating the educational, scientific process in the university on accredited specialties. All documents on request of the commission were provided on time, with seals and signatures of the executors and the administration, and explanations from the university staff were provided, if necessary.

Practical training of doctoral students ensures the passage of various types of professional practices (pedagogical and research practice - for students under the PhD program in the amount of not less than 3 credits each), scientific internships.

Professional practice of doctoral students is conducted in accordance with the approved academic calendar and individual work plan in the amount established in the PS by profession.

Pedagogical practice is conducted with the aim of forming and improving the teaching skills in higher education. Pedagogical practice of doctoral students in KSMU is conducted on the first course in the spring semester according to the approved working curriculum and academic calendar. In addition, the consolidation of teaching skills can be carried out without detachment from theoretical and research training in the form of conducting classes in the bachelor's degree in the disciplines of the specialty of training during the academic year.

The research practice of the PhD doctoral student is held at the KSMU according to the academic calendar in the autumn semester of the second year of study, the duration of the practice is 3 credits, which for this type of practice is 12 weeks (360 hours).

The content of research practice is determined by the specialty of training, the subject of research work of the doctoral candidate and scientific adviser and aims at mastering the skills of planning and carrying out scientific research, processing and analysis of data obtained, processing scientific documentation and preparing scientific publications. The purpose of the practice is to form the skills of performing research work.

The laboratory of the department, PCI KSMU, production (JSC IRPH "Phytochemistry"), where the experimental part of the doctoral student's work is conducted under the guidance of a scientific consultant, is the base of the practice.

The results of the practice are presented in the form of a report, the form of which is approved by the KSMU. The reports are heard at the meeting of the supervising chair.

(V) DESCRIPTION OF PREVIOUS ACCREDITATION PROCEDURE

Accreditation of the doctoral candidate's EP in the specialties "Pharmacy" and "Technology of pharmaceutical production" was not previously conducted.

(VI) CONFORMING TO THE SPECIALIZED ACCREDITATION STANDARDS

6.1 Standard "Mission and final results of study"

Evidence part

The activity of the institution is aimed at the realization of the mission of the KSMU. The mission is correlated with the Strategic Plan of the KSMU for 2017-2021. The strategic goal and objectives of the mission correspond to the goals and objectives of the university.

The mission, vision and strategic goal of the university correspond to the goals, objectives and priorities of the national education system, which is expressed in the university's desire to constantly improve the level of training of specialists for providing quality medical services to the population of Kazakhstan.

The University attracts to the formation of doctoral studies in the specialties "Pharmacy" and "Technology of pharmaceutical production" of teaching staff, students and employers. Accounting for the interests of employers is laid down at the level of determining the goals of training specialists. Employers annually formulate their needs for specialists and the requirements for their training.

Information on the content of doctoral studies for the specialties "Pharmacy" and "Technology of pharmaceutical production" is communicated to interested persons by posting on the site of the KSMU.

PhD programs in the specialties "Pharmacy" and "Technology of pharmaceutical production" are regularly reviewed and approved.

The university conducts an analysis of the external and internal environment. The degree of satisfaction of teachers, students is determined in the course of sociological monitoring. Monitoring is organized and conducted in accordance with established requirements. Surveys and questionnaires at KSMU are conducted among students, graduates, employers and teachers with the purpose of revealing their opinion on the quality of professional activity of teachers, on the quality of managerial activity and other important issues of the educational process.

Strengths / best practice

The strengths include:

- The presence of the university approved the Quality Policy
- Meeting the objectives of the EP with the strategic development plan and the mission of the university
- High demand for graduates in the labour market
- Developed regulatory documents in the university for all types of activities that determine the responsibility for implementing the EP (Regulations, instructions)
- High institutional rating of the university and educational programs.

Analytical part

The implementation of the doctoral program for the specialties "Pharmacy" and "Technology of pharmaceutical production" corresponds to the requirements of the standard "Mission and final results of study", which is confirmed by 100% employment of graduates (Pharmacy - 2, Technology of pharmaceutical production - 1).

The process of developing a doctoral program for the specialties "Pharmacy" and "Technology of pharmaceutical production" is transparent and accessible to all interested persons (confirmed during interviews with doctoral candidates and employers).

Institutional autonomy and academic freedom is confirmed by the fact that the policy in the field of quality assurance of the KSMU educational programs was developed and approved by the decision of the Academic Council of the KSMU on January 21, 2016 (Minutes No. 6). In the formation and implementation of the Quality Assurance Policy, all units of the university and the owners of the processes are involved, while relying on the main principles of the activities prescribed in the Policy. The document is presented on the corporate portal of the university in the section "Quality Management System". The activity of each division is regulated by the internal documents developed by the KSMU - the Regulations, which are also presented on the portal in the section "The Regulations of the University".

The Department of Academic Work (DAW), along with the dean's office, is responsible for drafting the curriculum, registering the educational achievements (registrar's office), scheduling classes, boundary and final control. The Department for the Transfer of Innovative Technologies (DTIT) is responsible for the implementation and monitoring of innovative teaching methods, the organization of teaching of the academic teaching staff, together with the supervising dean, conducts an analysis of the students' satisfaction with the quality of the educational process. The Department of Management of Scientific and Innovative Activities (DMSIA) monitors the implementation of research work by students; the Department for International Cooperation and the Bologna Process participates in the planning and organization of foreign internships, academic mobility of students and teachers (together with the deans); chairs implement the implementation of the EP; library, DEW and other supporting structural units provide the infrastructure of the learning process.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements /

unsatisfactory)

Strong – 21

Satisfactory – 0

Requires improvements – 0

Unsatisfactory – 0

6.2 Standard "Scientific research environment and educational resources"

Evidence part

The success of PhD programs for doctorates in the specialties "Pharmacy" and "Technology of pharmaceutical production" at the Faculty of Public Health, Biology and Pharmacy of the KSMU is provided by the presence of a strong and effective research environment conducive to the development and development of research skills of PhD doctoral students. Its main goal in accordance with the Law of the Republic of Kazakhstan "On Education" and the State Educational Establishment of the Republic of Kazakhstan is the preparation of highly specialized scientific and pedagogical staff for the system of higher and postgraduate education, for the research sector and practical public health (the Statute on doctoral studies at KSMU).

The organization of a strong and effective research environment is the combination of a strong competency level of scientific leaders and consultants, a high-tech research resource base (laboratories, research centers, a collective laboratory of the SIC KSMU, clinics), cooperation with leading medical research organizations and institutions in Kazakhstan, (List of cooperation agreements, Department of International Cooperation of KSMU: <https://portal.kgmu.kz>).

KSMU ensures the acquisition by the doctoral students of the necessary knowledge and competences based on the study of basic and specialized disciplines, the formation of skills and abilities in the passage of professional (teaching, research) practice and in the performance of research. Training sessions in doctoral studies are conducted by persons having a doctorate or Ph.D. The highly professional level of teachers, scientific advisors, consultants PhD-doctoral students is confirmed by the fact that 100% of the teaching staff have doctoral degrees or Ph.D., extensive experience in both higher education and participation in research projects at various levels.

Over the past 3 years, in general, there has been an increase in publications in indexed publications. ATS, conducting classes in the disciplines of the educational program of doctoral studies and / or being scientific consultants of doctoral dissertations; published full-text articles in such prestigious publications as J. Georgian Medical News (Cited in Scopus), Life Science Journal (Cited in Scopus), Georgian Medical News (Cited in Scopus), Russian Journal of Physical Chemistry A (Cited in Thompson-Reuter), International Journal of Pharmacy & Technology (Cited in Scopus), Chemistry of Natural Compounds (Cited in Thompson-Reuter), Non-ferrous Metals (Cited in Scopus). During the reporting period, 10 patents of the Republic of Kazakhstan were received, 12 applications for patents of the Republic of Kazakhstan were submitted.

It should be noted that many teachers who teach the disciplines of the doctoral program and / or are scientific consultants for doctoral dissertations have a nonzero Hirsch index (Thomson Reuters, Scopus, Web of Science, Google Scholar, RINC).

On the basis of the KSMU there is a Laboratory of Collective Use (LCU), equipped with modern equipment for carrying out deep molecular genetic and proteomic-genomic studies. The laboratory has a number of profiled subdivisions: microbiological, immunological, chromatographic, PCR diagnostics and sequencing, washing and sterilization unit. The laboratory has the necessary infrastructure to implement a full cycle of research, including sample preparation and disposal activities. The equipment of LCU and high qualification of the personnel allows to solve the widest range of tasks, including within the framework of preparation and execution of scientific projects and dissertational works of various levels.

At present, work is underway to prepare the LCU for accreditation procedure for compliance with the requirements of ISO 15189 "Medical laboratories".

Today, there is an opportunity to conduct PhD research in the framework of the

Pharmaceutical Cluster Concertium, the Agreement on the creation of which was signed on January 22, 2016 by 17 participants, including the JSC ISPH "Phytochemistry", LLP "Karaganda Pharmaceutical Plant", RSE on REM "NCEDMPME MHSD RK in Karaganda", "Bayanaul National Nature Park", NC "Kyzyl May", LLP "Center for Phytotherapy" and others. One of the subjects of the agreement is participation in the implementation of joint scientific research, the development of a pilot experimental and laboratory research base for its joint use, joint participation in the development of international cooperation programs in the field of science and production.

PhD-doctoral students also carry out part of their scientific research in far-abroad countries (Hungary, Poland) in the framework of international internships. In 2015, the university joined the European Association of Universities (EUA) to develop research activities and improve the quality of doctoral programs in the European Union, cooperation with international European universities and organizations. The University participates in international meetings, conferences on the development and implementation of international standards for PhD education, global internationalization of doctoral studies for the successful resolution of public health problems.

Strengths / best practice

The strengths include:

- High professional level of the academic teaching staff participating in the implementation of doctoral studies
- Effective incentive and motivation system for teaching staff in the university
- Providing a unified system for the teaching competences of the academic teaching staff and innovative educational technologies
- Attraction of doctoral candidates of leading employees of organizations of practical pharmacy for scientific consulting
- Developed material, technical, social and cultural base of the university
- A wide range of information resources for the successful implementation of PhD programs for the specialties "Pharmacy" and "Technology of pharmaceutical production"
- Presence of regulations in the university of the principles of academic honesty, business ethics and bioethics

Analytical part

The standard "Research environment and educational resources" reflects the level of an adequate material and technical base and human resources allowing doctoral students to receive timely and qualitatively the results of scientific research, which are brought to the attention of a broad scientific audience by speaking at international conferences, and the preparation of doctoral dissertations that are successfully being defended in dissertational councils at medical universities of the Republic of Kazakhstan. In order to improve the process of preparing doctoral candidates, there is a need to strengthen the educational programs of doctoral studies with the involvement of a strategic partner institution, the use of international experience and the creation of joint PhD doctoral programs, increase the volume of research funding from external sources.

EEC recommendations

- ✓ Establish joint doctoral studies for the specialties "Pharmacy" and "Pharmaceutical production technology" with strategic partner universities to obtain the possibility of awarding degrees from two universities.
- ✓ Attract external funding for research in the field of practical pharmacy and medicine by identifying the most pressing problems of modern healthcare.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 26

Satisfactory – 1
Requires improvements – 1
Unsatisfactory – 0

6.3 Standard "Policies and admission criteria"

Evidence part

In KSMU, admission to doctoral studies in the specialties "Pharmacy" and "Technology of pharmaceutical production" is carried out in accordance with the Model rules for admission to education in the organization of education, implementing professional curricula of postgraduate education, approved by Decree of the Government of the RK of 19.01.2012 No. 109 and the State compulsory standard of postgraduate education, approved by the Decree of the Government of the RK of 23.08.2012 No.1080 (Section 1. Doctoral studies): on a competitive basis according to the results of the entrance examinations. Also, the KSMU has defined and implemented the Policy of admission and selection of applicants, which describes the criteria for admission of doctoral candidates to the university, the technology of enrollment, the work of the admission committee, and the formation of the student contingent.

The program of the entrance examination for doctoral studies in the specialties "Pharmacy" and "Technology of pharmaceutical production" for admission in 2017 was approved on May 17, 2017 by the rector of the KSMU.

The purpose of the entrance examination is to determine the degree of preparedness of the PhD-doctorate for the development of the educational program.

In connection with the changing requirements for the competencies of graduates of doctoral studies, the program of entrance examinations is reviewed and approved annually.

Citizens entering the doctorate in the specialties "Pharmacy" and "Technology of pharmaceutical production" take the entrance examinations: 1) one of the foreign languages of choice (English, French, German); 2) in the specialty.

In the absence of requisite prerequisites, the applicant is allowed to learn them on a paid basis (graduate doctorate in the specialty "Pharmacy" E.S. Zhunusov). In this case, the study in doctoral studies begins after the full development of the prerequisites.

The SEC is a commission that works as a part of the advisory body of the KSMU, the Scientific Expert Council (SEC). The Statute on the scientific and expert council and scientific and expert commissions of the Kazan State Medical University has been developed and approved. The last version was approved on January 25, 2013 by the rector of the KSMU. The SEC is created for organizing and conducting an examination of the research directions on the appropriate profile, scientific and technical and innovation activity, activities with the educational process and improving the quality of training of specialists and scientific and pedagogical personnel.

Formation of a contingent of doctoral candidates is carried out by means of budgetary financing, placement of the state order for the training of personnel, as well as payment for training at the expense of the citizens' own funds and other sources.

Strengths / best practice

The strengths include:

- Relevant subject matter of doctoral dissertations
- The presence at the KSMU of the Laboratory of Collective Use (LCU), equipped with modern equipment with the admission of doctoral students to work on the research topic.
- The possibility to conduct PhD research in the framework of the "Pharmaceutical Cluster" Consortium, including at the JSC IRPH "Phytochemistry", LLP "Karaganda Pharmaceutical Plant", RSE on REM "NCEDMPME MHSD RK " in Karaganda, "Bayanaul National Nature Park", NC "Kyzyl May", LLP "Center of Phytotherapy", etc.
- The opportunity for doctoral students to carry out part of their scientific research in the

far and near abroad (Hungary, Poland, Turkey, Russia and Ukraine) in the framework of international internships.

Analytical part

According to the "Policies and admission criteria" standard, the policy for admission of doctoral candidates meets the requirements of interested parties, taking into account changing expectations and circumstances, requirements for human resources, changes in the system of postgraduate education and the needs of the PhD doctoral program.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 12

Satisfactory – 0

Requires improvements – 0

Unsatisfactory – 0

6.4 Standard "PhD doctoral program"

Evidence part

The Regulation on doctoral studies was approved in KSMU (the last version was approved by the rector of KSMU on January 28, 2013).

Subjects of dissertational works are presented in self-assessment reports (Appendix No. 4).

In the university, a modular educational program (MEP) is developed and approved for each year of admission for the entire period of study, and the doctoral students are given the opportunity to choose the module for teaching and elective disciplines of the basic and profiling component, taking into account the complexity of the disciplines in credits.

The structure of the educational program of doctoral studies contains two equivalent components: educational and scientific, determining the content of education, and reflects their correlation, measurement and accounting.

Dissertational works on the specialties "Pharmacy" and "Technology of pharmaceutical production" in KSMU are carried out under the guidance of a consulting team consisting of at least 2 people - domestic and foreign scientific advisers who have academic degrees of Candidate or Doctor of Science who are specialists in the field scientific research doctoral candidate, which meets the requirements for scientific advisers in accordance with the Order of the Ministry of Education and Science of the Republic of Kazakhstan from March 31, 2011 No. 127. Scientific advisors and theses of dissertational works given at a meeting of the Academic Council of KSMU. According to the Regulations on doctoral studies, the functions and responsibilities of a scientific adviser are defined. In KSMU, the scientific consultant also performs the functions of an academic mentor (adviser), providing advisory assistance to the doctoral student in the formation of the IEP.

The academic teaching staff of the University has the freedom to choose the methods and forms of organizing and conducting training sessions, teaching methods, if the requirements of curriculum and course of study are met.

Teaching staff of the KSMU regularly undergo training in improving pedagogical skills; own modern interactive methods and technologies of teaching, use them in the educational process.

In order to ensure academic mobility for the mastery of a part of the training component of the EP and / or conduct research, the doctoral candidate should plan internships to foreign educational and scientific institutions lasting no more than 3 months 2 times during the period of study. To date, KSMU has concluded agreements with the leading organizations of education and science, including foreign ones, the list of which is presented on the official site of the KSMU (<http://www.kgmu.kz/ru>, the Academic Mobility Partners tab).

The evaluation of the doctoral candidate's degree is held at the meetings of the department with the participation of scientific advisers and doctoral students.

Elective courses have a professional orientation, which enables students to have an individual educational trajectory of education, that is, taking into account their scientific and practical specialization. The CED during the work of the selection committee is placed for familiarization on the site and the student educational portal.

The questionnaires and other types of questioning of doctoral students are conducted at the departments, which make it possible to determine their satisfaction in the program being implemented, and also to receive proposals for its improvement.

The departments, leading disciplines of the mandatory component and component of choice, determine the list of pedagogical methods that are prescribed in syllabuses and work programs.

The IEP reflects the overall picture of the implementation of the educational and scientific part of the doctoral program without specifying the specific results of the doctoral candidate, which makes it difficult to analyze the progress of the EP implementation and achieve the competencies of the student.

The state attestation of doctoral candidates is conducted in the form of complex testing, then - defense of doctoral dissertations in the dissertation council.

Strengths / best practice

- International cooperation of the university with European organizations (EUA), which allows conducting research in the framework of dissertational works of doctoral students using modern world practices in the field of pharmacy and medicine.

Analytical part

According to the "PhD program of doctoral studies", the PhD educational program in the specialty "Pharmacy" and "Technology of Pharmaceutical Production" are developed and implemented in accordance with the State Compulsory Standard of Postgraduate Education.

The objectives of PhD doctoral programs are to train domestic doctors who are competitive both within the country and on the international labor market, the integration of national doctoral programs into the world educational space.

The documents regulating the training of doctoral students, in particular IEP of doctoral students, reports, require improvement with the specification of the results of scientific research.

EEC recommendations

- ✓ To detail the activities in the IEP of doctoral students in the specialties "Pharmacy" and "Technology of pharmaceutical production" for each academic year for quality monitoring of assigned competencies.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 15

Satisfactory – 1

Requires improvements – 0

Unsatisfactory – 0

6.5 Standard "Scientific guidance"

Evidence part

Leading associate professors and professors of the department, as well as part-time employees - leading experts from practice are appointed as heads of PhD doctoral dissertations in the specialties "Pharmacy" and "Technology of pharmaceutical production".

The number of doctoral candidates assigned to the supervisor is adequate to its workload.

The workload of the head is planned by the department taking into account the working time spent on advising the doctoral student and other types of work for which the teacher is responsible.

Currently, KSMU has agreements on cooperation in the field of education and science with leading universities and scientific organizations of our Republic, near and far abroad. On the territory of the Republic, contracts were concluded with the West Kazakhstan State Medical University named after Marat Ospanov, Aktobe; with the South-Kazakhstan State Pharmaceutical Academy, Shymkent; Kazakh National Medical University named after S.D. Asfendiyarov, Almaty; JSC "Medical University of Astana" and others.

The university also has perpetual agreements with the largest universities of near and far abroad: Kursk State Medical University, Novosibirsk State Medical University, International Medical University, Malaysia, Kuala Lumpur; Kharkiv National Medical University, First Moscow State Medical University named after I.M. Sechenov, Medical University of Lublin, Poland, etc.

Agreements on cooperation with research centers have been signed, in particular, with JSC "International Research and Production Holding "Phytochemistry".

When choosing scientific supervisors and scientific advisors for PhD doctoral students at the pharmaceutical faculty are guided by the following policy: the scientific adviser and the scientific consultant should have high professional competencies, therefore this role in the Department of Pharmaceutical Sciences and Chemistry is performed by professors, associate professors having a degree (doctor or candidate of science).

Strengths / best practice

- Leading scientists from near and far abroad are invited as co-supervisors or scientific consultants of PhD doctoral dissertations in the fields of "Technology of pharmaceutical production" and "Pharmacy" in accordance with agreements and memorandum of cooperation between educational organizations.

Analytical part

In order to provide scientific and methodological assistance in the work on the thesis, control over the performance of work, provide psychological support, if necessary, make recommendations on the participation of PhD doctoral students in the PhD doctoral studies in the specialties "Pharmacy" and "Technology of pharmaceutical production" for each PhD a doctoral adviser is appointed within 2 months after his enrollment. If the dissertation is carried out at the intersection of various scientific fields, co-leaders or scientific advisers are appointed.

The scientific management is based on the criteria of professional experience, the results of research, recognition by colleagues and teaching experience.

Subjects of dissertations correspond to actual inquiries of practical medicine. The choice of scientific leaders, co-leaders and scientific consultants PhD doctoral students is determined by the goals and objectives of specific scientific research.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 9

Satisfactory – 0

Requires improvements – 0

Unsatisfactory – 0

6.6 Standard "PhD thesis"

Evidence part

Doctoral thesis is an indicator of the formation of doctoral competences in scientific research activities in accordance with the MEP PhD doctoral studies in the specialties "Pharmacy" and

"Technology of pharmaceutical production." The term of the thesis preparation is 3 years.

Currently the dissertations for a PhD Doctor degree in the specialty 6D1104800 - "Pharmacy" were defended by: A.S. Adekenova, E.S. Zhunusov, the dissertations of A.S. Adekenova and E.S. Zhunusov were written by doctoral students on their own, contain a set of new scientific results and provisions put forward by the author for public protection, and testify to the author's personal contribution to science.

On the specialty "Technology of pharmaceutical production" the first issue was held in 2017, but the defense of the thesis of graduate A.S. Kishkentayeva is scheduled for September of 2018 due to the need for additional research.

Information about the practical use of the doctoral students received during the training is confirmed by patent applications and patents.

It is possible to write and defend a thesis in the state or Russian language. Completed dissertational works of doctoral students of KSMU in the specialty "pharmacy" were submitted to the defense in Russian.

For doctoral students it is possible to write and defend a thesis in English at will. This practice is welcomed in the university. Defense in English on the specialty of "Pharmacy" at the moment has not been conducted.

The results of the thesis work are available for familiarization to all internal stakeholders - doctoral students, scientific supervisors, employees of the KSMU, researchers carrying out scientific work in a similar direction, and other categories of interested persons at the KSMU on the student portal.

KSMU provides a discussion of doctoral dissertations on the specialties "Pharmacy" and "Technology of pharmaceutical production" at the meeting of the profile department of pharmaceutical disciplines and chemistry, further recommendations are made on the submission of the work to the SEC "Pharmacy and technology of pharmaceutical production" (until 2016 – SEC "Therapy and pharmacology"). The results of the discussion are drawn up by the minutes of the meetings of the department and the SEC.

Strengths / best practice

- The results of scientific research are valid due to the fact that they are performed on the bases of LCU and scientific laboratories of JSC "IRPH "Phytochemistry" and have high applied value.
- Research on the topic of dissertational work is carried out not only on laboratory equipment, but also on pilot plants, which makes it possible to develop pilot industrial regulations that can be a product of commercialization.

Analytical part

According to the Regulations on doctoral studies at KSMU of January 25, 2013, these topics, scientific advisers of doctoral candidates are represented at the meeting of the department, the decision of which topics of dissertations and scientific consultants of doctoral candidates are recommended for submission to the meeting of the SEC (scientific expert commission). SEC recommends topics for dissertations and scientific advisers of doctoral candidates for approval at the Academic Council of KSMU.

Graduates of PhD doctoral studies of KSMU are able to operate modern equipment and equipment for performing research field and laboratory works, apply in practice the methods of compiling scientific and technical reports, reviews, analytical maps and explanatory notes, understand, present and critically analyze the information received and present the results of pharmaceutical research.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 17
Satisfactory – 0
Requires improvements – 0
Unsatisfactory – 0

6.7 Standard "Evaluation of dissertations"

Evidence part

In KSMU in 2017 there was approved by the Committee for Control of Education and Science of the MES (CCES MES RK) and opened Dissertation Council (DS) in the field of doctoral studies "Pharmacy" and "Technology of pharmaceutical production", its composition and work plan were approved. In 2018, the first defenses are planned. DC works for 3 years.

The composition of the Dissertation Council for the protection of dissertations for the award of the degree of Doctor of Philosophy (PhD), a doctor on the profile of pharmacy and technology of pharmaceutical production.

For the year of 2018, five doctoral PhD theses are planned to be defended:

on the specialty "Technology of pharmaceutical production"

1. Anarkul Serikovna Kishkentayeva - the second half of the year;
 2. Zhanar Rakhimovna Shaimerdenova - the second half of the year;
 3. Mayra Abylovna Zhunusova - the second half of the year;
- on the specialty "Pharmacy"
4. Perizat Zarukhanovna Orazbaeva - the second half of the year;
 5. Ainur Maratovna Akhmetalimova - the second half of the year.

The correspondence of dissertations after public defense and preparation of a package of documents is sent to CCSON of the Ministry of Education and Science of the Republic of Kazakhstan. CCSON MES of the Republic of Kazakhstan on the basis of the opinion of the Expert Council decides on award / refusal to the doctoral degree of PhD, doctor in the field and issues an appropriate order.

The working materials of the Expert Councils are kept in the CCSON of the Ministry of Education and Science of the Republic of Kazakhstan. The doctoral student acquaints himself with the conclusion of the Expert Council on the thesis within a month after the decision of the Committee on the award / refusal of doctoral degree PhD, doctor by profile.

Persons awarded the degree of a Ph.D., doctor in the field., are given state-recognized diplomas.

Strengths / best practice

- Opening of the Dissertation Council for the defense of dissertations on the specialties "Pharmacy" and "Technology of pharmaceutical production" in KSMU;
- The results of scientific research of doctoral candidates, reflected in patents and developed pilot industrial regulations, can be used for commercialization.

Analytical part

Evaluation of dissertations of PhD doctoral students is the main component of the evaluation of the effectiveness of training, for which KSMU demonstrates the created environment for learning and achieving other aspects of the mission and vision of the university.

The active involvement of foreign experts to review the scientific work of doctoral students is important in order to strengthen the scientific research of the university, the recognition of scientific results at the international level.

EEC recommendations

- ✓ Ensure the involvement of specialists from leading foreign universities to review dissertations on the specialties "Pharmacy" and "Technology of pharmaceutical production"

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 12

Satisfactory – 0

Requires improvements – 0

Unsatisfactory – 0

6.8 Standard "Management and administration"

Evidence part

On the organization and implementation of the educational process, the functioning of the doctoral candidate's office, the deans and departments interact with the Vice-rector for Educational and Methodological Work and with the divisions and advisory bodies supervised by this Vice-rector - AC, DAW, CPS, CTIT, library, Department of Youth Affairs; on the organization and conduct of research work, scientific internships, the preparation of publications, etc. - with the Vice-Rector for Strategic Development and International Cooperation and the units and bodies supervised by him - the NEC, the Department for Strategic Development and International Cooperation, the Department for Management of Scientific Activities, SIC, Department of Scientific Editing, Bioethics Committee, Committee for the Control of Clinical Trials; on the organization of professional practices, interaction with bases, employment of graduates - with the Vice-Rector for Clinical Work and NDP (supervised departments and councils - Clinical Council, Employers' Council, Clinical Training and Employment Department of Graduates, MC). Dean's offices and departments also cooperate with the Vice-Rector for Organizational and Economic Affairs on the issues of providing the educational process and research work with personnel and material and technical resources. He supervises departments such as DEF, HRMD, PPD, Legal Department, Student Service Center, DEW.

In order to ensure the possibility for students to participate in the discussion of the problems of training and making proposals for the implementation of the EP, improving the learning environment on the official website, there is a rector's blog, regular meetings of the students with the rector and vice-rectors. Also, discussion on student life is possible in social networks. Official university accounts are presented in:

1. www.instagram.com/OFFICIALKSMU
2. www.vk.com/OFFICIALKSMU
3. www.facebook.com/OFFICIALKSMU
4. www.twitter.com/OFFICIALKSMU

Doctoral students of the specialty are also involved in the work on the development of the EP by participating in the discussion of the EP (they are invited to the department meetings), using the survey methods to assess the quality of the programs being implemented, the degree of satisfaction of the doctoral students with the educational services provided, the organization of various types of work, etc. The data obtained as a result of the survey is used to improve the EP and the processes for their implementation.

Dean's offices and administrative structures of the university regularly hold meetings and conferences with doctoral students, where also various issues related to training, the work of the student support service, etc. are discussed.

Resources for the implementation of the doctoral candidate's degree program correspond to the norms for calculating the cost of training one student in higher educational institutions of the Republic of Kazakhstan for the state educational order. Financing of doctoral programs is carried out in accordance with the normative documentation.

The sources of financing are budgetary and extrabudgetary funding (state educational order, income from paid educational services, research and other works that do not contradict the law, international funds, organizations, grants, etc.).

At present, the state expands the autonomy of universities, in connection with which the

KSMU implements a strategic partnership project with the University of Lund (Sweden) and implements the project management, which should improve the efficiency of the allocation of financial and other resources of the university.

The norms of expenses for PhD doctors on an internship, expenses related to staying in a foreign country during a business trip are determined. The budget means intended for reimbursement of expenses for internship (field trip): for doctoral students: up to 3 months, no more than 2 times for the entire period of study.

Strengths / best practice

- KSMU positions itself as a research university, the main strategy of which is the development of scientific research and the providing strategy is the production of competent specialists with scientific training
- Preparing for the transition of the university to autonomous management, which will allow them to independently manage the incoming republican and extrabudgetary funds for the successful implementation of the EP not only at the doctoral level, but also for the master's and bachelor's degrees, as well as for training of the ATS abroad.
- The presence of a strategic partner - University of Lund (Sweden), which can be the basis for the development of joint EPs at all levels of training specialists.

Analytical part

The management of the KSMU is determined by the developed Management Structure, which is updated as necessary, which ensures the effectiveness of the institution as a whole and the implementation of mechanisms for improving the EP. The last approved version of the management structure is posted for familiarization of the university staff on the corporate portal (<https://portal.kgmu.kz>).

According to the structure, the main structural units involved in the direct implementation of doctoral studies are the structures of the Faculty Council (departments and deans). For the effective functioning of all structures, the relevant Regulations have been developed, which determine the interaction of various units, including on the implementation of the EP.

Conclusions of the EEC on the criteria: (strong / satisfactory / requires improvements / unsatisfactory)

Strong – 27

Satisfactory – 0

Requires improvements – 0

Unsatisfactory – 0

(VII) REVIEW OF STRENGTH / BEST PRACTICES FOR EVERY STANDARD.

7.1 Standard "Mission and final results of study"

- The presence of the university approved the Quality Policy
- Meeting the objectives of the EP with the strategic development plan and the mission of the university
- High demand for graduates in the labour market
- Developed regulatory documents in the university for all types of activities that determine the responsibility for implementing the EP (Regulations, instructions)
- High institutional rating of the university and educational programs.

7.2 Standard "Research Environment and Educational Resources"

- High professional level of the academic teaching staff participating in the implementation of doctoral studies

- Effective incentive and motivation system for the academic teaching staff in the university
- Providing a unified system for training of the teaching competences and innovative educational technologies for the academic teaching staff
- Attraction of doctoral candidates of leading employees of organizations of practical pharmacy for scientific consulting
- Developed material, technical and social and cultural base of the university
- A wide range of information resources for the successful implementation of PhD programs for the specialties "Pharmacy" and "Technology of pharmaceutical production"
- Presence of regulations in the university of the principles of academic honesty, business ethics and bioethics

7.3 Standard "Policies and admission criteria"

- Relevant subject matter of doctoral dissertations
- The presence at the KSMU of the Laboratory of Collective Use (LCU), equipped with modern equipment with the admission of doctoral students to work on the research topic.
- The possibility to conduct PhD research in the framework of the "Pharmaceutical Cluster" Consortium, including at the JSC IRPH "Phytochemistry", LLP "Karaganda Pharmaceutical Plant", RSE on REM "NCEDMPME MHSD RK " in Karaganda, "Bayanaul National Nature Park", NC "Kyzyl May", LLP" Center of Phytotherapy ", etc.
- The opportunity for doctoral students to carry out part of their scientific research in the far and near abroad (Hungary, Poland, Turkey, Russia and Ukraine) in the framework of international internships.

7.4 Standard "Doctoral PhD Program"

- International cooperation of the university with European organizations (EUA), allowing to conduct research in the thesis of doctoral students using modern world practices in the field of pharmacy and medicine

7.5 Standard "Scientific guidance"

- Leading scientists from near and far abroad are invited as co-supervisors or scientific consultants of PhD doctoral dissertations in the fields of "Technology of pharmaceutical production" and "Pharmacy" in accordance with agreements and memorandum of cooperation between educational organizations.

7.6 Standard "PhD thesis"

- The results of scientific research are valid due to the fact that they are performed on the bases of LCU and scientific laboratories of JSC "IRPH" Phytochemistry "and have high applied value.
- Research on the topic of dissertational work is carried out not only on laboratory equipment, but also on pilot plants, which makes it possible to develop pilot industrial regulations that can be a product of commercialization.

7.7 Standard "Evaluation of dissertations"

- Opening of the Dissertation Council in KSMU for the defence of dissertations on the specialties "Pharmacy" and "Technology of pharmaceutical production";
- The results of scientific research of doctoral students, reflected in patents and developed pilot industrial regulations, can be used for commercialization.

7.8 Standard "Management and administration"

- KSMU positions itself as a research university, the main strategy of which is the development of scientific research and the providing strategy is the production of competent specialists with scientific training.
- Preparing for the transition of the university to autonomous management, which will allow them to independently manage the incoming republican and extrabudgetary funds for the successful implementation of the EP not only at the doctoral level, but also for the master's and bachelor's degrees, as well as for training of the academic teaching staff abroad
- The presence of a strategic partner - University of Lund, Sweden, which can be the basis for the development of joint EPs at all levels of specialists training.

(VIII) REVIEW OF RECOMMENDATION FOR IMPROVING QUALITY

8.2. Standard "Research Environment and Educational Resources"

- ✓ Establish joint doctoral studies for the specialties "Pharmacy" and "Pharmaceutical production technology" with strategic partner universities to obtain the possibility of awarding degrees from two universities.
- ✓ Attract external funding for research in the field of practical pharmacy and medicine by identifying the most pressing problems of modern healthcare

8.4. Standard "Doctoral PhD Program"

- ✓ Detail the activities in the IEP of doctoral students in the specialties "Pharmacy" and "Technology of pharmaceutical production" for each academic year for quality monitoring of assigned competencies

8.7. Standard "Evaluation of dissertations"

- ✓ Ensure the involvement of specialists from leading foreign universities to review dissertations on the specialties "Pharmacy" and "Technology of pharmaceutical production"

Annex 1. Score table "SPECIALIZED PROFILE PARAMETERS"

	CRITERIA FOR EVALUATION	Comments	Position of the organization of education			
			Strong	Satisfactory	Requires improvements	Unsatisfactory
11.	Standard "MISSION AND FINAL RESULTS OF STUDY"					
11.1	Mission Definition					
	The medical education organization must define its mission and bring it to the attention of stakeholders and the health sector.		+			
11.1.1	The mission statement should contain goals and an educational strategy, allowing the preparation of a competent scientist, researcher at the level of postgraduate medical education.		+			
11.1.2	The medical education organization must ensure that the mission statement includes problems of public health, the needs of the health care system and other aspects of social responsibility.		+			
11.1.3	The medical education organization should have a strategic development plan that corresponds to the mission statement, the goals of the medical education organization, which includes improving the quality of PhD doctoral programs and approved at the advisory board of the medical education organization / scientific organization.		+			
11.1.4	The medical organization of education must systematically collect, accumulate and analyze information about its activities and the implementation of the PhD doctoral program; evaluate strengths and weaknesses (SWOT)		+			
11.1.5	The mission and goals of the medical education organization should correspond to the available resources, the possibilities of the medical organization of education / scientific organization, market requirements and the ways of their support should be determined and access to information about the mission, the goals of the medical education organization for the public (information in the media, on the web.		+			
11.2.	Participation in the mission formulation					
11.2.1	The medical education organization must ensure		+			

	that the main stakeholders participate in the development of the mission.					
11.3	Institutional autonomy and academic freedom					
	The medical education organization should have institutional autonomy for the development and implementation of policies for which the academic teaching staff and administration are responsible, particularly in relation to:		+			
11.3.1	development of an educational program;		+			
11.3.2	use of the allocated resources necessary for the implementation of the educational program.		+			
	Medical education organization should guarantee academic freedom to its employees and doctoral students PhD:		+			
11.3.3	in relation to the current educational program, which will be allowed to rely on different points of view in the description and analysis of questions on medicine;		+			
11.3.4	in the possibility of using the results of new research, to improve the study of specific disciplines / issues without expanding the educational program.		+			
11.3	Final results of the study					
11.4.1	The medical education organization should determine the expected outcomes of the training that PhD candidates should demonstrate after completing the PhD doctoral program.		+			
11.4.2	PhD training with a PhD award should provide the doctoral students with the competencies that will enable them to become a qualified researcher able to conduct an independent scientific research in accordance with the principles of the best research practice.		+			
	Other competences (knowledge, skills, attitudes) corresponding to the PhD doctorate program should include :					
11.4.3	demonstration of systematic understanding by doctoral students in the field of study and mastering the skills and methods of research in their field		+			
11.4.4	demonstration by doctoral students of the ability to form, develop, implement and adapt the original scientific research in the context of existing academic work at the level required for publication in international peer-reviewed publications		+			
11.4.5	demonstration of leadership skills by the doctoral candidates, the ability to lead the work of others, project management, the ability to train and transfer knowledge;		+			
11.4.6	the ability to exchange views in their field of research with academic leaders, the broad academic community and society as a whole;		+			
11.4.7	the ability to contribute, within the academic and		+			

	professional context, to technological, social or cultural progress in a knowledge-based society.					
11.4.8	Completion of the PhD doctoral program should have a potential benefit for those who continue their careers outside the medical organization and apply their competencies formed during the development of the doctoral program, including critical analysis, assessment and resolution of complex problems, the ability to transfer new technologies and the synthesis of new ideas.		+			
11.4.9	The medical education organization / scientific organization should ensure that the process of updating and restructuring leads to a modification of the final results of graduate training in accordance with the responsibilities that are entrusted to graduates after the PhD program of doctoral studies.		+			
	TOTAL:		21	0	0	0
12.	Standard "SCIENTIFIC RESEARCH ENVIRONMENT AND EDUCATIONAL RESOURCES"					
12.1	Scientific and research environment					
12.1.1	The success of individual doctoral programs should be ensured by the organization of a strong and effective research environment.		+			
	The quality of the research environment should be assessed by analysis:					
12.1.2	publication of research results (number of publications, impact factor, etc.) on the profile of PhD doctoral studies in a medical education organization / scientific organization.		+			
12.1.3	the level of attracting external funding for research in a medical education organization / scientific organization.			+		
12.1.4	the number of qualified and competent researchers, teachers in the group, at the faculty, educational institution.		+			
12.1.5	national and international cooperation with research groups of medical organizations, universities, research centers.		+			
12.1.6	Studies should be conducted in accordance with international ethical standards and approved by relevant and competent ethics committees. In their research, doctoral students must adhere to the observance of international ethical standards: the Helsinki Declaration II (clinical studies), the European Union Directive 2010/63 / EU (animal studies) and the Oviedo Convention (bioethics).		+			
12.1.7	In order to provide access to the funds needed to write a dissertation, doctoral studies programs should include training in other laboratories, preferably in another country, thus ensuring internationalization.		+			

12.1.8	The PhD program for doctoral studies must be conducted in a manner that respects mutual respect, planning and the overall responsibility of the supervisor and doctoral student.		+			
12.1.9	The medical education organization / scientific organization should explore the possibility of providing joint PhD doctoral programs with the awarding of degrees from both universities and a joint leadership to support cooperation between higher education institutions.				+	
12.1.10	The medical organization of education / scientific organization should ensure that the process of updating educational resources is carried out in accordance with changing needs, such as a set of doctoral candidates, the number and profile of academic staff, the PhD doctoral program.		+			
	The medical organization of education should :					
12.1.11	provide sufficient autonomy in the allocation of resources, including a decent remuneration of teachers in order to achieve the final results of study;		+			
12.1.12	when allocating resources, take into account scientific advances in medicine and public health problems and their needs.		+			
12.2	Material and technical base					
	The medical education organization / scientific organization must have logistical support that meets the licensing criteria, which include the criteria:		+			
12.2.1	audiences, laboratories and their equipment should be modern and adequate to the goals and objectives of the PhD doctoral program;		+			
12.2.2	doctoral students must be provided with the conditions for independent study and research work;		+			
12.2.3	The medical education organization / scientific organization should have sufficient resources for the proper implementation of the PhD doctoral program and distribute them in accordance with the needs. The resources of the organization should provide: <ul style="list-style-type: none"> - admission of doctoral students, - training in the doctoral program - performance of dissertation work - scientific direction of doctoral students - advising doctoral students - examination, review and evaluation of the dissertation - award of the degree - operating costs - costs for participation in training courses, in international scientific conferences - payment for tuition in doctoral studies in institutions, where this is practiced. 		+			

	- resources also include a doctoral scholarship / salary, however, the amount of payment may vary.					
12.3.4	The resource policy should be aimed at maintaining and ensuring the permanent professional growth of the teachers of the doctoral program.		+			
	The medical organization of education should :					
12.2.5	provide a safe environment for employees, doctoral students, patients and those who care for them, including providing the necessary information and protection from harmful substances, microorganisms, compliance with safety regulations in the laboratory and using equipment		+			
12.2.6	The medical organization of education should improve the educational environment for doctoral students by regularly updating, expanding and strengthening the material and technical base, which should correspond to the development in the practice of teaching		+			
12.3	Information technology					
	The medical organization of education / scientific organization should have information support corresponding to the goals and objectives of the PhD doctoral program:					
12.3.1	the library should contain the materials necessary for teaching - educational, technical, scientific and reference literature, various periodical medical publications, etc .;		+			
12.3.2	Master's students should have timely and free access to library resources.					
12.3.3	The library must have basic technical equipment to support daily activities: faxes, copiers, computers, printers available for public use, and a telephone with voice mail or an answering machine.		+			
12.3.4	The library should have an information website. The website can contain the following elements: links, forms of interlibrary exchange, full-text electronic journal articles, and a form for feedback.		+			
12.3.5	The medical education organization / scientific organization should regularly monitor library resources, study and implement strategies to meet the current and future needs of undergraduates.		+			
12.3.6	Computer classes and terminals with access to information resources (LAN, Internet) should be in the use of doctoral candidates;		+			
12.3.7	The medical organization of education / scientific organization should monitor the availability and adequate use of information resources by doctoral students;		+			
12.3.8	The medical organization of education / scientific organization should constantly update, improve and expand the database of information resources.		+			

12.3.9	The medical education organization / scientific organization must open and constantly update on its website a section on PhD doctoral programs that contains the following information: <ul style="list-style-type: none"> - Structure and staff of the doctoral department, the duties of the head and staff of the department; - Admission policy, including clear rules on the selection process for doctoral candidates; - List of PhD doctoral programs; - Structure, duration and content of PhD doctoral programs; - Criteria for the appointment of a supervisor with a description of the characteristics, responsibilities and qualifications of the supervisor; - Methods used to evaluate doctoral students; - Criteria for writing and writing a dissertation; - Description of the procedure for the protection of the dissertation work; - Description of the Dissertation Council (position, composition, schedule of meetings); - Quality Assurance and Regular Evaluation Program for PhD Doctoral Studies; - Information about doctoral candidates, taking into account the year of study. 		+			
	TOTAL:		26	1	1	0
13	Standard "POLICY AND CRITERIA OF ADMISSION"		+			
13.1	The medical education organization / scientific organization should define and implement a reception policy, including a clearly established position on the selection process of doctoral candidates.		+			
13.2	The medical education / scientific institution should establish the relationship between the selection of PhD students and the mission of medical education organizations, educational program and desired qualities of graduates.		+			
13.3	In order to ensure the quality of PhD doctoral programs, the selection of doctoral students should be based on the competition and ensure transparency of the selection process.		+			
13.4	Candidates for the PhD program must have a doctoral level of education corresponding to the degree of Master of Science at the appropriate profile doctorate or have completed training in the residency of medical specialties.		+			
13.5	Prior to enrolling a PhD doctoral student, the medical education organization / scientific organization must evaluate the quality of the scientific research project, the implementation of which is planned by the doctoral student.		+			

13.6	After enrolling in doctoral studies, the doctoral candidate must be approved the topic of the dissertation and scientific supervisors.		+			
13.7	The topic of the thesis should be evaluated and approved by a group of independent experts through an external evaluation of the written description or on the basis of a presentation of research work, including:					
	- the expected results of the scientific research project, which should be completed by writing a dissertation in accordance with the required quality standards (PhD thesis standard), for the period of time determined by the PhD doctoral program;		+			
	- the degree of innovation and creativity of the scientific project;		+			
	- the qualification of scientific leaders (the standard "Scientific guidance").		+			
13.8	Doctoral students should have the rights and duties comparable with the status of the medical organization of education / scientific organization where scientific research work is carried out.		+			
13.9	In those cases when the doctoral candidate is forced to seek additional sources of income, additional time is required to complete the training program.		+			
	The medical education organization / scientific organization should ensure that the process of renewal and restructuring leads to:					
13.10	adaptation of the policy of doctoral candidates taking into account changing expectations and circumstances, needs for human resources, changes in the system of postgraduate education and the needs of the PhD doctoral program.		+			
	TOTAL:		12	0	0	0
14	Standard "PhD DOCTORATE PROGRAM"					
14.1	The medical education organization / scientific organization must determine the purpose and objectives of the PhD doctoral program.		+			
14.2	The PhD doctorate program should be based on the implementation of original research, courses and other types of work that require analytical and critical thinking.		+			
14.3	The PhD doctoral program should be structured with a clear time limit equivalent to 3 years full-time.		+			
14.4	The PhD program of doctoral studies should include compulsory courses in parallel with the performance of the thesis. A significant part of the training program should include the training of doctoral students in special skills that can consist of: - teaching doctoral students the skills of presenting research results (oral / poster / documents) for academic and non-academic audiences,		+			

	<ul style="list-style-type: none"> - teaching at the university, - project management, - writing a grant application, - critical evaluation of scientific literature, - management of technical personnel and doctoral students, - professional growth and organization of cooperation. 					
14.5	The PhD program for doctoral studies should be carried out under the guidance of a scientific adviser.		+			
14.6	The medical education organization / scientific organization should determine the methods of teaching and learning used.		+			
14.7	The PhD doctoral program should guarantee the training of doctoral candidates in ethics and responsible scientific research.		+			
	In the medical organization of education / scientific organization the following mechanisms should exist:					
14.8	allowing doctoral students, if necessary, to fulfill part of their doctoral program in another medical institution, including in other countries;		+			
14.9	constant evaluation of the progress of the research work of the doctoral student throughout the PhD doctoral program.			+		
14.10	The medical education organization / scientific organization should provide confidentiality to the doctoral student who consults on the doctoral program, scientific management, personal issues.		+			
14.11	The medical education organization must ensure that the educational program is implemented in accordance with the principles of equality.		+			
14.12	In the medical organization of education / scientific organization, an appeal mechanism should be developed and implemented, allowing doctoral candidates to review the decision concerning their programs and the evaluation of their dissertations.		+			
14.13	The medical education organization / scientific organization should regularly evaluate the quality of the PhD doctoral program, including feedback from scientific leaders and doctoral students.		+			
	The medical education organization / scientific organization should ensure that the process of renewal and restructuring leads to:					
14.14	adaptation of the model of the educational program and methodological approaches in training, in order to ensure that they are relevant and relevant;		+			
14.15	adjusting the elements of the PhD doctoral program and their interrelation in accordance with the achievements in the medical sciences, with changes in the demographic situation and the health /		+			

	structure of the incidence of the population and socioeconomic and cultural conditions.					
14.16	improve the monitoring and evaluation of the PhD doctoral program in accordance with changes in the final learning outcomes and methods of teaching and learning;		+			
	TOTAL:		15	1	0	0
15.	Standard "SCIENTIFIC LEADERSHIP"					
15.1	Every doctoral student must have a principal supervisor and, as appropriate, at least one co-leader to cover all aspects of the program.		+			
15.2	The number of doctoral candidates assigned to the supervisor should be adequate to his workload.		+			
15.3	Scientific supervisors can be co-directors of doctoral students of other organizations, both in the country and abroad.		+			
15.4	A qualified scientific adviser should have a doctorate or an equivalent degree, be an active scientist with publications of scientific research in refereed literature.		+			
15.5	In the selection and appointment of the supervisor his research experience and international connections should be reviewed.		+			
15.6	A medical education organization / scientific organization must have clearly articulated responsibilities and responsibilities of each scientific adviser.		+			
15.7	Scientific supervisors should conduct regular consultations with their doctoral students.		+			
15.8	Medical organization of education / scientific organization should plan and organize training courses for scientific leaders on the policy of implementing PhD doctoral programs, the main responsibilities of scientific leaders.		+			
15.9	The medical organization of education / scientific organization should envisage drafting a contract, which describes the process of scientific management. The contract must be signed by the scientific adviser, the doctoral candidate and the head of the doctoral program.		+			
	TOTAL:		9	0	0	0
16.	Standard "PhD thesis"					
16.1	The PhD program for doctoral studies should be completed with the preparation and defense of a doctoral dissertation, which is an indicator of the formation of competencies in a doctoral candidate in accordance with the educational program.		+			
16.2	The medical organization of education / scientific organization should determine the period of preparation of the dissertation, limited to a 3-year		+			

	period.					
16.3	The thesis should be written by the doctoral student independently, contain a set of new scientific results and provisions put forward by the author for public protection, and testifies to the author's personal contribution to science, and also meet one of the requirements:		+			
16.4	to contain new scientifically grounded results that solve an important scientific problem;		+			
16.5	to contain new scientifically grounded results, the use of which ensures the solution of an important applied problem;		+			
16.6	to contain new scientifically grounded theoretical and (or) experimental results, the totality of which is important for the development of specific scientific areas.		+			
16.7	The structure of the thesis should include a review of the literature relevant to the research topic, a detailed analysis of the purpose and objectives of the research work, a methodological basis, methodological decisions, results, discussion, conclusion, conclusions and further research prospects.		+			
16.8	The dissertation, having applied value, should contain information on practical use of the scientific results received by the author, confirmed by author's certificates, patents and other official documents.		+			
16.9	The thesis can be written in the state or Russian languages.		+			
16.10	To ensure international recognition, a dissertation can be written and protected in English.		+			
16.11	Abstracts to the thesis should be published in the state, Russian and English languages.		+			
16.12	The summary of the doctoral dissertation should be published in two languages (English, Russian or Kazakh), depending on the main language of the doctoral student's education.		+			
16.13	The results of the dissertation work should be available to interested parties (doctoral candidates, scientific supervisors, employees of the organization where the thesis was being performed, researchers conducting scientific work in a similar direction, and other categories of stakeholders), i.e. published, if copyright, or other reasons, do not prevent it.		+			
16.14	The thesis can be published on the home page of the medical education organization / scientific organization in which the scientific work was done,		+			

	both in the abbreviated form (summary, theses) and in full if the copyright, or other reasons, does not prevent it.					
16.15	Dissertational work should be accompanied by not less than 7 (seven) publications on the topic of the thesis, including at least 3 (three) in scientific publications recommended by the Committee, 1 (one) in the international scientific publication, 3 (three) in the materials of international conferences, including 1 (one) in the materials of foreign conferences. The international edition should be in the information base of the company Thomson Reuters (ISI Web of Knowledge, Thomson Reuters) or the company Scopus, and have a nonzero impact factor.		+			
16.16	In the case of joint publications, the co-author should document that the doctoral student made a significant and independent contribution to the writing of these works. The ownership of the research results of the doctoral candidate must be clearly defined and described. This will avoid the re-publication of results in more than one dissertation.		+			
16.17	The medical organization of education / scientific organization should ensure the discussion of the doctoral thesis at the meeting of the department (chairs), where the thesis was carried out.		+			
	TOTAL:		17	0	0	0
17.	Standard "EVALUATION OF DISSERTATIONS"					
17.1	The medical organization of education / scientific organization should define, approve and publish the principles, methods and practices used to evaluate doctoral candidates, including criteria for assessing scientific work.		+			
17.2	Final evaluation and approval of the thesis should be carried out by the Dissertation Council.		+			
17.3	Defense of the thesis should be conducted at the university, where the Dissertation Council is working on the field of preparation of PhD doctoral students.		+			
17.4	The thesis must be reviewed.		+			
17.5	Reviewers on the basis of studying the thesis and published works should submit written opinions to the Dissertation Council assessing the relevance of the selected topic, the degree of validity of the scientific provisions, conclusions, recommendations formulated in the dissertation and its practical importance, their novelty, and also gives an opinion on the possibility of awarding Ph.D. in the relevant specialty.		+			

17.6	Defense of a doctoral dissertation should include both the preparation of a written version and subsequent oral protection.		+			
17.7	Defense of the thesis should be open to the public.		+			
17.8	The time between the submission of the dissertation to the Dissertation Council and the defense should be as short as possible in order to ensure further employment of the graduate doctoral studies.		+			
17.9	Defense of the thesis should be considered successful if the Dissertation Council made a positive decision, i.e. 2/3 (two-thirds) or more of the members of the Dissertation Council participated in the meeting. If less than two-thirds (two-thirds) of the members of the Dissertation Council who participated in the meeting voted for a positive decision, a negative decision is taken.		+			
17.10	In the case of a negative evaluation of the written version of the dissertation, the doctoral student should be given the opportunity to finalize the thesis. If a negative evaluation is given in oral defense, the doctoral candidate should be allowed additional protection. In exceptional cases, the Dissertation Council may reject the thesis without the possibility of revision.		+			
17.11	The PhD doctorate must be awarded by a medical education organization / scientific organization on the basis of the decision of the Dissertation Council, which assesses the thesis and oral defense in accordance with the "PhD thesis" standard.		+			
17.12	In order to achieve an independent and competent international expertise, medical educational organizations / scientific organizations should actively use information technologies that allow some members of the Dissertation Council to participate in the process of assessing and defending a thesis in a remote format.		+			
	TOTAL:		12	0	0	0
18.	Standard "MANAGEMENT AND ADMINISTRATION"					
18.1	Program management					
18.1.1	Management of a university / scientific organization should be effective and ensure the improvement of the educational program.		+			
18.1.2	The medical organization of education / scientific organization should determine the structural unit responsible for educational programs and achievement of the final results of training.		+			
18.1.3	The structural unit responsible for the educational programs should have the authority to plan and implement the educational program, including the allocation of allocated resources for the planning and implementation of teaching and learning		+			

	methods, evaluation of doctoral students, evaluation of the educational program and training courses.					
18.1.4	Representatives of doctoral students should interact with the leadership of the doctoral department on design, management and evaluation of doctoral programs.		+			
18.1.5	Involvement of doctoral candidates in the work of organizations of students working on the development of programs for the training of doctoral candidates should be promoted and encouraged.		+			
18.1.6	The structural unit responsible for educational programs should ensure the transparency of the management system and decisions that are published in the bulletins are posted on the university website, included in the minutes for review and execution.		+			
18.1.7	The medical organization of education should , through the structural unit responsible for educational programs, plan and implement innovations in the educational program.		+			
18.1.8	The medical education organization should include representatives from other relevant stakeholders, the structural unit of the medical education organization responsible for educational programs, including other participants in the educational process, representatives from clinical bases, graduates of medical education organizations, health professionals involved in the learning process or other teachers of the faculties of the university.		+			
	The medical organization of education should ensure that the structural unit responsible for the educational program:					
18.1.9	takes into account the peculiarities of the conditions in which the graduates are to work and accordingly modify the educational program accordingly.		+			
18.1.10	considers the modification of the educational program on the basis of feedback from the public and society as a whole.		+			
18.1.11	The medical education organization should periodically evaluate the academic leadership regarding the achievement of its mission and the final results of the study .		+			
	The medical education organization / scientific organization should ensure that the process of renewal and restructuring leads to:					
18.1.12	improving the organizational structure and principles of managing the PhD doctoral program to ensure effective performance in the face of changing circumstances and needs, and, in the long run, to meet the interests of different stakeholder groups.		+			

18.2	Academic leadership					
18.2.1	The medical education organization should clearly define the responsibility of the academic leadership with regard to the development and management of the educational program.		+			
18.2.2	The medical education organization should periodically evaluate the academic leadership regarding the achievement of its mission and the final results of the study.		+			
18.3	The budget for training and allocating resources					
	The medical organization of education should :					
18.3.1	have a clear terms of reference and authority to provide the educational program with resources, including the target budget for training.		+			
18.3.2	allocate the resources necessary to implement the educational program and allocate educational resources in accordance with their needs.		+			
18.3.3	The system of financing the medical education organization should be based on the principles of efficiency, effectiveness, priority, transparency, responsibility, delineation and independence of all levels of budgets.		+			
18.3.4	The financial and administrative policy should be aimed at improving the quality of the educational program.		+			
	The medical organization of education should :					
18.3.4	provide sufficient autonomy in the allocation of resources, including a decent remuneration of teachers in order to achieve the final results of training;		+			
18.3.5	when allocating resources, take into account scientific advances in medicine and public health problems and their needs.		+			
18.4	Administrative staff and management					
	The medical education organization should have the appropriate administrative and academic staff, including their number and composition in accordance with the qualifications, in order to:					
18.4.1	ensure the implementation of the educational program and related activities;		+			
18.4.2	ensure proper management and allocation of resources.		+			
18.4.3	The medical education organization / scientific organization should develop and implement an internal quality management program that includes consideration of needs for improvement, and conduct regular management review and analysis.		+			
18.4.3	The medical education organization / scientific organization should ensure the implementation of the PhD doctoral program in accordance with the quality management system certified by		+			

	independent organizations.					
18.5	Interaction with the health sector					
18.5.1	The medical education organization should have a constructive interaction with the health sector, with related sectors of public health and government, including information exchange, cooperation and initiatives of the organization, which facilitates the provision of qualified specialists in accordance with the needs of society.		+			
18.5.2	The medical education organization should provide an operational link between the educational program and the subsequent stages of training.		+			
18.5.3	The medical organization of education should be given an official status of cooperation with partners in the health sector, which includes the conclusion of formal agreements with the definition of the content and forms of cooperation and / or the conclusion of a joint contract and the establishment of a coordinating committee and joint activities.		+			
	IN ALL:		27	0	0	0
	TOTAL:		13	2	1	0
			9			