



The External Evaluation Report of the Doctoral Study Domain: Medicine

"George Emil Palade" University of Medicine,
Pharmacy, Sciences and Technology from Targu
Mures (UMFST)

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I. Introduction¹

The present report was performed as the result of the Doctoral study domain of Medicine external evaluation of the "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures in the period of 06-10 September 2021 based on terms of reference and methodology of ARACIS.

The total list of the Experts 'Panel in the Medicine Domain was, as follows:

1. Prof.univ.dr. ION Daniela, coordinator, Universitatea de Medicina si Farmacie "Carol Davila" din Bucuresti;
2. Prof. univ. dr. RAEVSCHI Elena, international evaluator, Nicolae Testemitanu State University of Medicine and Pharmacy from the Republic of Moldova;
3. STRUGARIU Alexandra, PhD student, Universitatea de Medicină și Farmacie „Grigore T. Popa”, Iasi.

George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș (UMPhST G.E. Palade Tg. Mureș) is a higher education institution dedicated to teaching, learning and research, with study programs in Romanian, Hungarian and English, integrated into the European system of higher education.

The Institute of Medicine and Pharmacy of Târgu Mureș was established after the Decision of the Council of Ministers, no. 1160 of August 3, 1945. In 1991, the Institute of Medicine and Pharmacy of Târgu Mureș became University of Medicine and Pharmacy. The University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș was established by Government Decision no. 735 of September 13, 2018, as a result of the merger by absorption between the University of Medicine and Pharmacy of Tîrgu Mureș and the "Petru Maior" University of Tîrgu Mureș. According to the Government Decision no. 707/2019, published in the Monitorul Oficial, no.795 of October 1, 2019, Part I, the University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, changes its name to „George Emil Palade” University of Medicine, Pharmacy, Science and Technology of Târgu Mureș.

The Institution for Organizing University Doctoral Studies (IOSUD) within UMPhST G.E. Palade Tg. Mureș was formed by the merger of the Doctoral Schools of UMPh and UPM.

IOSUD organizes and coordinates scientific doctoral programs, of 4 and 3 years, in the form of full-time. Within the IOSUD, doctoral studies are offered by two Doctoral Schools: The

¹ Each time when applicable the information shall be presented gender-wise.



Doctoral School of Medicine and Pharmacy (SDMF) for Medicine, Dentistry and Pharmacy and the Doctoral School of Letters, Humanities and Applied Sciences (SDLS) for Philology, History, Computer Science, Engineering and management.

IOSUD is led by the Council for Doctoral Studies (CSUD) as a collective governing body, and the two Doctoral Schools are led by the Doctoral School Council (CSD). The structure of the three Councils follows the legal provisions of the Code of doctoral studies and the Institutional Regulation for the organization and conduct of doctoral studies https://www.umfst.ro/fileadmin/documente_oficiale/regulamente/UMFST-REG-06.pdf . IOSUD is led by a director whose appointment has met the requirements of the legal methodology: https://www.umfst.ro/fileadmin/doctorate/concurs/2017/Decizie_Director_CSUD.pdf

On September 30, 2020 the IOSUD noted a total of 99 doctoral advisors, 78 from the Medicine and Pharmacy Doctoral School and 21 from the Doctoral School of Letters, Humanities and Applied Sciences (SDLS).

At the end of the academic year 2019/2020, the number of 229 of doctoral students of the Medicine and Pharmacy Doctoral School were registered and 73 from SDLS.

The Internal Quality assurance system of UPhST G.E. Palade Tg. Mureş are based on all legal requirements on the awareness regarding the quality and the ISO 9001:2015.

II. Methods used

The evaluation activities were performed according the timetable of the institutional evaluation visit – IOSUD Doctoral study domain of Medicine at the George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureş for the period of 06-10 September 2021.

On the preparation period was analyzed The Internal Evaluation Report Medicine of George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureş (63 pages) and its annexes (n^o39).

Along with that were analyzed documents, data and information available on the IOSUD / Doctoral Schools website.

To obtain objective information about the quality of educational programs and the entire infrastructure of the university, to clarify the content of self-assessment Internal Evaluation Report, meetings were held with:

- Representatives of the Institution
- Representatives of the CSUD and the Doctoral School
- Doctoral study medical field coordinator
- Academic staff members who are Doctoral advisors
- Members of Ethics Commission
- Commission for Quality Evaluation and Assurance
- Doctoral students
- Graduates of Doctoral program in Medicine
- Directors of the research centers/laboratories
- Doctoral schools' Council in Medicine doctoral study domain
- Employers of Doctoral graduates.



III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

- *general description of the domain analysis.*

The institutional capacity of the "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures (UMFST) as IOSUD Doctoral study domain Medicine was found as a compliant field.

Criterion A.1. The administrative, managerial institutional structures and the financial resources

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

- *general description of the standard analysis.*

The George Emil Palade University of Medicine, Pharmacy, Sciences and Technology from Targu Mures (UMPhST G.E. Palade Tg. Mureş) as IOSUD Doctoral study domain Medicine provided all necessary evidences in order to confirm the implementation of the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

Performance Indicator A.1.1.1. *The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:*

The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine of "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures (UMFST) elaborated according with the legal regulations in place, approved by the Senate of the University and posted on the web page of the Institution:

- (a) the internal regulations of the at the level of the IOSUD, respectively at the Doctoral School(s) (Senate Decision No 12 of 15 January 2019);
- (b) the Methodology for conducting elections at the level of the Council of University Doctoral Studies (CSUD), respectively at Doctoral School(s) including elections by the students of their representatives in CSUD/Council of the Doctoral School (CSD) and the evidence of their conduct; (Approved Senate 01/15/2019)
- c) the Methodologies for organizing and conducting doctoral studies for the admission of doctoral students, for the completion of doctoral studies) – Operational procedure approved 04/29/2021
- d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad; – Operational procedure approved 12/02/2019
- e) functional management structures CSUD/Council of the Doctoral School with evidence of the regularity of meetings;
- f) the contract for doctoral studies;
- g) internal procedures for the analysis and approval of proposals about doctoral study programs based on advanced academic studies.

The mentioned above specific regulations (a-g) are formulated in accordance with the National and International Regulations and are applied accordingly.

Recommendations:

The indicator is fulfilled



Performance Indicator A.1.1.2. *The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The Regulation for the organization and functioning of the Doctoral School Regulation establish the way in which the doctoral study programs are organized within the "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures doctoral schools, according the The IOSUD institutional Regulation.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The Regulation for the organization and functioning of the Doctoral School regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions, as follows:

- a) acceptance of new thesis supervisors and the manner whereby a thesis supervisor may excluded from the doctoral school;
- b) mechanisms for deciding on the adequacy, make-up and contents of the advanced university studies programme;
- c) procedures for replacing a doctoral student's thesis supervisor and conflict mediation procedures;
- d) conditions for interrupting a doctoral programme;
- e) means for preventing research fraud, including plagiarism;
- f) providing access to research resources;
- g) doctoral students' attendance requirements, based on a methodology developed by the Ministry of Education, Research, Youth and Sports.

Recommendations:

The indicator is fulfilled.

Standard A.1.2. *The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.*

- general description of the standard analysis.

The "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures as IOSUD provided all necessary evidences in order to confirm the presence of the logistical resources necessary to carry out the doctoral studies' mission.

Performance Indicator A.1.2.1. *The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

"George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures has an integrated software in order to keep track of doctoral students and their academic background (Annex 41-00-11 Internal Report).



- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

"George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures integrated software of The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provides real-time analysis and synthesis information needed in the decision-making process based on evidence about:

- 1) Academic Organization
- 2) Admission of Candidates
- 3) Web Teachers
- 4) Scholarships
- 5) Examinations
- 6) Administration
- 7) Export RMU
- 8) Reports and Analyses
- 9) Fees

Recommendations:

The indicator is fulfilled.

Performance Indicator A.1.2.2. *The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

"George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine are applying the following software for verifying the similarity percentage of doctoral theses: by using the official System sistemeantiplagiat.ro (Annex 41-00-12 Internal Report).

Out of a total of 99 doctoral students, 100% were accepted for the defence of doctoral theses, as a result of the anti-plagiarism check. (Annex 41-00-13, Internal Report)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

IOSUD of UMPHST G.E. Palade Tg. Mureş The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine strongly promotes a pro-active attitude regarding the prevention of fraud in Research by detection of:

- ▶ Data fabrication
- ▶ Counterfeiting
- ▶ Plagiarism (is regulated additionally by https://www.umfst.ro/fileadmin/documente_oficiale/regulamente/UMFST-REG-81.pdf)
- ▶ Conflict of interest - is done in accordance with the UMPHST policy and is regulated by the Code of Ethics and Professional Conduct https://www.umfst.ro/fileadmin/documente_oficiale/regulamente/UMFSTREG-02.pdf respectively the Regulation of the Ethics Commission of UMPHST https://www.umfst.ro/fileadmin/documente_oficiale/regulamente/UMFST-REG-22.pdf

Recommendations:

The indicator is fulfilled.



Standard A.1.3. The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

**general description of the standard analysis.*

The "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to confirm that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

Performance Indicator A.1.3.1. *Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There are 8 research grants implemented at the time of the submission of the evaluation report. From 2016 to 2020, a number of 23 research grants were carried out, in which the doctoral advisors had the quality of directors or managers. (Annex 41-00-14.1.1 from Internal Report)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine exist research institutional human resources development grant under implementation at the time of submission of the internal evaluation and all institutional developments grants, as a rule, involve doctoral students.

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.1.3.2. *The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The awarding of grants to doctoral advisors is done through national or international competition, and a requirement in submitting the project funding application within UEFISCDI, is represented by the inclusion of doctoral students in the research team. The results of the award of research or institutional development grants are available on the University's website at <https://www.umfst.ro/universitate/cercetare/granturi-interne-decercetare-stiintifica/competitia-2020>. and on the website of the Centre for Advanced Medical-Pharmaceutical Research at <http://ccamf.umfst.ro/projects.php>.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself



The proportion of doctoral students who benefit for at least six months from other funding is 33.50% vs. required 20%

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.1.3.3.² *At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

A number of 111 doctoral students received a doctoral grant (29 200 lei) through institutional contract, with a value of 3 241 200 lei. A number of 83 doctoral students paid tuition fees (8 000 lei), amounting to 664 000 lei. Annually, the University allocates the sum of 9,600 lei for doctoral students enrolled as full-time students with scholarships, respectively 5,600 lei for fee-paying doctoral students, amounting to 1 530 400 lei.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There is 39,18%, is used to finance the doctoral students' training expenses. (Annex 41-00-16.1.1 from Internal report)

Recommendations:

The indicator is fulfilled.

Criterion A.2. Research infrastructure

Standard A.2.1. *The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.*

- general description of the standard analysis.

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences in order to confirm a modern research infrastructure to support the conduct of doctoral studies' specific activities.

Performance Indicator A.2.1.1. *The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.*

² The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.



- *description of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

The situation of the available infrastructure is presented in Annex 41-00-17.1.1. from Internal Report. For each of the 3 accredited fields, in addition to the central building of UMPHST G.E. Palade Tg. Mureş, there are both spaces and research infrastructure.

- the Centre for Advanced Medical and Pharmaceutical Research (CCAMF)
- the Centre for Advanced Medical and Pharmaceutical Research
- Scientific Research and Technological Development Unit

In the University there are laboratories and research centres that can be found on the ERRIS platform. Regarding access to databases, doctoral students can use the Central Library of the University, which provides unlimited free access to the ANELIS database.

- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

The research infrastructure development is in line with the assumed mission and objectives.

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

Standard A.3.1. At the level of each domain there are sufficient qualified staff to ensure the conduct of doctoral study program.

- *general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences in order to confirm the sufficiency of qualified staff to ensure a quality educational process.

Performance Indicator A.3.1.1. Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.

- *description of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

Out of 62 doctoral advisors, 36 of them meet the minimum CNATDCU standards in force. (Annex 41-00-18.1.1 from Internal Report. The proportion of Active doctoral advisors is 72.6% (45 from 62).

- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

There is a proportion of 58.06% (36 persons) of doctoral thesis advisors in Medicine meeting the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force. Along with this the proportion of active advisors 72.6% (45 persons) could be considered as a sign of the aging trend of doctoral theses supervisors.



Recommendations: To strengthen the HR strategy for Research motivating and involving young researchers in Doctoral School activities in order to rise the proportion of active doctoral thesis advisors within the doctoral domain of Medicine.

The indicator is fulfilled.

Performance Indicator *A.3.1.2. *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The supervising activity of doctoral students is provided by 62 professors who are doctoral advisors, 43 of them have a full-time employment contract for an indefinite period in the institution. (Annex 41-00-19.1.1) from Internal report.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There is a proportion of 69.39% of professors who are doctoral advisors having a full-time employment contract for an indefinite period in the institution.

Recommendations:

The indicator is fulfilled.

Performance Indicator A.3.1.3. *The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The disciplines in the training program based on advanced university studies are taught by professors who have the quality of doctoral / habilitated advisor, university professor or associate professor.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The totals of 100% from subjects in the doctoral education program based on advanced higher education studies in Medicine are taught by certified doctoral thesis advisors.

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs³ does not exceed 20%.*

³ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the provided information from all 62 doctoral advisors, 3 doctoral advisors were found having 9 students and one advisor having 10 students.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, is 6.5%, which does not exceed 20%.

Recommendations:

The indicator is fulfilled.

Standard A.3.2. The Doctoral advisors within the domain are carrying out a scientific activity visible at international level.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences in order to confirm the visibility of scientific activity at the international level.

Performance Indicator A.3.2.1. *At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the Medicine domain undergoing evaluation, out of 62 doctoral advisors, 57 have minimum 5 publications, significantly relevant to the field and indexed Web of Science; 45 of them have international visibility over the last 5 years.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

72.58% of doctoral advisors meet the two criteria. (Annex 41-00-20.1.1 from Internal report).

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.2.2. *At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required*



and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the domain of Medicine, 93.54% of doctoral advisors are still carrying scientific activities, with scientific results published in the past years.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There is a percentage of 58.06% of the doctoral advisors meeting the minimum CNATDCU standards in force. (Annex 41-00-18.1.1 from Internal report)

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

**general description of domain analysis.*

The educational effectiveness of the The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain was found as a compliant field.

Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to confirm the capacity to attract candidates from outside the higher education institution and having a number of candidates exceeding the number of seats available, as well.

Performance Indicator *B.1.1.1. *The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1.2.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the last five years, 6 master's graduates of other higher education institutions in the country or abroad applied for admission to university doctoral studies. The ratio is 0.24.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The ratio between the number of candidates who applied for scholarships and the number of seats funded by the state budget put out through contest within the doctoral studies domain in the last five is in decreasing trend from 2.9 (2015/2016) to 2.0 (2019/2020). That is due to increasing number of



places allocated by MECC and, respectively, number of places allocated to the field the University Senate.

Recommendations:

The indicator is fulfilled.

Standard B.1.2 Candidates admitted to doctoral studies demonstrate academic, research and professional performance.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to confirm the academic, research and professional performance of admitted candidates.

Performance Indicator *B.1.2.1. *Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Student-focused admission has been institutionalized since 2012. This admission procedure is meant to recruit the most valuable and motivated students, exclusively on the basis of the best portfolio and with the best elaborated research projects according the approved Procedure regarding the Admission Process to University Doctoral Studies Doctoral School of Medicine and Pharmacy Cod: UMFST-PO-SDR-01 Ediția 04. https://www.umfst.ro/fileadmin/documente_oficiale/proceduri/UMFST-PO-SDR-01.pdf . The methodology is applied accordingly to the mentioned above <https://www.umfst.ro/doctorat/scoala-doctorala-de-medicina-si-farmacie/admitere-la-doctorat/informatii-admitere-2021.html>

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Admission to doctoral study programs is organized based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure

Recommendations:

The indicator is fulfilled.

Performance Indicator B.1.2.2. *The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁴ does not exceed 30%.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the study domain undergoing evaluation doctoral students have not been expelled (dropout included) from studies 4 years after the admission process.

⁴ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.



- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The rate of doctoral students expelled from studies does not exceed 30%.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

Standard B.2.1. The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to confirm the training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

Performance Indicator B.2.1.1. *The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The training program based on advanced university studies includes disciplines relevant to the field of medicine, which contribute to the development of professional and transversal skills. The program includes a discipline for the in-depth study of research methodology and a discipline for statistical data processing. (Annex 41-00-23.1.1 from Internal Report):

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The training program based on advanced academic studies includes 9 disciplines (more than 3) relevant to the scientific research training of doctoral students; three of these disciplines is dedicated to study in-depth the research methodology and/or the statistical data processing (1. Biostatistical basics in medical research; 2. Clinical research methodology).

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.2. *At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The training program based on advanced university studies includes a discipline dedicated to ethics in scientific research and intellectual property, namely Ethics and academic integrity. (Annex 41-00-24.1.1 from Internal report)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

One discipline from 9 is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.



Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁵.*

- description of the facts, the findings from the assessed institution’s documents and the evaluation visit itself

All 9 mandatory disciplines for the scientific training of doctoral students are provided according to their Curriculums.

- analysis of the facts, the findings from the assessed institution’s documents and the evaluation visit itself

The Curriculums are specifying the knowledge and skills that doctoral students must acquire after completing each discipline.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.4. *All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*

- description of the facts, the findings from the assessed institution’s documents and the evaluation visit itself

During the doctoral studies the doctoral student is guided by a supervising committee, consisting of 3 members.

- analysis of the facts, the findings from the assessed institution’s documents and the evaluation visit itself

The guiding process can have multiple forms, including support granted in the elaboration and publishing of articles and regular meetings regarding the research stage and the topic of the doctoral thesis. (Annex 41-00-25.1.1 from Internal Report)

https://www.umfst.ro/fileadmin/documente_oficiale/proceduri/UMFTGM-PO-SDR-05.pdf

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.5. *For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.*

- description of the facts, the findings from the assessed institution’s documents and the evaluation visit itself

⁵ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.



The supervision of the doctoral students, in total number of 194, is provided by 201 professors from UMPHST G.E. Palade Tg. Mureş and from other higher education institutions in the country or abroad. (Annex 41-00-26.1.1 from Internal report).

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The ratio between the number of doctoral students and the number of professors / researchers who provide supervision is 0.96.

Recommendations:

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to demonstrate that the doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

Performance Indicator B.3.1.1. *For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There was selected 5 papers randomly from total list of doctoral students' contribution.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All 5 selected articles were found as significant original contributions in the field of Medicine.

Recommendations:

The indicator is fulfilled.

Performance Indicator *B.3.1.2. *The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The number of presentations of doctoral students who completed their doctoral studies in the evaluated period and the number of doctoral students who completed their doctoral studies in the evaluated period is presented in Annex 43.00-29.1.1 from Internal report.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself



The ratio between the number of presentations of doctoral students who completed their doctoral studies in the evaluated period and the number of doctoral students who completed their doctoral studies in the evaluated period is 1.55

Recommendations:

The indicator is fulfilled.

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.

**general description of the standard analysis.*

The UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain provided all necessary evidences in order to proof the engagement of significant number of external scientific specialists in the commissions for public defense of doctoral theses in the activities of Doctoral School medical domain.

Performance Indicator *B.3.2.1. *The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Reviewers coming from a higher education institution, other than the evaluated IOSUD had one or two theses allocated by the same doctoral advisor over one year. Two reviewers had three doctoral theses allocated from the same doctoral advisor, in the same year. (Annex 41-00-30.1.1 from Internal report)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

There are two reviewers having three (more than two) doctoral theses allocated from the same doctoral advisor, in the same year.

Recommendations: To assure the number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD not exceeding two (2) in a year for the theses coordinated by the same doctoral thesis advisor.

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The evidence for the situation in question are presented in Annex 41-00-31.1.1 from Internal report.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself



The ratio between the number of doctoral theses assigned to a certain reviewer from another higher education institution and the number of doctoral theses defended in medicine within the doctoral school varies between 0.01-0.09.

Recommendations:

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

The quality management of the UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain was found as a compliant field.

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

**general description of the standard analysis.*

Performance Indicator C.1.1.1. *The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:*

(a) the scientific work of Doctoral advisors;

(b) the infrastructure and logistics necessary to carry out the research activity;

(c) the procedures and subsequent rules based on which doctoral studies are organized;

d) the scientific activity of doctoral students;

e) the training program based on advanced academic studies of doctoral students;

f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In order to cover the requirements of points (a-f) of Performance indicator C.1.1.1., the UMPHST G.E. Palade Tg. Mureş IOSUD The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain has provided all necessary evidences in the Internal report.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain demonstrates the continuous development of the evaluation process and its internal quality assurance by applying approved Regulations, Procedures and Methodology at the level of UMPHST G.E. Palade Tg. Mureş IOSUD . University implemented the Quality Management System Standard (ISO 9001-2015).

Recommendations:

The indicator is fulfilled.

Performance Indicator *C.1.1.2. *Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their*



overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In order to identify the level of satisfaction of doctoral students regarding the doctoral program, SDMF prepared a questionnaire to measure satisfaction with the services provided. The questionnaire consisted of 11 items. (Annex 41-00-33.1.1 from Internal Report of Domain Medicine)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The analyses provided by institution is based on the one survey of 43 participants all doctoral students form Medicine domain that do not allowed to analyze the dynamics of satisfaction during the evaluation period of 5 years.

Recommendations: It is recommended to increase the participation rate of satisfaction evaluation survey. To ensure the systematic analysis of the dynamics of the satisfaction level for the period of 5 years in the annual Internal reports.

The indicator is fulfilled

Criterion C.2. Transparency of information and accessibility of learning resources

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.

**general description of the standard analysis.*

The "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures IOSUD the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences covering the requirements of interest information to doctoral students, future candidates and public interest information being available for electronic format consultation.

Performance Indicator C.2.1.1. *The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:*

- (a) the Doctoral School regulation;*
- (b) the admission regulation;*
- (c) the doctoral studies contract;*
- (d) the study completion regulation including the procedure for the public presentation of the thesis;*
- (e) the content of training program based on advanced academic studies;*
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);*
- (h) information on the standards for developing the doctoral thesis;*
- (i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.*



- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures IOSUD is publishing on the website the documents specified in points (a-i)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The documents published on the website of the "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures IOSUD the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine are considered the proof for points (a-i).

Recommendations:

The indicator is fulfilled

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

**general description of the standard analysis.*

The "George Emil Palade" University of Medicine, Pharmacy, Sciences and Technology from Targu Mures IOSUD the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences in order to demonstrate the presence of the access for doctoral students to the resources needed for conducting doctoral studies.

Performance Indicator C.2.2.1. *All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All doctoral students are enabled, via their institutional email accounts, with access to online platforms of relevant academic databases for Medicine doctoral field:

ELSEVIER SCIENCE DIRECT

SPRINGERLINK

CLARIVATE ANALYTICS – WEB OF KNOWLEDGE

PROQUEST CENTRAL

SCOPUS

WILEY ONLINE LIBRARY

CAMBRIDGE JOURNALS

NATURE RESEARCH

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.

Recommendations:

The indicator is fulfilled

Performance Indicator C.2.2.2. *Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.*



- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Each doctoral student, subsequent to the approval of the doctoral advisor, has access to the electronic system of plagiarism checking: sistemeantiplagiat.ro approved and countersigned by the Ministry of Education and Research in 2016.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Each doctoral student have access, upon request, to the electronic system (sistemeantiplagiat.ro) for verifying the degree of similarity with other existing scientific or artistic works according the Anti Plagiarism Regulation of the "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine. https://www.U.M.F.S.T..ro/fileadmin/documente_oficiale/regulamente/U.M.F.S.T.-REG-81.pdf

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All doctoral students of Medicine domaine have access to scientific research laboratories or other facilities within the interdisciplinary Doctoral Schools according the affiliated domaine: the Centre for Advanced Medical-Pharmaceutical Research (CCAMF). The laboratories are led by professors, doctoral advisors and researchers from the Doctoral School of Medicine and Pharmacy, thus offering doctoral students the opportunity to perform research activities in these laboratories.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The access of doctoral students of the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine to scientific research laboratories or other facilities are provided according to the internal Regulation. The access of doctoral students to scientific research laboratories or other facilities are provided according to the internal Regulation is a part of the ERRIS platform.

Recommendations:

The indicator is fulfilled.

Criterion C.3. Internationalization

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

**general description of the standard analysis*

The IOSUD "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine provided all necessary evidences in order to proof the application of strategy to enhance the internationalization of doctoral studies.



Performance Indicator *C.3.1.1. *IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Doctoral students from IOSUD of UMPHST G.E. Palade of Tg. Mureş benefit during the doctoral research from mobility supported through ERASMUS agreements with prestigious universities, both in the European Union and outside it. Doctoral students have the opportunity to conduct specific scientific research in international universities and medical centres. International visibility is a key priority of IOSUD.(Annex41-00-34.1.1 from Internal Report)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

A percentage of 36.08% of doctoral students have completed a training course or another form of mobility abroad, such as participation in international scientific conferences.

Recommendations: It is recommended to increase the number of doctoral students participating at mobility periods abroad to ensure continuously the target at the level of the European Higher Education Area.

The indicator is fulfilled.

Performance Indicator C.3.1.2. *In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

A number of 20 doctoral students are enrolled in international joint supervision, with annual mobilities at joint supervision university centres. In order to stimulate research in international jointly supervised doctorates, candidates who prove enrollment through international jointly supervised doctorates, benefit from a 5% bonus, added to the grade from the admission exam for doctoral studies, according to the Admission Procedure. A number of 26 personalities have visited IOSUD in recent years, and some of them have teaching activities within the training program of the first doctoral year.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

IOSUD supports the organization of international jointly supervised doctorates and has mechanisms to improve continuously the research in international jointly supervised doctorates.

Recommendations:

The indicator is fulfilled.



Performance Indicator C.3.1.3. *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The internationalization of activities is supported by many approaches, as participation of prestigious universities in the Commissions for the supervision of Doctoral students, as well as in the Commissions for public defense of doctoral theses, procedure for the recognition of doctoral diplomas, respectively of the quality of doctoral advisor, which facilitates the integration of researchers from abroad in the Doctoral School, etc.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All mentioned in the Internal Report specific measures are implemented in order to assure the internationalization of activities carried out during the doctoral studies.

Recommendations:

The indicator is fulfilled.

IV. SWOT Analysis

| | |
|---|--|
| <p><u>Strengths:</u></p> <ol style="list-style-type: none"> 1. The existence of institutional capacity based on modern research infrastructure and quality of human resources; 2. The program based on advanced university studies; 3. Interdisciplinarity of the University; 4. Implementation of Quality management System Standard (ISO 9001:2015). | <p><u>Weaknesses:</u></p> <ol style="list-style-type: none"> 1. The aging trend of doctoral theses supervisors. |
| <p><u>Opportunities:</u></p> <ol style="list-style-type: none"> 1. Development of international visibility of Doctoral school activities; 2. To strength the interdisciplinary research in the domain of Medicine and Informatics; 3. Implementation of Open Sciences approaches; 4. The European Commission recognition: the 'HR Excellence in Research' Award. | <p><u>Threats:</u></p> <ol style="list-style-type: none"> 1. Migration of young researchers due to country economic situation. |

V. Overview of judgments awarded and of the recommendations

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| 1. | PI | <p>A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:</p> <p>a) the internal regulations of the Doctoral School;</p> <p>b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p> <p>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p> <p>g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.</p> | <i>Fulfilled</i> | |
| 2. | PI | <p>A.1.1.2. The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.</p> | <i>Fulfilled</i> | |
| 3. | PI | <p>A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.</p> | <i>Fulfilled</i> | |
| 4. | PI | <p>A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.</p> | <i>Fulfilled</i> | |
| 5. | IP | <p>A.1.3.1. Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated</p> | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|--|
| | | domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students. | | |
| 6. | PI * | A.1.3.2. The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%. | <i>Fulfilled</i> | |
| 7. | PI * | A.1.3.3. At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.). | <i>Fulfilled</i> | |
| 8. | CPI | A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly | <i>Fulfilled</i> | |
| 9. | CPI | A.3.1.1. Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and | <i>Fulfilled</i> | To strengthen the HR strategy for Research motivating and involving young researchers in Doctoral School activities activities in order to rise the percent of active doctoral thesis advisors within the doctoral domain of Medicine. |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|-----------------|
| | | mandatory for obtaining the enabling certification. | | |
| 10. | PI * | A.3.1.2. At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD. | <i>Fulfilled</i> | |
| 11. | PI | A.3.1.3. The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law. | <i>Fulfilled</i> | |
| 12. | PI * | A.3.1.4. The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs does not exceed 20%. | <i>Fulfilled</i> | |
| 13. | CPI | A.3.2.1. At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|-----------------|
| | | professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions. | | |
| 14. | PI * | A.3.2.2. At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years | <i>Fulfilled</i> | |
| 15. | PI * | B.1.1.1. The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1.2. | <i>Fulfilled</i> | |
| 16. | PI * | B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure. | <i>Fulfilled</i> | |
| 17. | PI | B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission does not exceed 30%. | <i>Fulfilled</i> | |
| 18. | PI | B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|-----------------|
| | | these disciplines is intended to study in-depth the research methodology and/or the statistical data processing. | | |
| 19. | PI | B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program. | <i>Fulfilled</i> | |
| 20. | PI | B.2.1.3. The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities. | <i>Fulfilled</i> | |
| 21. | PI | B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting. | <i>Fulfilled</i> | |
| 22. | CPI | B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1. | <i>Fulfilled</i> | |
| 23. | CPI | B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain | <i>Fulfilled</i> | |
| 24. | PI * | B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|--|
| | | international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1. | | |
| 25. | PI * | B.3.2.1. The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor. | <i>Fulfilled</i> | To assure the number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD not exceeding two (2) in a year for the theses coordinated by the same doctoral thesis advisor. |
| 26. | PI * | B.3.2.2. The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed. | <i>Fulfilled</i> | |
| 27. | PI | C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory: a) the scientific work of Doctoral advisors; b) the infrastructure and logistics necessary to carry out the research activity; c) the procedures and subsequent rules based on which doctoral studies are organized; d) the scientific activity of doctoral students; e) the training program based on advanced academic studies of doctoral students; f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students. | <i>Fulfilled</i> | |
| 28. | PI * | C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous | <i>Fulfilled</i> | It is recommended to increase the participation rate of satisfaction evaluation survey. To ensure the systematic analysis of the dynamics of the satisfaction level for the period of 5 years in the annual Internal reports. |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|--|
| | | improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented. | | |
| 29. | CPI | <p>C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:</p> <ul style="list-style-type: none"> a) the Doctoral School regulation; b) the admission regulation; c) the doctoral studies contract; d) the study completion regulation including the procedure for the public presentation of the thesis; e) the content of training program based on advanced academic studies; f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data; g) the list of doctoral students within the domain with necessary information (year of registration; advisor); h) information on the standards for developing the doctoral thesis; i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation. | <i>Fulfilled</i> | |
| 30. | PI | C.2.2.1. All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis. | <i>Fulfilled</i> | |
| 31. | PI | C.2.2.2. Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works. | <i>Fulfilled</i> | |
| 32. | PI | C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures. | <i>Fulfilled</i> | |
| 33. | PI * | C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training | <i>Fulfilled</i> | It is recommended to increase the number of doctoral students participating at mobility periods abroad to ensure continuously the target at the level of the European Higher Education Area. |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| | | course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area. | | |
| 34. | PI | C.3.1.2. In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students. | <i>Fulfilled</i> | |
| 35. | PI | C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.). | <i>Fulfilled</i> | |

VI. Conclusions and general recommendations

As a result of the evaluation performed based on the performance indicators, it is found that the activity of the IOSUD George Emil Palade University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, the Doctoral School of Medicine and Pharmacy (SDMF) for Medicine domain is in accordance with the requirements of ARACIS and legislation in force.

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