



This report was drafted by Prof. Ahcène BOUMENDJEL

Université Grenoble Alpes

Faculté de Pharmacie

3800 Grenoble

France

e-mai : ahcene.boumendjel@univ-grenoble-alpes.fr

The External Evaluation Report of a Doctoral Study Domain

I. Introduction¹

The evaluation of the UMF CD, Pharmacy Doctoral School took place on line from Monday October 25 to Friday October 2021. The evaluation panel was composed of 3 members: two Professors including an international evaluator and one PhD student. Prior the evaluation, a timetable was provided with the precise program and the links to join the different meetings. The international evaluator was assisted with an interpreter. Despite some problems linked to internet connections, things worked very well. Personally, I would like to thank the colleagues from ARACIS for their professionalism and reactivity. Due to the COVID-19 pandemic crisis, the international evaluator did not participate in the on site visit.

At UMFCD Doctoral Schools, there are 271 doctoral supervisors from which, 219 are in the field of Medicine, 31 in the field of Pharmacy and 21 in the field of Dentistry. Doctoral advisors meet the expected criteria to supervise research. The habilitation to supervise research is awarded on the basis of the research experience and especially on the activity of the last 5 years.

The doctoral school is headed by a Director and a council composed of 5 members including one elected student.

During the last five years, at the doctoral school of Pharmacy of UMFCD, there were between 25 and 31 doctoral advisors/year. The number of doctoral advisors is increasing linearly (25 advisors in 2015; 31 in 2020). For the evaluation period, the average number of PhD degrees awarded annually is between 10 and 13. In addition to the specific equipment present in their hosting laboratories, PhD students have access to 4 research laboratories/infrastructures covering the research topics of doctoral theses in the field of Pharmacy.

II. Methods used

The panel members were provided with the self assessment report (Internal Evaluation Report) written in english and annexs (written in Romanian). The document were downloaded from the cloud platform of ARACIS by using a secured login and password. For the international evaluator, there was no on site visit, due to the pandemic situation. In this context, the meetings with officials of the Doctoral School, the council of the Doctoral School, ethics commission, quality assessment and assurance commission,

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



alumni, doctoral advisors, teachers...were extremely useful and they allowed to gather some information that were missing in the internal evaluation report. For all meetings, the presence of an interpreter (very professional) was highly appreciated by the international evaluator. Based on the discussions, it can be said that there is a team spirit within PhD students, and academic members.

In conclusion, from the practical and methods point of view, the evaluation was well organized and all needed help was provided by ARACIS and UMFCD representatives.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

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

Performance Indicator A.1.1.1.

The specific regulations (a to g) that are related to A.1.1.1 are defined and provided in annexes that are drafted in Romanian. The institutional regulations are provided within an exhaustive annex (Annex A.1.1.1.a). The following regulations were provided in specific annexes: process of appointing the management structures; the process of election of students representatives; the process of appointing the director of the doctoral school; methodology of admission for Romanian student, UE students and abroad; thesis presentation methodology; methodology for the recognition of the capacity of doctoral supervisor.

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

The provided documents help to find the information needed to check the performance. However, due to the language issue, it is difficult for the external evaluator to give a clear idea about these facts. We did our best to translate the documents and we could confirm that the UMFCD is in compliance with the performance indicator A.1.1.1.

Recommendations:

The indicator is fulfilled

Performance Indicator A.1.1.2.

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

According to the institutional regulation described in (Annex A.1.1.1.a), the regulation include criteria, procedures and standards for the matters specified in art. 17 para. (5) of the Code of doctoral studies, approved by Government Decision no. 681/2011. Seven amendments to and/or completion of the institutional regulation are provided. They concern. the acceptance of new doctoral supervisor members, the appreciation of the structure and content of the training program, the procedures for changing the doctoral supervisor, the conditions satisfied in order to interrupt the doctoral program, fraud in scientific research and plagiarism, access to research resources, the attendance obligations of the PhD students.



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

The facts related to this performance indicator are clearly provided and detailed in dedicated annexes.

Recommendations:

The indicator is fulfilled

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

Performance Indicator A.1.2.1.

All information about the students personal data (date and place of birth, Nationality, ...) and its scholar data (doctoral supervisor, year of admission, form of funding, academic path, periods of interruption, extensions, date of the doctoral thesis, order ascertaining the PhD degree) are secured in a protected database. A new and more performant program for the on line management of the schooling of PhD students in doctoral studies is being acquired.

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

UMFCD practices are in line with standard rules. The acquisition of the the new software for the management of the schooling of PhD students will reinforce the performance indicator.

Recommendations:

The indicator is fulfilled

Performance Indicator A.1.2.2.

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

The doctoral school uses a software (www.sistemantiplagiat.ro) to scan doctoral theses in order to verify the originality. The generated similarity reports are included in the doctoral file. In the period 2016 - 2020, 54 verifications were performed for the doctoral theses in the field of Pharmacy.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself
Evidence of the use of a dedicated software to verify the percentage of similarity is provided.

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.

Performance Indicator A.1.3.1.

For the evaluated period (2016 - 2021), 35 contracts were led by the PHD advisors and they are divided as follows: 19 research contracts (one in progress), 12 FDI contracts (two in progress), 3 European projects and 1 contract with a the private partner. These contracts address research topics in the field of Pharmacy. PhD students were involved in most of the project indicated above.



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

The performance is very good. It should be highlighted (as indicated in annex 1.3.1) that some contracts involve two or more students, which is a strong indicator. However, the amount of the contracts are not indicated.

Recommendations:

The indicator is fulfilled

Performance Indicator *A.1.3.2.

As indicated in the internal evaluation report and Annex A.1.3.2 (Students - Complementary budget funding), during the evaluated period and in the field of Pharmacy, there were 14 PhD students out of a total of 59 PhD students have received benefit from complementary funding. This represents a percentage of 24 %.

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

The provided elements allowed the appreciation of the performance. The performance is in line with the recommendation of the institution.

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

From the assessed institution documents (internal evaluation report) and annex 1.3.3. (Financing professional training) it is indicated that substantial amounts are used to reimburse professional training expenses. However, it is very difficult to calculate the percentage, since the all required financial sources are not available (tuition fees, the total amounts of contracts,...).

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

I would say that the doctoral school is in line with the performance indicator A.1.3.3. However the exact percentage of the total amount of doctoral grants (obtained by the university and tuition fees) used for reimbursement could not be found, nor the required numbers for calculation it.

Recommendations:

The indicator is partially fulfilled.

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.



Criterion A.2. Research infrastructure

**general description of the criterion analysis.*

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

Performance Indicator A.2.1.1.

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

The description is based ONLY on the internal evaluation report and from the discussions with the graduates and PhD students. Both graduates and PhD students who are presently preparing their PhDs, all agree that they benefit from modern infrastructures and equipments. They attested that there is no administrative hurdles for accessing the facilities. Moreover, according to the provided documents, students benefit from modern library that offer important scholar books, magazines and major data bases (the list of the available databases is provided in Annex A.2.1.1.-1.)

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

The requested (and detailed) information are easily found in the documents provided by UMFCO. The performance is excellent.

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

Performance Indicator A.3.1.1.

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

At the doctoral field of Pharmacy, 31 active doctoral supervisors fulfill the conditions and rules in force. At least three supervisors are in charge of each field of the doctoral school. Among them, 29 supervisors (94%) meet the minimum standards for licensing provided by OMENCS.

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

The self assessment document and its annexes (Annex A.3.1.3.-1.; Annex A.3.1.3.-2 and Annex A.3.1.4) provide the necessary information. The doctoral school fully satisfy the required performance.

Recommendations:

The indicator is fulfilled

Performance Indicator *A.3.1.2.

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



At the doctoral school of Pharmacy, 27 (87%) of doctoral advisors are either full-time or employed for an indefinite period contract.

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

The performance exceeds significantly the requested percentage.

Recommendations:

The indicator is fulfilled

Performance Indicator A.3.1.3.

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

According to the internal evaluation reports and annexes: A.3.1.3.-1 (List of disciplines and discipline managers in the last 5 academic years); A.3.1.3.-2. (teachers CVs); A.3.1.4. (supervising rate of PhD supervisors), evidence is provided that the disciplines in the training program based on advanced university studies are supported by professors who have the capacity of university Professor or Associate Professor. The teachers are active in research as attested by their bibliometric performance.

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

The facts supporting the good doctoral school performance are provided in the self assessment documents.

Recommendations:

The indicator is fulfilled

Performance Indicator *A.3.1.4.

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

According to Annex A.3.1.4. (Share of supervisors with over 8 PhD students), in Pharmacy, only 2 doctoral supervisors (6 % of total supervisors) coordinate at the same time more than 8 PhD students, but less than 12, during their doctoral studies.

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

The requested information is provided in both the internal report and its annexes and indicate good performance.

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.*

Performance Indicator A.3.2.1.



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

According to the four annexes related to the involvement of doctoral advisors in research, it is indicated that 30 out of 31 doctoral advisors are scientifically active and are regular publisher. Most of the articles are published indexed in Web of Science. According to annex A.3.2.1.-2 and from my own research on web of science, it is found that 27 out of 30 scientifically active doctoral advisors publish in known, relevant and highly ranked journals, including top scientific journals (Nature, Lancet, JACC, ...).

Doctoral advisors or students supervised have participated in 70 international conferences covering the fields related to pharmacy. In most conferences, posters presentations were presented.

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

The performance is satisfactory. However the publication rate is not homogenous among the doctoral advisors.

Recommendations:

The indicator is fulfilled

Performance Indicator *A.3.2.2.

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

Based on the 5 years CNATDCU score and according to the data provided in Annex A.3.2.2 and AS A.3.2.2, it is shown that 30 supervisors (97 %) continue to be scientifically active. They obtained at least 25% of the minimum CNATDCU score (47 points).

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

The performance indicator is fullfiled.

Recommendations:

The indicator is fulfilled

Domain B. EDUCATIONAL EFFECTIVENESS

**general description of domain analysis.*

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

Performance Indicator *B.1.1.1.

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

The internal report indicate that for the five years period, 18 master's degree graduates from outside UMFCD have been admitted to doctoral university studies. Compared to the total number of places available, the coefficient is around 0.3.

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

The facts and the findings from the provided documents are in agreement with the requested indicator. The performance can be enhanced by recruiting more students from outside UMFCD.



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.*

Performance Indicator *B.1.2.1.

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

According to the internal evaluation report and the meetings with the students and doctoral advisors, the recruitment of PhD students applied for scholarship financed from the state budget imply a written test and an interview in addition to the previous academia records and experiences. In the written test and interview, the scientific skills and the student abilities for research were evaluated.

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

The mode of admission of students applied for scholarships that are not financed from the state budget is not clear.

Recommendations:

The indicator is fulfilled

Performance Indicator B.1.2.2.

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

For the period 2015 - 2020, only one student (out of 75) was expelled. The expelled student was admitted in 2016 and expelled in 2017. Therefore, the expelling rate is 1.3%.

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

The performance is very good.

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.

Performance Indicator B.2.1.1.

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

The training program includes the following disciplines that contribute to the development of professional skills (a) Scientific research methodology and research project management; (b) Bioethics of research



and ethics of scientific publication; (c) Ethics and academic integrity; (d) Biostatistics; (e) Research ethics on laboratory animals; (f) Intellectual property. Moreover, some optional disciplines are proposed.

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

The proposed disciplines within the training program are in line with the requested curricula. However, it can be conceived that the disciplines intended to study in-depth the research methodology and/or the statistical data processing, can be taught in english.

Recommendations:

The indicator is fulfilled

Performance Indicator B.2.1.2.

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

Within the training program, among the disciplines proposed, three of them deal with the performance indicator B.2.1.2: ethics and academic integrity; biostatistics; research ethics on laboratory animals; Intellectual property (including optional courses on thesis writing)

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

The doctoral school displays good performance and in line with the predicted indicators.

Recommendations:

The indicator is fulfilled

Performance Indicator B.2.1.3.

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

For each discipline offered within the training program, the doctoral school indicates: if the discipline is compulsory or optional, the number of hours, the number of credits and information about the coordinator and the teaching staff, the outcomes of each discipline and examination modalities. These mechanisms can be found at the UMFCO web site. These information are provided to students and after admission, PhD students sign together with the doctoral supervisors, the individual training plan, attached to the study contract.

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

The performance indicators are fully respected.

Recommendations:

The indicator is fulfilled

Performance Indicator B.2.1.4.

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

The individual training plan for each doctoral student includes the composition of the guidance commission. The commission consists of three members and is proposed by the doctoral supervisor, with the consent of the PhD student. According to the discussions with PhD students, the commission meet



on regular bases (twice a year). Unanimously, students were very satisfied about the roles and recommendation of the guidance commissions.

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

According to the provided documents and discussions with PhD students, doctoral students receive counselling/guidance on regular bases from functional guidance commissions. The presence of external members in the guidance commissions can be an option to consider.

Recommendations:

The indicator is fulfilled

Performance Indicator B.2.1.5.

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

At the doctoral school of Pharmacy, based on the statistics of the thesis duration (4 years), 73 professors/teachers provide guidance for 50 PhD students, hence the ratio is 1.46. It should be mentioned that in addition to doctoral advisors (31), many teachers participate in the guiding of PhD students.

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

The performance is strong. However, the real input of the teachers who are not doctoral advisors is not clear.

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.

Performance Indicator B.3.1.1.

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

At the Pharmacy doctoral school, it is mandatory that PhD student has to publish at least two articles before defending the PhD thesis. Within the evaluation period, 106 publications were published by doctoral advisors and involving PhD students. Some articles were published in very prestigious journals (Nature, Lancet...), however these articles are made within a large panel of and worldwide consortiums.

Many of the reported articles deal with original research and few are reviews. Authors from UMFC are either first, second, co-last or last authors in more than 70% of articles.

Here are below three articles reporting interesting findings within the Pharmacy domain. Many other articles can be cited too.

Anuceanu R, Dinu M, Dinu-Pirvu C, Anuța V, Negulescu V. Pharmacokinetics of B-Ring Unsubstituted Flavones. *Pharmaceutics*. 2019 Aug 1;11(8):370.



Apostol TV, Chifiriuc MC, Draghici C, Socea LI, Marutescu LG, Olaru OT, Nitulescu GM, Pahontu EM, Saramet G, **Barbuceanu SF**. Synthesis, In Silico and In Vitro Evaluation of Antimicrobial and Toxicity Features of New 4-[(4-Chlorophenyl)sulfonyl]benzoic Acid Derivatives Molecules. 2021 Aug 23;26(16):5107.

Tihan GT, Rău I, Zgârian RG, Ungureanu C, Barbaresso RC, Kaya MGA, Dinu-Pîrvu C, **Ghica MV**. Oxytetracycline versus Doxycycline Collagen Sponges Designed as Potential Carrier Supports in Biomedical Applications. Pharmaceutics. 2019 Jul 24;11(8):363

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

The performance is very good but can be enhanced.

Recommendations:

The indicator is fulfilled

Performance Indicator *B.3.1.2.

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

70 Presentations were made in international events. All of them were held abroad. Therefore, the ratio of presentations/number of students who defended their theses (45) is 1.6. Based on the discussions with graduates and PhD students, the hosting laboratories are very open to the participation of students in international events.

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

The performance is very good. However, clear rules indicating the minimum of participations per student that should be accomplished during the PhD period.

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.

Performance Indicator *B.3.2.1.

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

The facts reported in the internal evaluation report and Annex B.3.2.1. (Public support commissions for the last 5 years) are difficult to analyze and may be some mistakes had occurred. For example, in the internal report it said (*Of the 614 theses publicly presented in the period 2016 - 2020 ...*) !!! Where the number of 614 comes from !!!

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

Very difficult to analyse with the provided documents.

Recommendations:



Partially fulfilled

Performance Indicator *B.3.2.2.

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

The internal assessment document indicate that: The highest number of theses allocated to the same referent in the period 2016 - 2020 was 18 theses. Compared to the total number of presentations (53), the coefficient of 0.18.

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

Based on the self assessment document the performance indicator fits within the requested recommendation.

Recommendations:

The indicator is fulfilled

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

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.

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

As reported in annex Annex C.1.1.1.-1, the doctoral studies are regulated by an internal and operational procedure. Among others, the procedure pay particular attention to the risks related to carrying out activities or achieving key objectives. The factors that increase the risk occurrence and the strategies to overcome the risks are provided. According to the internal report and the meetings with the doctoral advisors, the scientific activity of the doctoral advisors is evaluated on annual bases. The evaluation is conducted according to an established performance grid. The performance of the doctoral supervisors are used as a criteria for allocating of PhD students. The scientific infrastructures required for the research activities are evaluated on the basis of information provided by the authorities in charge of grants and scientific research.

The organisation of doctoral studies (admission methodology, public presentation of doctoral thesis, public presentation of doctoral thesis) are periodically revised based on the feedbacks from doctoral supervisors and PhD students and also according to legislation or institutional changes.

As said before, the scientific activity and the scientific progress of the theses of PhD students is evaluated by the doctoral supervisor and the guidance commission.



The training program is periodically reviewed. The review takes account of the disciplines evolution, the development of new transversal skills, the students feedback.

Finally, the UMFCFCD supports the participation of PhD students in scientific events and strongly encourage the publication of articles.

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

The facts were accurately presented in the internal report and supported by details provided in annexes. The performance is judged very strong.

Recommendations:

The indicator is fulfilled

Performance Indicator *C.1.1.2.

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

This performance was the subject of large discussions with the PhD students. Unanimously, the feedback of students was excellent and confirm that the necessary mechanisms are implemented. According to the documents provided by UMFCFCD, two mechanisms are adopted and are; evaluation of the teaching activity; measuring the degree of satisfaction of students regarding the doctoral program, the scientific research, the administration, support provided by the school.

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

The performance indicators are provided and show that the University is in full compliance with the required performance.

Recommendations:

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.

Performance Indicator C.2.1.1.

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

According to the self assessment report, the performance indicators a-i can be viewed on the UMFCFCD web site (<https://umfcd.ro/educatie/doctorat/scoala-doctorala>). The documents reported for each performance indicator were given.

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

The performance is very strong.

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.



Performance Indicator C.2.2.1.

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

The list of databases relevant to the field of Pharmacy and accessible for students is provided in annex A.2.1.1.-1. The databases concern major ones that are worldwide used by students and researchers enrolled in pharmacy doctoral schools. The databases can be accessed directly when the student is present on the university (on the basis of institutional IP) or from outside the campus by mobile access.

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

The performance is strong and meet international standards.

Recommendations:

The indicator is fulfilled

Performance Indicator C.2.2.2.

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

Upon request, PhD students have access to the electronic verification system www.sistemantiplagiat.ro to verify the level of similarity.

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

The performance is satisfactory. However, more efforts can be made to push students for regular (and mandatory !!) electronic verifications.

Recommendations:

The indicator is fulfilled

Performance Indicator C.2.2.3.

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

The students have full access to the research laboratories and facilities. The list of the latter are provided in Annex A.2.1.1 -2 (List of laboratories and research centers). The on line discussions exchange with PhD students confirmed the information provided in the documents. The on site visit would have been a good opportunity to appreciate the performance. In addition to the facilities presents at the UMFCD campus, PhD students can also benefit from facilities present at other research institutions within partnership agreements.

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

All indicators are in favour of a very good performance.

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.

Performance Indicator *C.3.1.1.

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

At the university level, 68 international agreements are active, including 29 Erasmus partnership. For the period 2016-2020, 22 PhD students (out of 45) have completed internship mobility, giving the percentage of 49%.

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

The performance related to mobility of PhD students matches the UMFCO internationalization ambitions.

Recommendations:

The indicator is fulfilled

Performance Indicator C.3.1.2.

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

UMFCO implement mechanisms to encourage and financially support co-tutelage of PhD theses. The Methodology regarding the academic mobility of PhD students, Procedure regarding the use of the budget allocated to doctoral studies, Co-supervision agreement are provided in 3 different annexes. PhD students are invited to attend lectures of international experts invited to conferences organized by the university and faculties.

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

All indicators are in favour of good performance.

Recommendations:

The indicator is fulfilled

Performance Indicator C.3.1.3.

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

PhD students are permanently informed about the opportunities to participate in international programs or projects. The information is posted on the web site. The University has implemented several mechanisms to establish strong and sustainable international activities. Here two examples illustrating the



mechanisms. The University organize an annual congress where conferences are delivered by prestigious personalities from abroad. The congress gives opportunities for PhD students to present their scientific work and the best achievements are awarded. UMFCD organized in 2018 an intensive seminar dedicated to biopharmaceuticals in the presence of several European experts.

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

The findings are in favor of a full engagement of UMFCD for promoting the internationalization among PhD students and researchers.

Recommendations:

The indicator is fulfilled

IV. SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none"> - Strong research activities. - Good scientific production - Respectfull Research facilities - Dedicated doctoral advisors - Strong international activity 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> - The doctoral supervision activity of doctoral advisors is too heavy. - Corses taught in english are too low - Admission of external students is moderate
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> - Take part of prestigious EU programs -Take measures to attract external PhD students - Develop co-tutelage theses 	<p><u>Threats:</u></p> <p>The decrease number of Master students willing to pursue for PhD thesis (the tendency is observed at the EU level).</p>

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</p>	Fulfilled	No specific recommandation regarding this performance.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>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>		
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>	Fulfilled	No specific recommendation regarding this performance.
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>	Fulfilled	No specific recommendation regarding this performance.
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>	Fulfilled	If possible, implement double check of similarity to strengthen the performance. There are very performant (and free) softwares.
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 domain within the past 5 years. The grants address relevant themes for the respective</p>	Fulfilled	Doctoral advisors should be encouraged to take part of networks (COST...) which are the starting points for prestigious EU programs.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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%.	Fulfilled	The performance is good. No recommendation regarding this performance.
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.).	Partially fulfilled	This performance is not clear, based on the provided documents. These information should be clearly indicated. This performance can be used as a strong argument for attracting students.
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	Fulfilled	It is difficult to make recommendation based only on documents (I did not participate on the on site visit, due to the pandemic context)
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 mandatory for obtaining the enabling certification.	Fulfilled	The performance is excellent. Therefore, no recommendation is necessary.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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.	Fulfilled	For higher quality of education and training, it is recommended to increase the ratio of full-time employment/employment for an indefinite period.
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.	Fulfilled	Although, the performance is good, particular attention should be paid to the scientific performance of non full-time professors, when they are recruited.
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%.	Fulfilled	Even though, the doctoral school is in line with the recommended percentage. The school should make all efforts for decreasing the number of doctoral thesis coordinated by a doctoral advisor.
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	Fulfilled	It is recommended to reinforce the interdisciplinary research between the active doctoral advisors. This can lead to highly ranked journals. For the participation of students in international events, privilege oral presentations.

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	Fulfilled	No particular recommendation
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.	Fulfilled	The performance should be enhanced. Recruiting from outside including abroad is a hallmark of good visibility and attractiveness.
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.	Fulfilled	It is recommended to add more criteria such as the analysis of a scientific publication related to Pharmacy field.
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%.	Fulfilled	The performance is excellent. Therefore, no recommendation.
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	Fulfilled	It will be welcomed if the disciplines intended to study in-depth the research methodology and/or the statistical data processing, are taught in english.

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.	Fulfilled	No recommendation. The doctoral school validate the performance indicators.
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.	Excellent	No suggestions. Strong mechanisms are implemented.
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.	Fulfilled	The guidance commissions should include external members. A formalized report with indicators about the thesis progress should be drafted by the guidance commission.
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.	Fulfilled	It is recommended that the teachers providing doctoral guidance should be doctoral advisors.
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	Fulfilled	It is highly recommended that the quality of the articles should be privileged over quantity. Avoid to publish in predatory journals.
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	Fulfilled	It is recommended to privilege oral presentations over posters

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.	Partially fulfilled	It was difficult to evaluate this performance. Please clarify
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.	Fulfilled	No recommendation (the performance is in line with the recommended one)
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.	Fulfilled	In addition to the implemented continuous development, and whenever possible, the doctoral school should inspire from other structural abroad.
28.	PI *	C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students	Fulfilled	Great attention should paid to the action plan. This should be clearly drafted, published and implemented.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
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. 	Fulfilled	The information should be provided in english (on the english version of the web site)
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.	Fulfilled	No recommendation.
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.	Fulfilled	Try whenever possible to implment a double check for similarity
32.	PI	C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific	Fulfilled	The students feedback (based on the discussions during the on line visit) was very positive. Therefore, no recommendation

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		domain/domains within the Doctoral School, according to internal order procedures.		
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 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.	Fulfilled	Keep the implemented dynamic.
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.	Fulfilled	The doctoral school should devote a budget for leading experts to deliver courses and take the opportunity to establish collaborations. The invitation could be twinned with participations in PhD juries !!
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.).	Fulfilled	Efforts should be made to enhance the attractivity of the english version of the web site. Take advantage of the international scientific collaborations to attract international doctoral students

VI. Conclusions and general recommendations

Conclusions:

Despite the fact that the evaluation took place entirely on line, it was a very interesting experience to participate in this evaluation. Based on the internal evaluation report and discussions with the different school representatives, it was possible to draw a clear picture about the Strengths and weaknesses of the Doctoral School of Pharmacy.

The doctoral school carry out strong education within disciplines related to Pharmacy. There is a team spirit among members and students. The quality of the research activities as attested by high quality of scientific production is to be highlighted. The school implement multiple mechanisms to ensure



continuous improvement. The school is active at the international level through students mobility and participation in international events.

Recommandations

We would like to encourage the doctoral school to pursue ambitious scientific activities at the international level in the field of pharmacy. To achieve this objective, we recommend the school to:

- reinforces its collaborations with local teams pursuing similar objectives.
- intensify international collaborations (through Horizon 2020 awards; Marie Skłodowska-Curie studentships or fellowships; by industrial collaborations; by academic collaborations outside of Romania).
- implement courses taught in English, to attract international students
- reduce the maximum number of PhD students that can be supervised by a doctoral advisor, in order to give time to the advisors to follow their students more effectively.