

The External Foreign Evaluator Report of a Doctoral Domain (DD) Veterinary Medicine for Institution Organizing Doctoral Study Programs (IOSUD) – University of Agricultural Sciences and Veterinary Medicine “Ion Ionescu de la Brad” from Iasi (UASVM Iași)

Report to Doctoral Domain Team Leader, Prof. Dr Dana Liana PUSTA

by

Univ. Prof. Dr Dušan Palić, Chair for Fish Diseases and Fisheries Biology, Faculty of Veterinary Medicine, Ludwig-Maximilians-University Munich, Germany

Independent external foreign expert evaluation of the doctoral domain biotechnology of the University of Agricultural Sciences and Veterinary Medicine from Iasi (UASVM Iași) was organized by ARACIS. After acceptance of a formal invitation to participate, Prof. Dr Palić has reviewed available documents in English and, with help of google translator, reviewed further documents and annexes that were originally prepared in Romanian language. Documents were made available by ARACIS via e-mail and via password-protected online access to a cloud server. The evaluation was conducted in a hybrid format, with multiple online meetings via ARACIS and UASVM Iași zoom platforms, with available simultaneous translation from Romanian to English and vice versa.

During period from 18-24.09.2021 a series of online meetings were organized for the entire evaluators group and for the doctoral domain evaluators group. This report focuses on the Doctoral Domain of Veterinary Medicine studies evaluation. Prof. Dr Dana Liana PUSTA was the head of the doctoral domain veterinary medicine external evaluator team, with Prof. Dr Dušan PALIĆ as foreign evaluator member and Mr Paul Andrei UNGUR as doctoral student member. In addition to the online meetings with the UASVM Iași representatives, the in person visit to review the infrastructure and available facilities was performed by Prof. Pusta, and Prof. Palić participated via sharing of the video and photo materials.

After the completion of the accreditation visit, Prof. Palić reviewed notes collected during the meetings, inclusive of comments, questions and answers of the colleagues participating in the meetings. He also reviewed the documents provided by the UASVM Iași after the visit that provided clarifications to some raised issues. The report presented below is based on the information collected during above listed activities, and is organized in the format following the List of Critical Indicators for Doctoral Study Domains as advised by the ARACIS visit coordinator, Prof. Dr Ioan IANOS (Annex 4).

CRITICAL INDICATOR A.2.1.1

Thorough review and evaluation was conducted during preparation and visit to the UASVM Iași of the following: available self-report (Internal evaluation report) of the DD Veterinary Medicine, as well as applicable annexes, meetings with respective University and Domain contact personnel, and video calls

from remote visits. The opinion of external evaluator is that 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 (online descriptions of the research centers, also supported by the brief information videos). The research centers specifically reviewed during this visit are used in multidisciplinary environment, and by multiple doctoral study domains. The doctoral students from the veterinary medicine domain have access to the equipment and infrastructure in the research centers, and are adequately trained and monitored during their activities in the respective laboratories/facilities. Prof. Palić reviewed video and photo materials recorded during the visits, and additional information about respective laboratories (microbiology, BSL-3 disease research facility/ROVETEMERG, veterinary medical research center with corresponding areas for imaging and diagnostics; https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/4_infrastructura-cercetare.html). Annexes II.26-28 further provide the information about the available infrastructure. The research infrastructure described above, was purchased and developed within the past 5 years, is in very good condition and use, and provides excellent environment for doctoral students to participate in clinically and scientifically relevant research projects.

During systematic review of the documentation made available by the UASVM Iași, as well as interviews and remote site visits, I have determined that USAMV DD VM has in period from 2015-2020 successfully established and operated several research laboratories as part of the respective research centers, as well as clinical centers.

Students of the veterinary medicine doctoral program appear fully integrated in the work of the research centers and respective laboratories. The availability of venues and the material equipment is satisfactory, and students appear to use these facilities actively in the course of their respective PhD studies, of course, depending on their research topic. They are provided with adequate training in the laboratory safety, hygiene and operation of the equipment. Training is documented and certificates are available in respective student dossiers at the level of the School of Doctoral Studies.

The indicator is fulfilled.

INDICATOR A.3.1.1

The evaluation and review of the provided documents, annexes, web pages, and information collected during the online meetings and remote visits strongly supports the fulfillment of the critical indicators applicable to the domain of biotechnology doctoral studies. Total of 9 doctoral thesis advisors within DD VM (total of 9 listed for this external evaluation period 2016-2020, Annexes II.35, 36, 36a; currently in 2021 there are 8 affiliated doctoral supervisors) are listed. All 8 (100%) of currently affiliated advisors 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 (Annex II.42 and 42a). The score obtained by the doctoral supervisors in the field of Veterinary Medicine (DD VM) in the last 5 years is above the

mandatory minimum score provided by the standards in force for obtaining the habilitation certificate (Annex II.42a).

The indicator is fulfilled

INDICATOR A.3.2.1

Prof. Palić has conducted the review of the Annexes II.41, 43, 45, and 46, as well as performed online search via Google Scholar for the respective doctoral study supervisors in the domain Veterinary Medicine. After the review, visit and meetings, Prof. Palić confirms that all supervisors currently affiliated with the DD VM (8/8 or 100% for period of 2015-2020) have satisfied the requirements of at least 5 Web of Science - or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for the domain of biotechnology. The listed achievements of the doctoral advisors also include international-level contributions that indicate progress in scientific research, development and innovation in the field of biotechnology. The further review of Annex II.46, has provided evidence about international awareness of the listed doctoral advisors/supervisors in the area of veterinary sciences within the past five years.

The indicator is fulfilled

INDICATOR B.2.1.5.

After review of the internal (self-report) and respective annexes, the ratio between the number of doctoral students enrolled in the field of Veterinary Medicine (DD VM) in the period 2015-2020 (total 58, Annex II.37), and the number of teachers / researchers who provided guidance (total 38, Annex II.50) was calculated as 1.52:1.

NOTE: According to the Romanian system, in addition to the doctoral supervisor, each doctoral student is guided by a team of three members consisting of teachers and/or researchers. Criterion B.2.1.5 refers to the ratio between the number of doctoral students and the number of teachers and/or researchers who provide guidance to the doctoral students. There are therefore total of 38 teaching staff and/or researchers who guided total of 58 doctoral students, as mentioned above. Therefore, the ratio between the number of doctoral students and the number of teachers and/or researchers who provide guidance is $58/38 = 1.52:1$.

The indicator is fulfilled

INDICATOR B.3.1.1.

Prof. Palić has randomly selected and reviewed the following publications as provided in the annexes II.38b and 45. The conclusion is that at least five published papers in previous 5 years in the domain veterinary medicine have provided significant contributions to the field. Selected publications are:

1. **Iulian Ibănescu**, Claus Leiding, Ștefan Gregore Ciornei, Petru Roșca, Ioana Sfartz, Dan Drugociu. Differences in CASA output according to the chamber type when analysing frozen-thawed bull sperm. Animal Reproduction Science, 2016, 166:72-79. **Factor Impact - 1.511.**

2. Porea D., Anita A., Demange A., Raileanu C., Oslobanu Ludu L., Anita D., Savuta G., Pavo N., 2017 - Molecular detection of hepatitis E virus in wild boar population in eastern Romania. Transbound Emerg Dis. 00:1-7, doi: 10.1111/tbed.12736. IF 3.585
3. Teslariu Oana, Pasca A.S., Mittelu-Tataru Liliana, Schiriac C. E., Gales C., Saftencu Paula Maria, Nechifor M., 2016 -The protective effects of zinc in experimental induced acute renal failure in rats, Journal of Physiology and Pharmacology, ISSN 0867-5910 vol. 67, nr. 5, p:751-757.
4. Andrei-Cristian LUPU, Mihaela BOMBOȘ, Cristian-Alin BARBACARIU, Constantin ROMAN, Raluca MÎNDRU, Gabriela Victoria MARTINESCU, Liviu Dan MIRON, - Conditioning of praziquantel and florfenicol for some heterologous coinfections of farmed carp, (acceptata pentru publicare in Revista de Chimie, vol. 70, nr. 7.2019 - IF 1.412).
5. Cimpan Andrei Alexandru, Yaarit Nachum-Biala, Bar Ben-Shitrit, Liviu Miron, and Gad Baneth. "Epidemiological Study of Canine Babesiosis and Hepatozoonosis in the South of Romania" Acta Parasitologica (2020): p. 1-10.

The indicator is fulfilled

INDICATOR C.2.1.1.

After review of the internal self-report, and available online information, Prof. Palić concluded the following about the published data:

The Doctoral School of Veterinary Medicine (DD VM) within UASVM Iași, publishes following information on their website (https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat.html); in compliance with the general regulations with on data protection.

a) The institutional Regulation for the organization and functioning of the doctoral university study programs at UASVM Iași (https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Regulament-IOSUD_2021.pdf); and the Doctoral School Regulation

(https://www.uaiasi.ro/ro/files/doctorat/documente/2019/Regulament_S_D_MV_2019.pdf);

b) The regulation for admission to doctoral university studies

(<http://www.uaiasi.ro/admitere/files/doctorat/04-Regulament-admitere-doctorat.pdf>); *Methodology for conducting admission to USAMV Iași for the three cycles of university studies - bachelor, master, doctorate* (<http://www.uaiasi.ro/admitere/index.php> ; *Admission guide for foreign citizens* (http://www.uaiasi.ro/admission/files/Admission_guide.pdf ; and the admission conditions (<http://www.uaiasi.ro/admitere/doctorat.php?sectiune=conditii-de-admitere> ;

c) The doctoral studies contract

(https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_documente.html

d) Methodology for defending doctoral theses

(<https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Metodologie-sustinere-teze-doctorat.pdf> ;

e) The content of the study programs, in: The institutional regulation of organization and functioning of the doctoral study programs at UASVM Iași.

(https://www.uaiasi.ro/ro/files/doctorat/documente/2021/Regulament-IOSUD_2021.Pdf; *SDMV Regulation* https://www.uaiasi.ro/ro/files/doctorat/documente/2019/Regulament_SD_MV_2019.pdf ; and in the *Contract for doctoral studies* (https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_documente.html);

f) The scientific profile and thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data

(https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_SDMV.html ;

http://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_contact.html ;

g) The list of doctoral students from the doctoral school with the basic information

(https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_teze_2021.html);

h) Information about the elaboration standards of the doctoral thesis:

The procedure for submitting and defending doctoral theses

(https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_doctorat_procuctura.html ;

Norms regarding the drafting and elaboration of doctoral theses

(https://www.uaiasi.ro/ro/files/doctorat/documente/2016/Norme_elaborare-redactare-teza-doctorat.pdf ;

i) Links to the abstracts of the doctoral theses to be defended publicly, as well as the date, time, place where they will be defended, at least 20 days before the defense (https://www.uaiasi.ro/index.php?lang=ro&pagina=pagini/7_teze_2021.html).

The indicator is fulfilled

GENERAL COMMENTS AND RECOMMENDATIONS:

After careful review of different information sources (self-evaluation reports, applicable annexes, meetings, video calls, web pages, and further clarifications) about the Doctoral study Domain Veterinary Medicine of the UASVM Iași, the foreign evaluator Prof. Dušan Palić offers following comments and recommendations:

The overall organization of the evaluation by the ARACIS and UASVM Iași was excellent. Specifically the participation in the online meetings was exceptional, and very useful for international evaluators was availability of simultaneous translation. The schedule for the meetings was intense, especially if the colleagues were involved in more than one domain or in a domain in parallel with institutional level evaluation. While there are some components of in-person visit that make evaluators job easier, having video conferences is a viable alternative. Along the same lines, review of the research facilities and infrastructure is always better to be conducted in person, as video and photo materials can only get you so far. The ARACIS staff did a very good job to coordinate meetings with UASVM Iași representatives. I am satisfied with the evaluation process, and hope that future evaluations will have more in-person opportunities.

The colleagues representing the UASVM Iași have been very cooperative and trying to accommodate our questions within the limitations of the remote/video communication. I am very satisfied with their attitude and praise their openness and patience during the meetings.

Regarding the overall evaluation of the Veterinary Medicine doctoral domain, I am impressed by the infrastructure and facilities that are at student's disposal for practical and experimental parts of their doctoral work. I am also satisfied with the quality of doctoral work performed in previous 5 years, as the number of Q1/2 peer reviewed publications produced by the doctoral students is very good.

It is understood that number of doctoral students strongly depends on availability of funding, and it is especially important that UASVM Iași appears to have mechanisms of supporting doctoral students in different areas and providing finances for promoting student visibility and international connectivity. This was evidenced in significant number of doctoral students that have participated in Erasmus program exchanges (see full report of Prof. Pusta in section C3). Considering available research center infrastructure and equipment, it appears that the material base for doctoral training is under-utilized. Therefore, my general recommendation is that UASVM Iași, possibly through coordination with the local or state government, increases effort toward expanding funding opportunities for doctoral students from Romania, and explore opportunities for recruitment of international doctoral students who would add to the diversity of the doctoral programs. Possible future venues for increasing doctoral student resources at national level are participation of the Romanian government in the program of EU Partnerships (https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/european-partnerships-horizon-europe/candidates-food-security_en)

Specific comments and recommendations for improvement are related to limitations of current quality control / quality assurance procedures and protocols. While it is not in the list of critical indicators, it is of importance to note that formal QA/QC procedures have to be continuously recorded and available for review in format of scheduled meetings with written agendas, formal collection and circulation of meeting minutes and follow-up on action items associated with respective decisions. As mentioned in the full report, the QA/QC structure is in place and the progress has been made to improve the processes. It is my suggestion to make a conscious effort to use the structure to document the QA/QC process in a more formal way, whenever it is possible. This final report was discussed with the Head of the DD team, Prof. Dr Dana PUSTA, and student Andrei UNGUR and was unanimously accepted.

Dear ARACIS colleagues, Dear UASVM Iași colleagues, I was very pleased to have an opportunity to participate in this evaluation, and I was impressed with the quality and consistency of the good work that you are presenting in the doctoral study domain of veterinary medicine, and moreover, in the whole institutional environment. I wish you all the best, and I am certain that you will continue to improve and justify the new name of the "Ion Ionescu de la Brad" University of Life Sciences Iași in many areas.

Munich, 04.10.2021