



**The External Foreign Evaluator Report of a Doctoral Domain (DD) Animal Science*
for Institution Organizing Doctoral Study Programs (IOSUD) – Banat’s University of
Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from
Timișoara (USAMVBT)**

Report to Doctoral Domain Team Leader, Prof. Dr Livia VIDU

by

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*NOTE: The USAMVBT self-report in English is referring to Doctoral Study Domain “Animal Husbandry”, while ARACIS English language documents in this evaluation refer to “Animal Science”. After clarification by ARACIS personnel, the name “Animal Science” was used in this report.

Independent external foreign expert evaluation of the doctoral domain Animal Science at **Banat’s University of Agricultural Sciences and Veterinary Medicine “King Michael I of Romania” from Timișoara (USAMVBT)** 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 USAMVBT zoom platforms, with available simultaneous translation from Romanian to English and *vice versa*.

During period from 11-15.10.2021 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 Animal Science studies evaluation. Prof. Dr Livia VIDU was the head of the doctoral domain Animal Science 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 USAMVBT representatives, the in person visit to review the infrastructure and available facilities was performed by Prof. Vidu, 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 USAMVBT 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 Vasilica STAN (Annex 4).

CRITICAL INDICATOR A.2.1.1



Thorough review and evaluation was conducted during preparation and visit to the USAMVBT of the following: available self-report (Internal evaluation report) of the DD Animal Science, 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 Animal Science 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.

The spaces and the material endowment of IOSUD-USAMVBT / SD-IRVA allow the realization of the research activities of the doctoral students in the domain of Animal Science, the research infrastructure and the offer of research services being presented publicly through the public profile platform, the ERRIS platform. The research units have a modern infrastructure for advanced, frontier, fundamental and applied research. Each research unit is registered on the page of the National Register of Research Infrastructures System (ERRIS - Engage in the Romanian Research Infrastructures System). The ERRIS platform offers the possibility to know the public and private research infrastructures in Romania, stimulating partnerships and enrollment in national and international networks involved in research-development-innovation (RDI) activities:

1. "Horia Cernescu" Research Laboratories Complex Short link: <https://eeris.eu/ERIF-2000-000R-1723>
2. Organic, sustainable agriculture and food security Short link: <https://eeris.eu/ERIF-2000-000Y-0226>
3. Aquaculture research laboratory <https://erris.gov.ro/Aquaculture-lab>
4. Research unit for fish farming in recirculating aquaculture system (<https://erris.gov.ro/Tech-platform-sturgeons>)

In recent years, research laboratories have been modernized, both through the acquisition of modern, high-performance equipment, specialized human resources, and through access to specialized scientific literature. For example, E-nformation / ANELiS plus (https://www.usab-tm.ro/USAMVBT_ANELIS-PLUS_ro_2029.html) or through licensed software (doctoral, master's and undergraduate students having free access (free of charge) to the scientific literature through the USAMVBT library). The financing of the access to the scientific literature ("E-nformation" / ANELiS) was made through the project **"Ensuring excellence in the activity of RDI within USAMVBT"**, Code 35PFE / 2018, Ministry of Research and Innovation (MCI) (<http://www.research.gov.ro/uploads/programe-nationale/pn-cdi-iii/competitii/2018/pdi-pfe-cdi/rezultate/rezultate-finale-comp-1-2-post-negociere-m.pdf>). **"Ensuring research excellence within the Interdisciplinary Research Platform of USAMVBT"**, code CNFIS – FDI -2018-0618 (<http://www.cnfis.ro/wp-content/uploads/2018/04/FDI2018-Rezultate-finale-evaluare-CNFIS.pdf>).



The doctoral scientific supervisors within SD-IRVA benefit from other research contracts through which they support both the scientific documentation and the dissemination of the doctoral students' results (**Annex A.2.1.1**). In addition to the units available in the library of the institution, within the doctoral schools from IOSUD-USAMVBT, each discipline with doctoral supervisors has an adequate library, with documentary materials that can be consulted by doctoral students. (<http://biblio.usab-tm.ro/>).

USAMVBT owns agricultural lands, both in town and out of town, lands that depending on their destination are cultivated with cereals, fruit trees, vines or are exploited in the form of meadows. All university students, regardless of their study cycle, carry out research on the most diverse topics in the fields of Agronomy, Horticulture, Engineering of Food Products and Animal Science as a result SD-IRVA doctoral students have the opportunity, if needed to carry out their research in within the doctoral theses in any of the locations that our university holds. Furthermore, there are partnerships between the university and numerous professional forums, as a result there is a wide opening in the extension of research and in the areas adjacent to Timiș County, thus covering a wide area of agricultural research in the Banat area (Annex A.2.1.2). Within USAMVBT there is the procedure USAMVBT-PCIT-PO001 regarding the access of teachers, researchers and students within the research infrastructure of the Banat's University of Agricultural Sciences and Veterinary Medicine "*King Michael I of Romania*" from Timisoara (Annex A.1.1.1_17).

(<https://www.usab-tm.ro/utilizatori/calitate/file/proceduri/USAMVBT%20PCIT%20PO001.pdf>)

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

Students of the Animal Science 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 Animal doctoral studies. Within the field of doctoral studies (Commission 14 - CNADCU), there are currently 7 doctoral supervisors, three of them obtaining the habilitation certificate and the quality certificates of doctoral supervisor in the last five years. Of the seven active doctoral supervisors, six meet the CNATDCU minimum standards 100%, at the time of evaluation, and one partially meets them (75%). Therefore, the proportion of doctoral supervisors who fully meet the minimum CNATDCU standards in force at the time of evaluation, necessary and mandatory to obtain the certificate of qualification (according to the verification sheet of compliance with the standards assumed by each



doctoral supervisor), is 85.71 % (Annex A.3.1.1a_01, Annex A.3.1.1a_02, Annex A.3.1.1b and Annex A.3.1.1c).

The indicator is fulfilled

INDICATOR A.3.2.1

Prof. Palić has conducted the review of the self-evaluation report, as well as performed online search via Google Scholar for the respective doctoral study supervisors in the domain Animal Sciences. After the review, visit and meetings, Prof. Palić confirms that all supervisors currently affiliated with the DD An Sci 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 Animal Science. 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 annexes listed below has provided evidence about international awareness of the listed doctoral advisors/supervisors in the area of animal science within the past five years.

All PhD supervisors in the field of Animal Science carry out scientific activity visible internationally according to indicator A.3.2.1. A list of 5 publications indexed in Web of Science (minimum 5) in journals with impact factor or other achievements, with relevant relevance for the respective field in which there are international contributions that reveals a progress in scientific research - development - innovation for the evaluated field (Annex A.3.2.1a și Annex A.3.2.1b). *IOSUD-USAMVBT Doctoral School – Engineering of Plant and Animal Resources (SD-IRVA) Domain: ANIMAL SCIENCES*. PhD supervisors within the Animal Husbandry field have international visibility in the last five years, consisting of:

1. membership of the scientific committees of national / international publications and conferences (Annex A.3.2.1c);
2. membership in the boards of national / international professional associations (Annex A.3.2.1d);
3. the quality of UEFISCDI expert evaluator of research projects for the PTE 2016 competition (Prof. habil. Ștef Lavinia, Prof. Grozea Adrian) (Annex A.3.2.e2) <https://uefiscdi.gov.ro/userfiles/file/Innovation/Transfer%20la%20operatorul%20economic/Lista%20Evaluatori/LISTA%20EVALUATORI-PTE.pdf> and the quality of expert constituted in working groups, carried out with experts from abroad (Annex A.3.2.e1);
4. guest quality: round table *The role of innovation in bird nutrition for obtaining foods with improved nutritional qualities*, INCD-Biology and Animal Nutrition Balotesti, October 31, 2018. Lecture topic: Nutritional solutions to improve the safety and food safety of poultry meat , (Prof. habil Ștef Lavinia); *GALIMPLUS - INCD-Animal Biology and Nutrition Balotesti*, October 31, 2018 - The role of innovation in bird nutrition for obtaining foods with improved nutritional qualities (Prof. habil. Ștef Lavinia) (Annex A.3.2.e3);
5. other achievements - books and book chapters published in national and international publishing houses, with relevant significance for the doctoral field subject to evaluation, respectively, patents and participation in various salons of invention and innovation at national and international level in which there are contributions revealing progress in scientific research (Annex A.3.2.1f, Annex A.3.2.1g, Annex A.3.2.1h).

The indicator is fulfilled



INDICATOR B.2.1.5.

In the field of evaluated Animal Science doctoral university studies, there are appointed teachers/researchers leading doctors or teacher with scientific expertise in the field of the doctoral thesis of the doctoral student under their guidance (AnnexB.2.1.5.). The members of doctoral guidance commissions in the field of Animal Science include 25 teachers. The teachers come from the Faculty of Animal Resources Bioengineering, but also from other faculties of the University. For example, Faculty of Management and Agricultural Tourism, Faculty of Agriculture, Faculty of Veterinary Medicine, Faculty of Medicine and Pharmacy / UMF Victor Babeş from Timișoara, Faculty of Food Engineering, AgriFood and Biosciences Institute Belfast, UK). Such diversity demonstrates the interdisciplinary nature of the research conducted. The ratio between the number of doctoral students and the number of teachers in the guidance commissions is 1.56 (≤ 3 -ARACIS standard).

The indicator is fulfilled

INDICATOR B.3.1.1.

Prof. Palić has randomly selected and reviewed five publications as provided in the annexes B3.1.1. (Excluding conference abstracts and non-ISI indexed journals). The conclusion is that at least five published papers in previous 5 years in the domain Animal Sciences have provided significant contributions to the field.

The indicator is fulfilled

INDICATOR C.2.1.1.

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

The USAMVBT publishes following information on their web pages; in compliance with the general regulations with online data protection.

(a) doctoral school regulations;

USAMVBT – PG 001- R075 - *REGULATION regarding the organization and development of doctoral university studies in IOSUD USAMVBT* (<https://www.usab-tm.ro/utilizatori/calitate/file/regulamente/R075.pdf>) (Annex C.2.1.1_01).

USAMVBT – PG 001- R093 - *REGULATION regarding the organization and development of doctoral studies within the DOCTORAL SCHOOL OF ENGINEERING OF PLANT AND ANIMAL RESOURCES* (<https://www.usab-tm.ro/utilizatori/calitate/file/regulamente/R093.pdf>) (Annex C.2.1.1_02).

USAMVBT - PG 001 R046 - *Internal regulations* (<https://www.usab-tm.ro/utilizatori/calitate/file/regulamente/R046.pdf>) (Annex C.2.1.1_03).

(b) admission regulations;

USAMVBT – R030 - *REGULATION on the organization and conduct of admission to doctoral studies - IOSUD-USAMVB Timișoara 2021/2022* (<https://www.usab-tm.ro/utilizatori/calitate/file/regulamente/R030.pdf>) (Annex C.2.1.1_05).



(c) doctoral studies contract;

Doctoral Studies Contract (USAMVBT – PG 001- R075 - REGULATION regarding the organization and development of doctoral university studies in IOSUD USAMVBT (<https://www.usab-tm.ro/utilizatori/calitate/file/regulamente/R075.pdf>) (Annex C.2.1.1_01).

Model for study contracts within SD-IRVA / Animal Husbandry

- Contract for doctoral studies financed from the budget for part-time education (Annex C.2.1.1_6a);
- Contract for doctoral studies financed from the budget (Annex C.2.1.1_6b);
- Contract for doctoral studies in charge (Annex C.2.1.1_6c);

(d) the regulation for completing the studies, which should also include the procedure for public defense of the thesis; IOSUD-USAMVBT Doctoral School – Engineering of Plant and Animal Resources (SD-IRVA) Domain: ANIMAL HUSBANDRY

USAMVBT-CSUD - PO-001 - Operational PROCEDURE regarding the evaluation and defense of the doctoral thesis (https://www.usab-tm.ro/utilizatori/calitate/file/proceduri/csud-po-001/USAMVBT_CSUD_PO%20001%20Procedura%20sustinere%20teza%20doctorat%20ed%201%20rev%200.pdf) (Annex C.2.1.1_07).

USAMVBT-CSUD - PO-002 - Operational PROCEDURE regarding the evaluation and defense of the doctoral thesis (https://www.usab-tm.ro/utilizatori/calitate/file/proceduri/USAMVBT_CSUD_PO002%20%20ed%201%20rev%201%20Procedura%20sustinere%20online%20teza.pdf) (Annex C.2.1.1_08).

(e) the content of study programs;

Disciplines that develop transversal competencies with the advanced university training program and scientific research program (Model advanced training program / scientific research program and Annex_C.2.1.1_09 (2019-2020)) may contain strictly specialized chapters on the studied topic. by the doctoral student and can be taught by the course holder / doctoral supervisor who can also invite other tenured teachers or specialists from outside the higher education and research systems.

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

The scientific profile and the thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data can be found on the website of the university / SD-IRVA / Animal Science: (<https://www.usab-tm.ro/ro/conducatori-doctorat-10995/domeniul-de-studii-universitare-de-doctorat-45-zootehnie-12004>).

(g) list of doctoral students in the field with basic information (year of enrollment; leader);

At the doctoral school level there is a database with basic information about the doctoral student such as: name, first year of enrollment, doctoral supervisor and the topic of the doctoral thesis (Annex_C.2.1.1_10).

(h) information about the standards for the elaboration of the doctoral thesis;

Unique instructions and standards for the elaboration of doctoral theses within IOSUD-USAMVB TIMIȘOARA (<https://www.usab->



[tm.ro/utilizatori/universitate/file/doctorat/docs/Instructiuni%20Redactare%20Teze%20USAMVBT%202018.pdf](https://www.usab-tm.ro/ro/scoli-doctorale-66/sustinere-teze-doctorat-11119)) (Annex C.2.1.1_11).

(i) links to abstracts of 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

The links to the summaries 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 can be *IOSUD-USAMVBT Doctoral School – Engineering of Plant and Animal Resources (SD-IRVA) Domain: ANIMAL SCIENCE* found on the university / SD-IRVA website: <https://www.usab-tm.ro/scoli-doctorale-66/sustinere-teze-doctorat-11119>

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 Animal Science of USAMVBT the foreign evaluator Prof. Dušan Palić offers following comments and recommendations:

The overall organization of the evaluation by the ARACIS and USAMVBT was very good. Specifically the participation in the online meetings was exceptional, and very useful for international evaluators was the 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 proving to be 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 USAMVBT representatives. I am satisfied with the evaluation process, and hope that future evaluations will have more in-person opportunities.

The colleagues representing the USAMVBT 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 Animal Science 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. I am also very happy to see the improvements in the utilization of infrastructure from my previous visit to the USAMVBT.

It is of course understood that the number of doctoral students strongly depends on availability of funding, and it is especially important that USAMVBT appears to have mechanisms of supporting 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, and the level of international cooperation that was presented during the meetings and in the reports.

Considering available research center infrastructure and equipment, it appears that the material base for doctoral training is however still under-utilized to some extent, and it invites the increase in number of Romanian, and international students, even for shorter visits or as part of Erasmus exchange programs to visit Romanian facilities, instead only sending Romanian students abroad. It is my general recommendation is that USAMVBT, possibly through coordination with the local or state government, or businesses, increase effort toward expanding funding opportunities for doctoral students from Romania. In addition, it would be also valuable in my opinion to see more 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)

Dear ARACIS colleagues, Dear USAMVBT 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 Animal Science, and moreover, in the whole institutional environment. I wish you all the best and I am certain that you will continue to improve in many areas.

With best regards,

Prof. Dr Dušan Palić,
LMU-Munich, Chair for Fish Diseases and Fisheries Biology

Munich, 29.10.2021