

ARACIS Evaluation 2021-2026

Doctoral School of Life Sciences (SDSV)

The Romanian Academy has the status of an institution organizing university doctoral studies (IOSUD) through the Advanced Studies School of the Romanian Academy (SCOSAAR). The Doctoral School of Life Sciences (SDSV) operates within SCOSAAR and was established on March 16th, 2023 through the reorganization of the doctoral structures of the institutes of the Romanian Academy, with the Institute of Cellular Biology and Pathology “Nicolae Simionescu” (ICBP-NS) having the role of coordinating institute.

During the evaluation period, the organizational and regulatory framework for doctoral studies was updated, including through the revision of the SCOSAAR Regulations in September 2025 (<https://acad.ro/scosaar/doc2025/RegulamentulSCOSAAR-revizuire2025-sept.pdf>). Doctoral activity is supported through the development of human resources, the integration of doctoral students into research activities, and the strengthening of monitoring and quality assurance mechanisms.

Through SCOSAAR, the Romanian Academy organizes university doctoral studies aimed at training specialists with advanced research skills. SDSV aims to train researchers capable of conducting independent, interdisciplinary and competitive scientific activities.

The coordination of SDSV is ensured by the Council of the Doctoral School of Life Sciences (CSD-SV) and the director of SDSV. CSD-SV has 17 members: 8 doctoral supervisors, 4 doctoral students and 5 external members, representing research institutes of the Romanian Academy, universities in Romania and academic institutions abroad. ([Annex Composition of the Council of the Doctoral School of Life Sciences \(CSD-SV\)](#))

The structure of SDSV, according to the information published by the Romanian Academy, comprises:

- **Biology:** Institute of Cellular Biology and Pathology “Nicolae Simionescu” – coordinating institute; Institute of Biochemistry of the Romanian Academy; Institute of Biology; “Emil Racoviță” Institute of Speleology;
- **Medicine:** “Francisc I. Rainer” Institute of Anthropology; “Ștefan S. Nicolau” Institute of Virology.

The structure is confirmed by the updated public information of the Romanian Academy and by the admission requirements revised for 2025: <https://acad.ro/institutia/scosaar.html>; https://acad.ro/institutia/scosaar_admitere_cond_doct_2025.html.

The Romanian Academy, through SCOSAAR, underwent periodic external ARACIS evaluation in 2021, with the on-site visit on November 4th, 2021. The evaluation covered, among other aspects, the regulatory framework, the recording and monitoring of doctoral students, the recruitment of doctoral supervisors, research activity and internationalization. The latest periodic external quality evaluation procedure for the field of university doctoral studies in Biology was also carried out by ARACIS in 2021.

The 2025 interim ARACIS evaluation (https://www.aracis.ro/wp-content/uploads/2022/02/IOSUD440_C1_03.07.2025.pdf) highlighted the implementation of most of the recommendations previously formulated. Some aspects concerning the regulatory framework, certain

components of the doctoral programme and the tie-breaking criteria for admission remained partially implemented.

Following the evaluation, SCOSAAR, SDSV and the component institutes undertook measures to implement the recommendations; their status was analyzed in the 2025 ARACIS interim external progress evaluation.

Main recommendations and measures undertaken:

- 1. Updating and promoting regulations and methodologies:** The recommendation concerned the updating of regulations and methodologies and informing doctoral students; the measures included the revision of documents, continuation of the updating process and their availability on the official SCOSAAR page, in the section dedicated to regulations and methodologies (https://acad.ro/institutia/scosaar_metodologii.html; https://www.icbp.ro/static/en-education_training-documents_of_the_doctorate/index.html), while doctoral students are informed through institutional communication channels. Doctoral supervisors and doctoral students are informed about the provisions and amendments to the regulations applicable to doctoral activity.
- 2. Development of the academic progress recording and monitoring system:** An effective information system was requested for recording and monitoring doctoral students' academic progress. Recording and monitoring mechanisms have been maintained; however, the 2025 evaluation identified the need to strengthen and systematically document their operation. This aspect should be treated as a priority in the following period, both by strengthening the mechanism and by documenting and explicitly presenting evidence of its operation, using appropriate software programmes and applications to be acquired within the available funding.
- 3. Strengthening human resources and attracting new doctoral supervisors:** The recommendation was implemented by attracting and co-opting new doctoral supervisors, which contributed to strengthening doctoral coordination capacity.
- 4. Diversification of the staff involved in the training programme based on advanced university studies:** The evaluation committee recommended avoiding situations in which the same disciplines are taught by the same doctoral supervisor at different institutes and recommended collaboration among the institutes comprising SDSV, including through online activities and the involvement of members of supervision committees. To diversify the human resources involved in doctoral teaching activities, ICBP-NS supported the involvement of members of supervision committees in the training activities of doctoral students and collaboration with doctoral supervisors and specialists from the other institutes comprising SDSV. The composition of the supervision committees supports the diversification of the scientific expertise offered to doctoral students and the alignment of advanced training with the topic of doctoral research.
- 5. Increasing scientific performance and international visibility:** The external evaluation recommended increasing the number of publications in journals with a high impact factor, particularly in the Q1 and Q2 categories. The recommendation was implemented. Scientific activity carried out during 2023–2025 shows a favorable evolution in scientific productivity, research impact and international visibility. These results demonstrate the maintenance and strengthening of a high-performing research environment capable of supporting doctoral activity by integrating it into research projects and activities and by connecting doctoral students to scientific results and research networks at national and international level.

- 6. Improving the admission procedure for doctoral studies:** The establishment of explicit tie-breaking criteria for candidates with the same average was recommended. The admission methodology was updated. However, the 2025 interim evaluation considered the recommendation partially implemented. The recommendation was implemented by updating the Regulation on the admission competition for university doctoral studies of SCOSAAR. The admission regulations for 2026 explicitly provide the tie-breaking criterion for candidates obtaining equal scores, using the arithmetic mean of the graduation average from undergraduate studies and the graduation average from master's studies. In this respect, the recommendation formulated during the ARACIS evaluation was transposed into an explicit regulatory provision applicable to the admission procedure (<https://acad.ro/scosaar/doc2026/doctorate/doctorateAdmitere2026/Regulament-ConcursAdmitere.pdf>).
- 7. Improving the doctoral training programme and course descriptions:** The recommendation concerned the explicit specification of objectives, content and learning outcomes in course descriptions. The recommendation was implemented by updating the course descriptions.
- 8. Increasing doctoral students' participation in scientific activities and the number of publications:** The recommendation concerned increasing doctoral students' publications and participation in national and international conferences. The recommendation was implemented; the 2025 evaluation highlighted the active participation of doctoral students in scientific activity. Doctoral activity is integrated into the research activities carried out within the institutes, and research results are disseminated through scientific publications, presentations at scientific events and participation in research projects.
- 9. Access to scientific literature and academic databases:** Improved information regarding access to scientific literature and academic databases was recommended. The recommendation was implemented through doctoral students' access to the academic resources available through [Anelis Plus 2024](#).
- 10. Strengthening mobility and internationalization of doctoral studies:** The recommendation concerned promoting mobility, participation in international conferences and attracting international experts. The recommendations regarding mobility and internationalization were assessed in 2025 as implemented. The measures contribute to increasing international visibility and strengthening scientific collaborations in the fields of Biology and Medicine.

Conclusions regarding the implementation of the recommendations

Overall, the development of the fields of Biology and Medicine during 2021–2025 shows a favorable trend towards strengthening doctoral activity, reflected in the development of human resources, increased research and publication activity, doctoral students' participation in scientific and international activities, and the development of institutional mechanisms for organizing and monitoring doctoral studies.

For the following period, the main areas of action concern the continuous updating of the internal regulatory framework, strengthening the system for recording and monitoring doctoral progress, systematically documenting the implementation of procedures, and using the results of monitoring to continuously improve the quality of university doctoral studies.

Annex 2

Structure of the Internal Evaluation Report (REI) Institute of Cellular Biology and Pathology “Nicolae Simionescu” – SDSV coordinating institute

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I. General information

I.1. General description of the higher education institution and the institution organizing university doctoral studies (IOSUD) (establishment, development, mission, governance, structure, university study programmes/fields, completion of external quality evaluation procedures)

Establishment and development: The Institute of Cellular Biology and Pathology “Nicolae Simionescu” (ICBP-NS) is a biomedical fundamental research institute of the Romanian Academy, located in Bucharest and part of the Section of Biological Sciences. The institute was inaugurated on September 3rd, 1979 and has borne its current name since 1995.

Mission: At ICBP-NS, doctoral training is integrated into the institute’s scientific profile and concerns the field of Biology, with an emphasis on cellular and molecular biology and on the physiological and pathological mechanisms of the cardiovascular system.

Governance: The governance of doctoral studies is organized at the following levels: Romanian Academy – IOSUD → SCOSAAR → SDSV → Biology and Medicine → ICBP-NS.

ICBP-NS has management structures, 9 departments and specialized laboratories, as well as shared research facilities. Doctoral activity is integrated into the institute’s research teams and projects.

The training programme based on advanced university studies, including the courses, number of hours, credits and course holders, is presented in [Annex – Training programme based on advanced university doctoral studies at ICBP-NS](#).

I.2. General description of the organizational component that organizes the field of university doctoral studies (establishment, development, governance, structure, fields of university doctoral studies)

ICBP-NS is a biomedical basic research unit of the Romanian Academy, active in cellular and molecular biology and cardiovascular research. Doctoral activity is organized within IOSUD Romanian Academy – SCOSAAR – SDSV, field of Biology and Medicine, and ICBP-NS has the role of coordinating institute of SDSV.

At institute level, scientific activity is coordinated by the ICBP-NS management, the Scientific Council, the Scientific Secretary and the heads of departments. During 2025–2026, 9 doctoral supervisors were active at ICBP-NS in the field of Biology, their number being 8 as of August 2026. The nominal list of doctoral supervisors and supporting documents regarding compliance with the CNATDCU minimum standards are available on the [ICBP-NS website](#).

The infrastructure relevant to doctoral training includes facilities and equipment intended for research activities in areas such as cell cultures, molecular biology, biochemical analyses, cytometry, microscopy and imaging, bioinformatics and experimental modeling. (<https://www.icbp.ro/static/ro/cercetare-facilitati/index.html>). Doctoral students are integrated into research teams and projects and have access to the infrastructure, equipment and resources necessary for conducting and exploiting original research activities. The list of doctoral supervisors is published by ICBP-NS in the section dedicated to doctoral studies (https://www.icbp.ro/static/ro/educatie_si_formare-evaluaire_scosaar_2026/index.html).

The doctoral profile is aligned with the institute's scientific activity and includes areas such as cellular and molecular biology, vascular and cardiovascular biology, atherosclerosis, inflammation, stem cells, regenerative medicine, proteomics, lipidomics, biomarkers and nanomedicine.

I.3. General description of the field of university doctoral studies (motivation for establishment – in the case of provisional operating authorization, respectively, development and/or changes since the last external quality evaluation procedure, in the case of accreditation or maintenance of accreditation procedures, as applicable)

The doctoral field of Biology, organized within IOSUD Romanian Academy – SCOSAAR – SDSV, provides advanced training for researchers and the implementation of original research projects. The scientific profile is centered on cellular and molecular biology and on mechanisms involved in the pathophysiology of the cardiovascular system, using modern approaches and advanced technologies.

The doctoral topics are aligned with the research directions of ICBP-NS and include, among others, cardiovascular biopathology, proteomics and biomarkers, lipidomics, inflammation, molecular and regenerative therapies, gene regulation and nanomedicine. For the 2025–2026 admission, topics were published for 8 doctoral supervisors. The detailed list of supervisors and topics is presented in the annex below.

According to institutional data for 2025, ICBP-NS has 57 researchers, 23 research assistants, 24 doctoral students and 9 are doctoral supervisors. The number of doctoral supervisors increased from 6 in 2020 to 9 during 2023–2024, highlighting the strengthening of the human resources involved in doctoral training.

All 9 doctoral supervisors meet the CNATDCU minimum standards applicable at the time the habilitation certificate was obtained. The nominal list and supporting documents are presented in [Annex – Doctoral supervisors in the field of Biology and compliance with the CNATDCU minimum standards.](#)

ICBP-NS implements the HRS4R principles and obtained, on 28 August 2024, the recognition “HR Excellence in Research”.

In 2025, 24 doctoral students were recorded within SCOSAAR. On 02.06.2026, there were 17 doctoral students enrolled in the programme; the difference reflects the different reporting dates and the completion of some theses.

During the analyzed period, the main developments consisted of the integration of the field of Biology into SDSV following the 2023 reorganization, the development of the body of doctoral supervisors, diversification of research topics, strengthening of infrastructure, and updating the organizational framework for doctoral studies.

Information regarding admission, doctoral topics and documents for the 2025–2026 academic year [is published institutionally](#) and is presented, as applicable, in the report annexes.

II. Preparation of the Internal Evaluation Report

(the team that prepared the report, stages, standards and performance indicators, stakeholder involvement)

The REI for the field of university doctoral studies in Biology and Medicine, organized within IOSUD Romanian Academy – SCOSAAR, was prepared in accordance with the ARACIS methodology

and requirements applicable to periodic evaluation, in compliance with the standards, criteria and performance indicators.

The preparation aimed to collect, verify and correlate information from IOSUD/SCOSAAR, SDSV and the component institutes, based on relevant supporting documents and data.

Team and responsibilities: The preparation of the REI involved representatives of the institutes, doctoral supervisors and persons responsible for providing and verifying institutional data.

Preparation stages: The main stages were: analysis of the ARACIS methodology; assignment of responsibilities; collection and verification of data and documents; correlation of information and reference points; analysis against ARACIS requirements; identification of strengths and development directions; verification of traceability. The analysis considered both the existence of the formal framework and the functioning and effectiveness of institutional mechanisms.

Interested-party involvement: Doctoral supervisors, doctoral students, ICBP-NS management and staff, and relevant academic structures were taken into consideration. The available contributions were used for aspects concerning doctoral activity, research, infrastructure and quality.

Use of institutional human resource development mechanisms: HRS4R mechanisms were used as a complement for the analysis of the research environment and human resources.

Quality assurance principles and traceability of information: The REI was based on accuracy, traceability, consistency, timeliness, transparency, comparability and continuous improvement; the reference point was specified for variable data. Through this approach, the report addresses both the degree of compliance with requirements and the effectiveness of institutional mechanisms and the capacity for continuous improvement.

The preparation of the REI took into account the involvement of the main categories of stakeholders relevant to university doctoral studies. The report constitutes an instrument for analyzing the capacity of the doctoral field to maintain and develop the quality of doctoral training.

III. Information necessary to assess the degree of fulfillment of the standards and performance indicators¹

FIELD A. Institutional capacity

Criterion A.1. Institutional structures and processes

Standard S.A.1.1. Organizational components and institutional processes

Indicator I.P.A.1.1.1: Statement of facts: The activity of university doctoral studies in the field of Biology is organized within IOSUD Romanian Academy, through SCOSAAR. Following the 2023 reorganization, the field of Biology is integrated into the Doctoral School of Life Sciences (SDSV), with ICBP-NS having the role of coordinating institute and providing the research and doctoral training framework specific to its profile.

Institutional structure: Romanian Academy → IOSUD Romanian Academy → SCOSAAR → SDSV → Biology field → ICBP-NS. At IOSUD level, coordination is carried out through CSUD and the structures associated with the doctoral schools. At SDSV level, activity is coordinated by the Council of the Doctoral School of Life Sciences (CSD-SV) and the SDSV director. CSD-SV has 17 members: 8 doctoral supervisors, 4 doctoral students and 5 external members.

¹The performance indicators used in the procedure for provisional operating authorization, respectively accreditation/maintenance of accreditation of a DSUD, are provided in Annex 1 to this Guide.

At ICBP-NS, scientific activity is coordinated by the institute management, the Scientific Council, the Scientific Secretary and the heads of departments. During 2025–2026, 9 doctoral supervisors in the field of Biology are active at the institute. Doctoral activity is integrated into departments, research teams and projects, and doctoral students have access to the experimental infrastructure required for conducting original research.

YEAR	ISI PAPERS*	BDI PAPERS*	BOOK CHAPTERS*	PATENTS	AWARDS	RESEARCH PROJECTS WON
2020	28	4	4	1	23	13
2021	31	0	0	3	38	4
2022	31	3	0	3	6	15
2023	18	2	1	3	9	2
2024	34	0	0	0	8	4
2025	44	2	1	2	8	6
01.01-28.06.2026	21	In progres	In progres	In progres	In progres	In progres
TOTAL 2020–2026	207	11	6	12	92	45

The organizational structure is documented in https://www.icbp.ro/resources/static_files/About/ROF/ROF%20actualizat.pdf. Administrative activity is supported by the financial-accounting, human resources, procurement and technical services structures, while research is conducted in nine specialized departments and laboratories and through shared research facilities.

The functioning of the structures is based on national legislation and institutional regulations, methodologies and procedures. The regulatory framework is available through the [SCOSAAR Regulations revised in September 2025](#).

Analysis of the state of facts: The institutional structure delineates responsibilities among IOSUD, SCOSAAR/SDSV and ICBP-NS and enables the alignment of academic coordination with research activity. The integration of doctoral students into research teams and projects supports doctoral training in accordance with the institute’s scientific profile.

During 2020–2024, the number of active doctoral supervisors at ICBP-NS increased from 6 to 9, concomitantly with an increase in the number of newly enrolled doctoral students. The 2025 ARACIS interim evaluation found that a significant part of the previous recommendations had been implemented, but also identified partially implemented aspects concerning the updating of regulations and methodologies and certain components of the doctoral programme.

Future directions

- Updating and harmonizing regulations, methodologies and procedures with legislation and ARACIS requirements.
- Strengthening the alignment of IOSUD/SCOSAAR–SDSV–ICBP-NS and clearly delineating responsibilities.
- Systematic documentation of the implementation of procedures.
- Keeping an updated record of regulations and their versions.

- Monitoring the effectiveness of structures through periodic reports and using the results for continuous improvement.

Standard S.A.1.2. Interested-party involvement

Indicator I.P.A.1.2.1: Statement and analysis of facts: SDSV governance includes doctoral supervisors, doctoral students and external members: 8 doctoral supervisors, 4 doctoral students and 5 external members. The preparation of the REI involved representatives of the institutes, doctoral supervisors, doctoral students, ICBP-NS management and staff, and relevant academic structures, making use of contributions concerning doctoral activity, research, infrastructure and quality.

Future direction: Explicitly documenting how interested-party opinions are incorporated into the adoption and revision of regulations and procedures, by retaining minutes, observations, consultations and the manner in which proposals are addressed.

Criterion A.2. Material resources and optimization of their use

Standard S.A.2.1. Material resources

Indicator I.P.A.2.1.1: Statement of facts: Doctoral activity is integrated into the ICBP-NS research infrastructure, relevant to cell cultures, molecular biology, biochemical analyses, cytometry, microscopy and imaging, bioinformatics and experimental modeling.

The institute provides expertise and services in cell cultures, biocompatibility, gene and protein expression, flow cytometry, extracellular vesicles, lentiviruses, molecular cloning, genetic and epigenetic analysis, advanced microscopy, proteomics, tissue engineering and nanoparticle characterization.

Evidence

- [Annex Research services, technologies and expertise available to collaborators and external users;](#)
- [EERTIS – ICBP-NS;](#)
- [Annex Scientific activity 2020–28.06.2026;](#)
- [Annex Ongoing grants 2020–28.06.2026;](#)
- [Updated ROF.](#)

Future direction: maintaining and modernizing the infrastructure and continuing the integration of doctoral students in the use of modern technologies.

Standard S.A.2.2. Management of material resources

Indicator I.P.A.2.2.1: ICBP-NS has experimental infrastructure integrated into departments and laboratories, administratively supported by the financial-accounting, human resources, procurement and technical services structures.

Future direction: maintenance and modernization of the infrastructure and ensuring the sustainability of its use.

Criterion A.3. Human resources and recruitment

Standard S.A.3.1. Human resources

Indicator I.P.A.3.1.1: In 2025, ICBP-NS had 57 researchers, 24 doctoral students and 9 doctoral supervisors. The number of doctoral supervisors increased from 6 in 2020 to 9 during 2023–2024.

In the field of Biology, doctoral supervisors affiliated with ICBP-NS meet the CNATDCU standards applicable at the time of habilitation, as presented in the [Annex – Doctoral supervisors in the field of Biology and compliance with the CNATDCU minimum standards](#). Their CVs are available on [the institute's website](#).

Indicator I.P.A.3.1.2: ICBP-NS implements the HRS4R principles and obtained, on 28 August 2024, the HR Excellence in Research recognition, supporting transparent recruitment, professional development and researchers' careers. ICBP-NS researchers participate in supervision committees and thesis defense committees.

Analysis: human resources are adequate for doctoral supervision activities, and the increase in the number of doctoral supervisors reflects the strengthening of the capacity to coordinate and support the doctoral training process.

Standard S.A.3.2. Recruitment procedures

Indicator I.P.A.3.2.1: Recruitment procedures comply with legal provisions and are conducted transparently. The implementation of HRS4R and the HR Excellence in Research recognition support the institutional framework for recruitment and professional development.

Direction: maintaining and transparently documenting recruitment and professional development.

Criterion A.4. Digitalization of institutional processes

Standard S.A.4.1. Digital transformation

Indicator I.P.A.4.1.1: Information on doctoral studies, supervisors, admission and research infrastructure is published through information resources and platforms. The 2025 ARACIS interim evaluation did not, however, allow full verification of the implementation of the recommendation concerning an effective information system for recording and monitoring doctoral students' academic progress.

Future directions: Strengthening the information system for recording and monitoring academic progress through the acquisition of specialized software.

FIELD B. Educational effectiveness

Criterion B.1. Programme content and relevance

Standard S.B.1.1. Programme content

Indicator I.P.B.1.1.1: ICBP-NS provides the research and doctoral training framework specific to its scientific profile. The training programme based on advanced university studies, including courses, hours, credits and course holders, is presented in [Annex Training programme based on advanced university doctoral studies at ICBP-NS](#). Each institute within SDSV has its own programme, adapted to its profile and needs.

Criterion B.2. Alignment between curriculum and qualification

Standard S.B.2.1. Alignment with qualification level and competencies

Indicator I.P.B.2.1.2: Doctoral training aims to develop competencies in research, critical analysis, project development and implementation, scientific dissemination, national and international collaboration, and biomedical/translational transfer.

The doctoral topics are aligned with the research directions of ICBP-NS, including cellular and molecular biology, vascular and cardiovascular biology, atherosclerosis, inflammation, stem cells, regenerative medicine, cardiovascular biopathology, proteomics and biomarkers, lipidomics, therapies, gene regulation and nanomedicine.

For the 2025–2026 academic year, information on admission, the methodology and the topics for the admission colloquium was published, as well as doctoral topics for 8 doctoral supervisors, corresponding to the research directions of ICBP-NS.

Evidence: ICBP-NS page dedicated to admission and doctoral training
https://www.icbp.ro/static/ro/educatie_si_formare-admitere_doctorat_20262027/index.html.

Criterion B.3. Student-centered learning, teaching and assessment

Standard S.B.3.1. Principles

Indicator I.P.B.3.1.1: Doctoral students are integrated into ICBP-NS research teams and projects and participate in activities and training on relevant techniques and methodologies, conducting experimental research directly related to their doctoral topics.

Indicator I.P.B.3.1.2: Opportunities for physical and/or virtual academic mobility are available. The international dimension is supported through mobility, placements, ERASMUS and COST activities, collaborations and participation in international scientific events.

Evidence: [Annex Doctoral Students Self-Evaluation 2021–2026](#), [Annex Scientific events, mobility documents, ERASMUS/COST](#).

Standard S.B.3.2. Equity

Indicator I.P.B.3.2.1: Doctoral students benefit from training, research, placement and mobility opportunities, aligned with their topics and needs.

Direction: further development of individualized opportunities for training, research, mobility and professional development.

Criterion B.4. Accessibility and efficiency of resources and services

Standard S.B.4.1. Access to resources and services

Indicator I.P.B.4.1.1: Doctoral students have access to research infrastructure and are integrated into research teams and projects. The recommendation concerning access to scientific literature and academic databases was assessed in 2025 as implemented through access to Anelis Plus 2024 resources.

Evidence: [ICBP-NS/EERTIS](#) infrastructure, documents concerning academic databases and [Annex Doctoral Students Self-Evaluation 2021–2026](#).

Criterion B.5. Learning outcomes

Standard S.B.5.1. Definition and assessment

Indicator I.P.B.5.1.1: The recommendation concerning the explicit specification of objectives, content and learning outcomes in course descriptions was implemented.

Indicator I.P.B.5.1.2: The outcomes of doctoral training are evidenced by the completion and public defense of doctoral theses. During the period 01.01.2020–28.08.2026, doctoral students in the field of

Biology affiliated with ICBP-NS completed and publicly defended doctoral theses in thematic areas aligned with the institute's research directions.

The complete list of theses publicly defended during the evaluation period is presented in [Annex Complete list of theses publicly defended 01.01.2021–28.08.2026](#) and is available, to the extent of the published information, on the institute's website. Based on this record, the summary below presents theses completed during 2021–2026 and examples of topics addressed.

Period	Completed theses	Examples of topics
2026	2	inflammation, miR-210, microRNA
2025	6	nanotherapy, inflammation, atherosclerosis
2024	4	proteomics, biomarkers, epigenetics
2021–2023	7	regenerative medicine, cardiovascular pathology

The activity and academic progress of doctoral students are documented through **individual monthly reports**, which record scientific results and academic activities carried out. Individual documentation includes, as applicable, publications and original scientific contributions, including papers produced in collaboration with doctoral supervisors, participation in scientific events, mobility and research and training placements, internationalization activities, as well as awards and distinctions obtained for scientific results. These elements are centralized in [Annex Doctoral Students Self-Evaluation 2021–2026](#) and the related supporting documents.

An additional element concerning the outcomes of doctoral training is the continuation of scientific activity after obtaining the doctoral degree. Institutional documents show cases in which researchers who completed doctoral studies continued their activity within ICBP-NS, including through involvement in postdoctoral activities and research projects.

Evidence: [Annex Complete list of theses publicly defended during the period 01.01.2021–28.08.2026](#); [Annex Doctoral Students Self-Evaluation 2021–2026](#); [Annex Doctoral students within SCOSAAR 2021–28.06.2026](#); [Annex Ongoing grants 2020–28.06.2026](#).

Criterion B.7. Admission and academic progress

Standard S.B.7.1. Admission

Indicator I.P.B.7.1.1: For the 2025–2026 academic year, information on admission, the methodology and the topics for the admission colloquium was published. Updated documents concerning admission and the conduct of doctoral studies are available at SCOSAAR level.

Indicator I.P.B.7.1.2: The admission methodology was updated.

Standard S.B.7.2. Academic progress

Indicator I.P.B.7.2.1: In 2025, 24 doctoral students were registered within SCOSAAR, while on 02.06.2026 there were 17 doctoral students enrolled in the programme. The difference between the two values reflects the different reporting dates, as well as the completion of some doctoral theses during the period analyzed. The activity is documented through individual monthly reports on scientific results and academic activities. Recording and monitoring mechanisms have been maintained, but ARACIS indicated in 2025 the need to strengthen and systematically document their operation.

Criterion B.8. Internationalization

Standard S.B.8.1. Internationalization

Indicator I.P.B.8.1.1: The international dimension of doctoral training is evidenced through mobility and research and training placements, ERASMUS and COST activities, collaborations with external partners and doctoral students' participation in international scientific events. Individual evidence concerning these activities is centralized in [Annex Doctoral Students Self-Evaluation 2021–2026](#), [Annex Scientific events and documents concerning mobility and ERASMUS/COST activities](#).

The ARACIS recommendations concerning mobility and internationalization were assessed in the 2025 interim evaluation as implemented.

Criterion B.9. Scientific research results

Standard S.B.9.1. Research in the educational process

Indicator I.P.B.9.1.1: The integration of doctoral students into research activities is a central element of the doctoral training process. Departments, laboratories and research infrastructure are available for doctoral activities, while doctoral students and young researchers are involved in research projects and receive training in techniques and methodologies relevant to the field of study. Research results are disseminated through scientific publications, presentations at scientific events and participation in research projects.

Standard S.B.9.2. Research related to programme objectives

Indicator I.P.B.9.2.1: Research activity is consistent with the programme objectives and has national and international visibility.

INDICATOR	2023	2024	2025	EVOLUTION
PUBLISHED ISI PAPERS	18	34	44	+144%
BDI PAPERS	2	–	2	Maintained
CHAPTERS IN MONOGRAPHS	1	–	1	Maintained
CITATIONS RECEIVED IN THE RESPECTIVE YEAR	1.703	1.530	1.919	+13%
PATENTS	3	–	2	Maintained
AWARDS	9	8	8	Maintained
ONGOING PROJECTS	20	20	18	high level
RESEARCHERS WITH H-INDEX >14	17	20	21	+24%
RESEARCHERS IN THE GLOBAL TOP 2%	–	1	1	Maintained

The evolution highlights the increase in scientific output, the number of researchers with a high H-index, and the maintenance of a high level of awards and patents, impact and visibility. Doctoral students are connected to national and international research projects and networks. Some doctors trained at ICBP-NS continue their activity at the institute, including in postdoctoral activities and research projects.

FIELD C. Quality management

Criterion C.1. Quality assurance strategies and procedures

Standard S.C.1.1. Implementation

Indicator I.P.C.1.1.1: ICBP-NS applies quality assurance procedures and monitors their impact on education. The REI considered the existence of the formal framework and the effectiveness of mechanisms, based on the principles of accuracy, traceability, consistency, timeliness, transparency, comparability and continuous improvement.

The 2021 ARACIS evaluation formulated recommendations concerning regulations, doctoral student monitoring, human resources, research and internationalization; the 2025 evaluation found that most of these had been implemented.

Standard S.C.1.2. Interested-party involvement

Indicator I.P.C.1.2.1: The preparation of the REI involved doctoral supervisors, doctoral students, ICBP-NS management and staff, and relevant academic structures.

Criterion C.2. Functionality of quality assurance structures

Standard S.C.2.2. Operation

Indicator I.P.C.2.2.2: The structures of IOSUD, SCOSAAR, SDSV and ICBP-NS and the mechanisms for coordination and quality assurance are documented. Specific regulations for the Ethics Committee, including its composition and functional independence, have also been established.

Evidence:

- <https://academiaromana.ro/ief/studiiDoctorale/2025/doc/6-RegulamentSCOSAAR.pdf>;
- https://www.icbp.ro/resources/static_files/About/CODETICA/Codul%20de%20etica%20al%20IBPC_NS.pdf;

Criterion C.3. Initiation, monitoring and revision of programmes

Standard S.C.3.1. Procedures and their implementation

Indicator I.P.C.3.1.1: The regulatory framework is under continuous updating, and the **SCOSAAR Regulations revised in September 2025** constitute evidence. The 2025 ARACIS evaluation found that the recommendations had been implemented.

Indicator I.P.C.3.1.2: The participation of doctoral supervisors, doctoral students and external members in SDSV structures and in the preparation of the REI constitutes evidence of stakeholder involvement.

Criterion C.4. Periodic evaluation of staff quality

Standard S.C.4.1. Procedures

Indicator I.P.C.4.1.1: The document describes the participation of doctoral supervisors and researchers in doctoral training, coordination and assessment based on methodologies developed and approved by the Scientific Council.

Criterion C.5. Databases for quality assurance

Standard S.C.5.1. Databases

Indicator I.P.C.5.1.1: Data concerning doctoral students, theses, scientific activity, grants and internationalization are documented through the relevant institutional annexes. The REI aimed to collect, verify and correlate information from IOSUD/SCOSAAR, SDSV and the institutes.

A substantial volume of data exists; however, ARACIS highlighted in 2025 the need to strengthen the information system for recording and monitoring academic progress and the documentation of its operation.

Direction: Development of an integrated database and systematic use of data in the internal quality assurance process through the implementation of specialized software solutions, which are to be acquired depending on the availability of funds.

Criterion C.6. Transparency of information of public interest

Standard S.C.6.1. Transparency

Indicator I.P.C.6.1.1: Information concerning SDSV, the field of Biology, doctoral supervisors, admission and doctoral topics is published on the websites of the Romanian Academy and ICBP-NS. The list of publicly defended theses is also available.

Indicator I.P.C.6.1.2: The governance structure is published through institutional documents and regulations, and CSD-SV includes doctoral supervisors, doctoral students and external members.

Evidence: Updated ROF, SCOSAAR Regulations 2025, institutional websites, documents concerning admission, supervisors and doctoral topics.

Criterion C.8. External evaluation

Standard S.C.8.1. Compliance with the obligation of external evaluation

Indicator I.P.C.8.1.1: The Romanian Academy, through SCOSAAR, underwent periodic external ARACIS evaluation in 2021, with the on-site visit on 4 November 2021. The field of Biology was evaluated within the institutes involved and received the qualification “Maintenance of accreditation”.

Analysis of the state of facts: The period 2021–2025 shows the consolidation of the field of Biology through human resource development, intensified research and publication, increased participation in scientific and international activities, and development of institutional mechanisms for organization and monitoring.

Cross-cutting synthesis of evidence and annexes

To avoid repetition, the following documents constitute cross-cutting sources of evidence:

1. [Annex Official ICBP-NS document concerning the organizational structure / Updated ROF](#)
2. [Annex Doctoral supervisors and CNATDCU minimum standards](#)
3. [Annex Training programme based on advanced university doctoral studies at ICBP-NS](#)
4. [Annex Research services, technologies and expertise available to collaborators and external users](#)
5. [Annex Scientific events](#)
6. [Annex Doctoral Students Self-Evaluation 2021–2026](#)
7. [Annex Complete list of theses publicly defended during the period 01.01.2021–28.08.2026](#)
8. [Annex Doctoral students within SCOSAAR 2021–28.06.2026](#)

9. [Annex Scientific activity 2020–28.06.2026](#)
10. [Annex Ongoing grants 2020–28.06.2026](#)
11. [Annex Supervision committees](#)
12. [SCOSAAR Regulations revised in September 2025](#)
13. [HRS4R / HR Excellence in Research documents](#)
14. [Documents concerning ERASMUS/COST mobility and internationalization](#)

General conclusion

The institutional structure allows doctoral activity to be carried out in the field of Biology, with responsibilities delineated among IOSUD/SCOSAAR, SDSV and ICBP-NS. The 2023 reorganization and integration of the field into SDSV strengthened the institutional framework.

Research capacity, human resources, infrastructure and the integration of doctoral students into research teams and projects support educational effectiveness. The increase in the number of doctoral supervisors from 6 in 2020 to 9, diversification of topics and scientific results support the development of the field.

The main areas requiring consolidation, according to the 2025 ARACIS interim evaluation, are: **updating and harmonizing the regulatory framework, diversifying the staff involved in the doctoral programme, and the information system for recording and monitoring academic progress.**

The priority for the following period is not only to maintain the existing structures and procedures, but to **demonstrate their effectiveness in a documented manner**, through measurable indicators, revision histories, minutes, evaluation results, updated databases and evidence concerning the use of monitoring results for continuous improvement.

IV. Recommendations and main conclusions resulting from the latest external quality evaluation procedure, and actions undertaken²

Following the external evaluation of SCOSAAR by ARACIS, conducted during 25.10–19.11.2021, within the field of university doctoral studies in Biology, a series of recommendations were formulated concerning the improvement of the regulatory and organizational framework, teaching and research activity, as well as mechanisms for monitoring students' academic progress.

Regarding the implementation of the recommendations formulated by the members of the ARACIS expert evaluation team in the doctoral field of Biology of SCOSAAR, the following measures were undertaken at the level of the Institute of Cellular Biology and Pathology “Nicolae Simionescu” (ICBP-NS):

A.1.1.1. Existence of specific regulations and their application at the level of the doctoral school to which the field of university doctoral studies belongs

Recommendation: Updating the regulations and methodologies of the Doctoral School and SCOSAAR in accordance with national legal provisions and informing doctoral students about them. Promoting the regulations and ensuring student representation in the Council of the Doctoral School (CSD).

Implementation at SCOSAAR /ICBP-NS level: The regulations and methodologies applicable to university doctoral studies are updated and available on the official SCOSAAR page, in the section

²In the case of the accreditation or maintenance of accreditation procedure, as applicable.

dedicated to regulations and methodologies (https://acad.ro/institutia/scosaar_metodologii.html; https://www.icbp.ro/static/en/en-education_training_documents_of_the_doctorate/index.html), and doctoral students are informed through institutional communication channels. ICBP-NS supports the representation of doctoral students in the structures of the Doctoral School, in accordance with the applicable regulatory provisions.

A.1.1.2. The doctoral school regulations include mandatory criteria, procedures and standards for the aspects specified in Article 17, paragraph (5) of Government Decision no. 681/2011 approving the Code of University Doctoral Studies, as subsequently amended and supplemented

Recommendation: Permanent updating of the internal regulations of the Doctoral School in line with changes in national legislation concerning university doctoral studies.

Implementation: Actions undertaken at ICBP-NS level: ICBP-NS applies the regulations and methodologies adopted at SCOSAAR level and monitors the updating of internal documents in accordance with the national regulatory framework. Doctoral supervisors and doctoral students are informed about the provisions and amendments to the regulations applicable to doctoral activity.

A.1.2.1. Existence and effectiveness of an appropriate information system for recording doctoral students and their academic progress

Recommendation: Development and use of an appropriate information system for recording doctoral students and systematically monitoring their academic progress.

Implementation – Actions undertaken at ICBP-NS level: At institute level, mechanisms are used to record and monitor the academic status of doctoral students.

A.3.1.3. The disciplines in the training programme based on advanced university studies corresponding to the field are taught by academic staff or researchers who meet the conditions provided by the applicable standards

Recommendation: Diversification of the staff involved in teaching the disciplines of the training programme based on advanced university studies, including through collaboration among the institutes comprising SDSV and through the involvement of members of supervision committees.

Implementation: To diversify the human resources involved in doctoral teaching activities, ICBP-NS supported the involvement of members of supervision committees in doctoral student training activities and collaboration with doctoral supervisors and specialists from the other institutes comprising SDSV. The composition of supervision committees supports the diversification of the scientific expertise offered to doctoral students and the alignment of advanced training with doctoral research topics.

A.3.2.1. Increasing scientific performance and international visibility:

Recommendation: The external evaluation recommended increasing the number of publications in journals with a high impact factor, particularly in the Q1 and Q2 categories.

Implementation. Scientific activity carried out during 2023–2025 shows a favorable evolution in the scientific productivity, research impact and international visibility of the ICBP-NS team. The comparative analysis of the main indicators shows the progressive consolidation of scientific performance and the international recognition of researchers.

INDICATOR	2023	2024	2025	EVOLUTION 2023–2025
PUBLISHED ISI PAPERS	18	34	44	+144%
BDI PAPERS	2	–	2	Maintained

CHAPTERS IN MONOGRAPHS	1	–	1	Maintained
CITATIONS RECEIVED IN THE RESPECTIVE YEAR	1.703	1.530	1.919	+13%
PATENTS	3	–	2	Maintained
AWARDS	9	8	8	Maintained
ONGOING PROJECTS	20*	20	18	Maintained at a high level
PNRR PROJECTS WON THROUGH COMPETITION	5*	–	–	—
RESEARCHERS WITH H-INDEX >14	17	20	21	+24%
RESEARCHERS IN THE GLOBAL TOP 2%	–	1	1	Maintained

The evolution of the main indicators during 2023–2025 shows a sustained increase in scientific output, from 18 ISI papers in 2023, to 34 in 2024 and 44 in 2025, as well as an increase in the number of researchers with H-index >14, from 17 in 2023, to 20 in 2024 and 21 in 2025. At the same time, the number of awards and patents has remained at a high level. The number of citations received in the respective year was 1,703 in 2023, 1,530 in 2024 and 1,919 in 2025, confirming the maintenance of a high level of research impact and visibility. Regarding project activity, it remained at a high level, with 20 ongoing projects in 2023 and 2024 and 18 projects in 2025.

Overall, the 2023–2025 period shows the consolidation of ICBP-NS research capacity through increased scientific output, maintenance of significant bibliometric impact, and intensification of activities aimed at exploiting research results, reflected in patents and awards. The increase in the number of researchers with an H-index >14 and the presence of one researcher in the global top 2% support the team’s international visibility and competitiveness.

These results demonstrate the maintenance and strengthening of a high-performing research environment capable of supporting doctoral activity by integrating it into research projects and activities and by connecting doctoral students to scientific results and research networks at national and international level.

V. SWOT analysis

Strengths:	INTERNAL FACTORS ↑	Weaknesses:
✓ Recognized scientific expertise of doctoral supervisors and research teams in cellular and molecular biology, biomedical and translational research, cardiovascular diseases and personalized medicine. ✓ Scientific performance and international visibility, including Q1/Q2 publications and bibliometric impact. ✓ Multidisciplinary human resources and high-performance research infrastructure. ✓ Integration of doctoral students into projects, research teams, scientific events and collaborations.		✓ Dependence on competitive research funding and fluctuations in public funding. ✓ Still insufficiently leveraged participation in some European programmes and consortia. ✓ Skills gaps in bioinformatics, data analysis, multi-omics and artificial intelligence applied to biomedicine. ✓ Need to strengthen the attraction and retention of researchers and mentoring. ✓ Infrastructure operating and modernization costs and the need to

✓ Experience in competitive projects, national and international collaborations and human resource policies aligned with European principles.		strengthen the exploitation of research results.
	SWOT analysis	
Opportunities: ✓ Access to European funding and mobility programmes and expansion of international partnerships. ✓ Growing interest in personalized medicine, translational research and advanced therapies. ✓ Development of bioinformatics, multi-omics and artificial intelligence applied to biomedicine. ✓ Opportunities for technology transfer, innovation and collaboration with the clinical and industrial environment.	 FACTORI EXTERNI	Threats: ✓ Fluctuations in public funding and international competition for projects and resources. ✓ Legislative and bureaucratic instability, with an impact on long-term planning. ✓ Migration of high-performing researchers and difficulties in attracting young researchers. ✓ Increasing infrastructure costs and the rapid pace of technological development, with a risk of skills gaps.

The SWOT analysis highlights a favorable scientific and institutional framework, supported by the expertise of supervisors, scientific performance, infrastructure and the institute's collaborations.

The main vulnerabilities are related to competitive funding, human resource retention, emerging skills and infrastructure sustainability.

Opportunities include European research and mobility programmes, international partnerships and the development of emerging fields, while threats include competition for funding and resources, legislative and bureaucratic instability and the migration of high-performing researchers.

Development directions must address these factors by strengthening the quality of training, internationalization, skills development and sustainable access to infrastructure.

VI. Main challenges and development directions

Based on the SWOT analysis, the results of scientific and doctoral activity and developments in the research environment, the main challenges are strengthening the quality of doctoral training, increasing international integration, developing human resources, diversifying research topics, strengthening infrastructure, internationalization, increasing the exploitation and impact of doctoral research results, and consolidating monitoring and continuous improvement mechanisms.

1. Strengthening the quality and relevance of doctoral training: The doctoral programme must be maintained and updated in line with developments in the field.

Development directions:

- periodic updating of the doctoral training programme;
- diversification of interdisciplinary training;
- strengthening mentoring and supervision;
- development of transferable skills;

- monitoring doctoral students' progress and using the results for improvement.

2. Increasing the integration of doctoral students into competitive and international research: The integration of doctoral students into projects, mobility, scientific events and national and international networks should be strengthened.

3. Developing and strengthening the human resources involved in doctoral training: The quality of doctoral training depends on the existence of scientifically active doctoral supervisors and on the capacity to ensure continuity and diversification of the available expertise ([Annex Doctoral supervisors in the field of Biology and compliance with the CNATDCU minimum standards](#)).

4. Diversification and modernization of doctoral research topics: Doctoral topics should incorporate emerging directions and modern methodologies, including bioinformatics, multi-omics and artificial intelligence applied to biomedicine.

5. Strengthening infrastructure and resources required for doctoral research: Access to high-performance infrastructure must be maintained and expanded through equipment modernization, access to research technologies and sustainable allocation of resources.

6. Increasing the internationalization of doctoral training: Internationalization should be oriented towards concrete benefits for doctoral students: collaborations with external centers, mobility, participation in international scientific events and development of joint research activities.

7. Increasing the exploitation and impact of doctoral research results: Doctoral results should be disseminated through publications, presentations, identification of applicable results and strengthening of connections with the clinical and industrial environment.

8. Strengthening mechanisms for monitoring and continuous improvement of doctoral training: The development of the field should be supported by monitoring academic and scientific progress, collecting evidence, analyzing indicators and using the results for continuous improvement.

With a view to expanding international collaborations and creating opportunities for mobility and exchange of experience for doctoral students and researchers, the Institute of Cellular Biology and Pathology "Nicolae Simionescu" has concluded a Cooperation Agreement with the Istituto di Ricerche Farmacologiche "Mario Negri", Milan, Italy. The agreement provides an institutional framework for developing scientific cooperation, exchanging expertise and facilitating future mobility and research placements.

Through this agreement, an institutional framework is created for developing scientific cooperation, exchanging expertise and facilitating future mobility and research placements for doctoral students and research staff. The agreement thus contributes to strengthening the international dimension of doctoral training and to developing the ICBP-NS international partnership network. The document is presented in [Annex COOPERATION AGREEMENT IBPC- Inst Mario Negri Milano 20260729161147827](#).