



CALL 04/2026 PPGBCM-UFPR

SELECTION PROCESS NOTICE FOR THE *stricto sensu* GRADUATE PROGRAM – DOCTORAL DEGREE

The Course Collegiate of the Graduate Program in Cell and Molecular Biology (PPGBCM), in the exercise of its legal and statutory powers, following deliberations at the ordinary course collegiate meeting held on July 2, 2026, hereby announces the opening of the selection process for admission to the Program at the Doctoral level, considering:

- Resolution No. 32/17-CEPE, which establishes general regulations for *stricto sensu* graduate programs (Master's and Doctorate) at the Federal University of Paraná;
- Law No. 9,394 of December 20, 1996, which establishes the guidelines and bases of national education;
- Law No. 9,784 of January 29, 1999, which regulates the administrative process within the scope of the Federal Public Administration;
- The General Regulations of the Federal University of Paraná;
- The Internal Regulations of the Graduate Program in Cell and Molecular Biology of the Federal University of Paraná;
- Recommendation No. 09/2016 of the Federal Prosecutor's Office in the State of Paraná;
- Resolution No. 02/25-CEPE, which establishes rules for procedures, public notices, and reserved positions in *stricto sensu* graduate admissions processes at UFPR.

RESOLVES: To establish dates, criteria, and procedures for the selection and admission to the Doctoral Program in Cell and Molecular Biology, under the terms of this Public Notice.

1. PRELIMINARY PROVISIONS

The selection process shall be governed by this Public Notice and conducted by the Selection Committee established at the ordinary meeting held on June 11, 2026, composed of five faculty members of the Program: Professors Maria Cristina Leme Godoy dos Santos (Chair), Fernanda Fogagnoli Simas, and Alejandro Correa Dominguez as primary members, and Edvaldo da Silva Trindade and José Eduardo Vargas as alternate members.

2. AVAILABLE POSITIONS

2.1 A total of 15 (fifteen) positions will be offered for the Doctoral Program. The research lines and areas of expertise of the supervisors may be consulted in Appendix IV of this Public Notice and on the Program website: <http://www.pgbiocel.ufpr.br/portal>.

The faculty members offering positions in this selection process are listed below:

FACULTY MEMBER	PhD positions	CV Lattes link
Alexander W Biondo	1	http://lattes.cnpq.br/2978847453165582
Andrea Rodrigues Avila	1	http://lattes.cnpq.br/6529345404413981
Bruno Dallagiovanna	1	http://lattes.cnpq.br/5038843270685960
Carolina Oliveira	1	http://lattes.cnpq.br/1040170667827052
Ciro Oliveira Ribeiro	1	http://lattes.cnpq.br/7666734780195647
Glaucio Valdameri	2	http://lattes.cnpq.br/9897630183923653
José Eduardo Vargas	1	http://lattes.cnpq.br/9525858900171217
Lia Nakao	1	https://lattes.cnpq.br/7495729402863374

Lucélia Donatti	2	http://lattes.cnpq.br/8059432725797514
Luiza Gremski	1	http://lattes.cnpq.br/0195255019285499
Marcel Ivan Ramirez	1	http://lattes.cnpq.br/1736334142033813
Silvio Sanches Veiga	1	http://lattes.cnpq.br/1307617859068869
Silvio Marques Zanata	1	http://lattes.cnpq.br/1574808996231296

2.2 Applicants compete for the position offered by the supervisor who provided the supervision agreement at the time of application. If approved and the supervisor no longer has an available position, the applicant may request enrollment in an unfilled position offered by another supervisor (who has offered positions under Item 2.1), upon presentation of a letter of acceptance from the new supervisor.

2.3 In accordance with Resolution No. 32/17-CEPE, 5% of the positions provided in this Public Notice are reserved for UFPR employees, provided that the following requirements are met:

- 2.3.1 Proof of reciprocal institutional interest through an official statement from the immediate supervisor and an excerpt from the minutes of departmental and/or sector council approval regarding the application of the training offered by the graduate program to the applicant's professional duties;
- 2.3.2 Approval in the selection process with a score equal to or higher than the cutoff score.

2.4 In compliance with Resolution No. 02/25-CEPE, which establishes affirmative action policies for *stricto sensu* graduate programs at UFPR, the Graduate Program in Cell and Molecular Biology reserves 20% (twenty percent) of the positions offered in this Public Notice for applicants who self-declare as belonging to at least one of the following categories:

- Black applicants (Black or Brown);
- Indigenous applicants;
- Quilombola applicants;
- Persons with disabilities (PwD);
- Deaf applicants;
- Trans applicants (transsexual, transgender, and travesti persons);
- Refugees and stateless people.

2.4.1 Registration under the affirmative action category requires the submission of a specific self-declaration form (available at: <https://www.prppg.ufpr.br/site/pb/banca-unificada/coesafirmativas.docx>) and, when applicable, the submission of supporting documents, in accordance with Article 3 of Resolution 02-2025-CEPE.

2.4.2. Participation in the unified validation committee for the verification of self-declarations is **mandatory** for applicants seeking to compete for the affirmative action positions offered by the PPGBCM. Such applicants must be evaluated by the unified validation committee before the release of the final admission results. The official notice containing the registration schedule and the dates of the unified validation committee is available at: <https://ufpr.br/propg/cpgss/aco-es-afirmativas/banca-unificada/>.

2.4.3. Applicants whose self-declaration is not validated by the Unified Validation Committee, or who fail to appear on the designated date, will automatically be transferred to the general admission category, provided they have achieved the minimum required score in the eliminatory stages of the selection process. Their right to continue in the selection process will be guaranteed, without prejudice to their overall ranking.



- 2.4.4. Applicants whose self-declaration has been invalidated in previous UFPR admission processes may not apply again under the same affirmative action category, in accordance with Article 6, §3 of CEPE Resolution No. 02/2025.
- 2.4.5. If affirmative action positions remain unfilled after the completion of the validation and ranking process, such positions shall be reassigned to the general admission category, in accordance with Article 2, §5 of CEPE Resolution No. 02/2025.
- 2.4.6. Applicants registered under the general admission category may be considered for affirmative action positions if they meet the applicable eligibility criteria and their selection score qualifies them, in accordance with Article 2, §3 of CEPE Resolution No. 02/2025.
- 2.4.7. Applicants who have previously had their affirmative action status validated upon admission to UFPR are exempt from participating in the unified validation committee, provided they submit documentary proof at the time of registration for the selection process, in accordance with Article 6, §1 of CEPE Resolution No. 02/2025.

2.5. The list of approved and ranked applicants shall be limited to the maximum number of positions available under this Call for Applications and to the supervisory capacity of each faculty member of the Graduate Program, in accordance with CAPES regulations.

3. APPLICATIONS

3.1 Prior to applying, applicants must review the list of available positions and supervisors offering positions and obtain a letter of acceptance from the prospective supervisor, which must be submitted at the time of application.

3.2 Applications for the selection process shall be submitted *online* through the Graduate Program website (www.pgbiocel.ufpr.br) from **July 6, 2026, until 11:59 p.m. (Brasília time) on August 14, 2026**.

3.2.1 Applications submitted by any other means or after the deadline established in Item 3.2 will not be accepted.

3.3 Applicants for the regular doctoral program must complete the online application form (www.pgbiocel.ufpr.br) and upload the following documents in ".pdf" format:

a) Copy of an official identification document and CPF (Brazilian applicants) or passport (foreign applicants). The following are also accepted as official identification documents: identity cards issued by State Secretariats of Public Security, the Armed Forces, Military Police, the Ministry of Foreign Affairs, professional councils legally recognized as identification authorities, Work and Social Security Card (CTPS), and National Driver's License (with photograph).

b) Curriculum Vitae prepared according to the template provided in Appendix III, including the completed scoring table according to Appendix II, together with supporting documentation arranged in the same order as presented in the scoring table. Activities or achievements not supported by documentation will not be considered.

c) A signed and dated letter of supervisor's acceptance (template provided in Appendix I). This document must be uploaded under the field entitled "Recommendation Letter."

d) Applicants applying through the affirmative action system must upload, under "Other Documents," the specific self-declaration form (available at <https://www.prppg.ufpr.br/site/pb/banca-unificada/>) and, where applicable, the supporting documents required under Article 3 of Resolution No. 02/2025-CEPE.

e) Copy of the Master's degree diploma, the Master's thesis defense minutes, or an official document certifying completion of all requirements for the Master's degree awarded by a CAPES-recognized graduate program. Applicants who have not yet completed their Master's degree may apply by submitting an official statement indicating the expected defense date (which must occur before the enrollment deadline established in this Public Notice), signed and stamped by the Graduate Program Coordinator.

3.4 Applicants for Direct Doctoral Admission (without a prior Master's degree) must complete the online application form and upload the following PDF documents:

- a) All documents listed in Items 3.3(a)–(d).
- b) Copy of a Bachelor's degree diploma recognized by the Brazilian Ministry of Education (MEC). Foreign diplomas must be officially recognized by the competent authority in the country where they were awarded.
- c) Proof that the proposed supervisor has successfully supervised at least two doctoral dissertations (to be uploaded under "Other Documents").
- d) Proof that the applicant has completed at least two years of Undergraduate Scientific Initiation or equivalent research experience.
- e) Copy of an accepted or published scientific article in which the applicant is the first author, published in a journal ranked within one of the top three Qualis levels (CAPES Biological Sciences II area).

3.5 The selection committee will verify all submitted documentation. Failure to submit any required document or submission of documentation that does not meet the requirements shall result in rejection of the application.

4. SELECTION PROCESS TESTS

4.1 Applicants whose applications have been approved shall participate in the selection process, to be held on August 25, 2026, from 9:00 a.m. to 12:00 p.m. (Brasília time).

4.2 Applicants must present an official photo identification document at the examination venue.

4.3 The selection process consists of:

- 4.3.1 A cell and molecular biology knowledge examination (eliminary and ranking stage; weight 7);
- 4.3.2 Evaluation of the applicant's Curriculum Vitae**, scored according to Appendix II (ranking stage; weight 3).

**Applicants who obtain a minimum score of 60 points (on a scale from 0 to 100) in the cell and molecular biology examination shall be eligible for curriculum evaluation, regardless of research line or prospective supervisor. Applicants scoring below 60 shall be eliminated from the selection process.

4.4 In the event of a tie in the final score, ranking shall be determined in the following order:

- 1. Higher score on the cell and molecular biology examination;
- 2. Higher Curriculum Vitae score;

3. Older age.

4.5 The cell and molecular biology examination shall be conducted in person at the UFPR Biological Sciences Center (Setor de Ciências Biológicas).

4.5.1 Applicants residing abroad or in locations far from Curitiba may request, by email (pgbiocel@ufpr.br), authorization to take the examination in person at another university outside Curitiba. Requests must include proper justification and will be evaluated by the Selection Committee. The Committee's decision and examination instructions will be published together with the list of approved applications.

4.6 Examination Content

The examination shall consist of multiple-choice questions covering the following topics:

- a) How Cells Read the Genome: From DNA to Protein (Chapter 7)
- b) Membrane Structure (Chapter 11)
- c) Membrane Transport (Chapter 12)
- d) Mitochondria (Chapter 14 – relevant sections)
- e) Intracellular Compartments and Protein Transport (Chapter 15)
- f) The Cytoskeleton (Chapter 17)
- g) The Cell Division Cycle (Chapter 18)

Study textbook:

Alberts B., Bray D., Hopkin K., Johnson A., Lewis J., Raff M., Roberts K., Walter P. *Molecular Biology of the Cell*, 4th Edition.

4.7 Pursuant to §2 of PPGBCM Ordinance No. 01/2025, applicants who have participated in a PPGBCM admission process (Master's or Doctorate) within the previous five years and were approved may choose, at the time of application, to use the score previously obtained in the Cell and Molecular Biology examination. Applicants selecting this option must upload a signed declaration under "Other Documents." In such cases, they will not take the examination in the current selection process.

4.8 Curriculum Vitae scores shall range from 60 to 100 points. The final curriculum score will be based on the total score obtained according to Appendix II. After ranking all curricula:

- the highest-scoring curriculum will receive 100 points;
- the lowest-scoring curriculum will receive 60 points;
- intermediate scores will be calculated using the following formula:

$$\text{Curriculum score "X"} = [(ptX - ptb) \times 40 / (pta - ptb)] + 60$$

where:

- ptX = applicant X's curriculum score;
- pta = highest curriculum score;
- ptb = lowest curriculum score.

5. SELECTION COMMITTEE

5.1 The Selection Committee shall consist of the members appointed by the Graduate Program Collegiate in accordance with Article 46 of Resolution No. 32/17-CEPE.

5.2 The examinations shall be graded by at least two members of the Selection Committee. To prevent conflicts of interest, all examinations shall be anonymized through a coding system from the time of administration until completion of grading.

5.3 The Examination Committee may not include any UFPR employee or third party who has family, marital, corporate, business, or commercial relationships with any applicant or with another member of the committee.

6. ADMISSION, ENROLLMENT, AND SCHOLARSHIPS

6.1 The Selection Committee shall publish an official notice listing the approved applicants in descending order of final ranking, taking into account the number of positions available (Section 2 of this Public Notice) and the applicants' performance in the evaluation process (Section 4).

6.1.1 Within the 20% quota reserved for affirmative action applicants (Item 2.4), approved applicants competing under the affirmative action policy established by Resolution No. 02/25-CEPE shall have priority in filling positions offered by their prospective supervisors. If no position is available under that supervisor, the applicant shall have priority in filling a vacant position offered by another supervisor.

6.1.2 After publication of the final results:

- Brazilian applicants admitted to the Program must request enrollment by e-mail (pgbiocel@ufpr.br) **between September 1 and September 5, 2026**, following the instructions that will be provided by the Program Secretariat.
- International applicants admitted to the Program must request enrollment by e-mail (pgbiocel@ufpr.br) during one of the following enrollment periods: **September 1–5, 2026; October 1–5, 2026; or November 1–5, 2026.**

6.1.3 For the present selection process, two doctoral scholarships are expected to be available (monthly stipend of BRL 3,100.00), with implementation expected between September and November 2026. The availability of these scholarships depends on funding allocations by CAPES and CNPq.

6.2 Implementation of these anticipated scholarship quotas is subject to the timetable and administrative procedures established by CAPES, CNPq, and PROPG/UFPR.

6.3 Scholarships, when available, shall be awarded according to the applicants' ranking in the selection process, regardless of the order in which they enroll in the Program.

6.3.1 Applicants admitted through the affirmative action policy (Item 2.4) shall receive priority in scholarship allocation, regardless of their ranking or enrollment order.

6.4 Applicants admitted without receiving a scholarship may subsequently compete for scholarships offered in future PPGBCM scholarship selection processes. To do so, they must apply in the future selection process and choose either: to take the cell and molecular biology examination again; or to use the examination score obtained in the present selection process.

6.5 If admitted applicants receive scholarships from funding sources external to PPGBCM/UFPR, the Program scholarships shall be allocated to the next applicants on the ranked list.



6.6 Enrollment of admitted applicants is conditional upon reading and accepting the PPGBCM Internal Regulations (approved in 2025), in the current Program Ordinances, and Resolution No. 32/17-CEPE, all available on the Program website (<https://pgbiocel.ufpr.br/>).

6.7 Pursuant to Resolution No. 05/26-CEPE, scholarship awards are subject to compliance with the requirements established by the funding agencies and by the PPGBCM Scholarship Committee.

7. FINAL PROVISIONS

7.1 All official notices, ordinances, announcements, communications, and any other documents related to this selection process shall be published on the Program website (www.pgbiocel.ufpr.br).

7.2 The participation of a graduate student observer in the selection process is permitted and encouraged. The observer may attend all stages of the process without voting rights.

7.3 Applicants may file an administrative appeal. Appeals against any published result must be submitted within two (2) business days after publication of the corresponding official notice on the Program website. Appeals shall be submitted by e-mail to: pgbiocel@ufpr.br

7.4 The publication dates of the results and the deadlines for appeals are presented in Section 8 (Schedule) of this Public Notice.

7.5 Applicants may contact the Program Secretariat and the Selection Committee exclusively via the following e-mail address: pgbiocel@ufpr.br

8. SCHEDULE

Stage	Date
Application period	July 6 – August 14, 2026 (until 11:59 p.m., Brasília time)
Publication of approved and rejected applications	August 18, 2026
Appeal period regarding rejected applications	August 18–20, 2026 (until 11:59 p.m., Brasília time)
Final list of approved applications	August 21, 2026
Cell and Molecular Biology Knowledge Examination	August 25, 2026 (9:00 a.m.–12:00 p.m., Brasília time)
Examination venue	UFPR Biological Sciences Center (Setor de Ciências Biológicas), Av. Cel. Francisco H. dos Santos, s/n, Jardim das Américas, Centro Politécnico, Curitiba, Paraná (room to be announced in a subsequent official notice)
Preliminary results	August 26, 2026



Stage	Date
Appeal period	August 26–28, 2026 (until 11:59 p.m., Brasília time)
Final results	September 1, 2026
Enrollment period	September 1–5, 2026 (Brazilian applicants)
	September 1–5, October 1–5, or November 1–5, 2026 (international applicants)

Note: All official results shall be published on the PPGBCM website.

Curitiba, July 3, 2026

Prof. Luiza Helena Gremski, Ph.D.

Coordinator

Graduate Program in Cell and Molecular Biology



APPENDIX I

(To be uploaded under the field entitled "**Recommendation Letter**" during the online application process through SIGA.)

SUPERVISOR'S LETTER OF ACCEPTANCE

I hereby inform the Coordination of the **Graduate Program in Cell and Molecular Biology of the Federal University of Paraná** that the applicant: _____
(CPF/Passport No.: _____) will participate in the selection process for admission to the **Doctoral Program**, competing for a position offered under my supervision in **Public Notice 04/2026 of PPGBCM-UFPR**.

If admitted, the student will develop his/her research project under my supervision. Regarding the future research project to which the applicant will be affiliated, I declare that I agree to supervise the applicant provided that the following conditions, which are consistent with the type of research and experimental activities conducted by my research group, are met:

() The applicant may enroll in the Master's or Doctoral Program only if he/she is able to devote full-time dedication to the research project (regardless of whether a scholarship is awarded).

() The applicant may enroll while maintaining other professional activities, provided that he/she devotes _____ **hours per week** to the execution of the research project.

Justification:

No further remarks, I remain available for any additional clarification.

Curitiba, ____ of _____, 2026.

Prof. Dr. _____

APPENDIX II

Curriculum Vitae Scoring Table

Quantitative Evaluation

Additional Academic Qualifications

Item	Score
Doctoral degree	50 points
Master's degree	25 points
Graduate specialization course (<i>lato sensu</i>) or equivalent in the field	10 points / 360 hours
Professional development course (<i>lato sensu</i>) or equivalent	5 points / 180 hours
Undergraduate Scientific Research Fellowship (Scientific Initiation)	5 points / 12 months
Teaching Assistantship	1 point / 12 months
English language proficiency certificate obtained within the last five years (Cambridge, Oxford, ESLAT, Michigan, TOEFL ≥ 550)	10 points

Professional Experience

Item	Score
Undergraduate teaching	6 points/year (minimum 8 h/week; maximum 18 points)
Graduate teaching (<i>stricto sensu</i> or <i>lato sensu</i>)	0.5 point per 2 hours
Secondary education teaching	6 points/year (minimum 8 h/week; maximum 18 points)
Participation in administrative committees (departmental committees, student representation, organizing committees)	1 point

Awards and Honors

Item	Score
Awards received for scientific research or outreach activities	3 points

Scientific Publications

Item	Score
Research article published as first or corresponding author in an indexed journal (ISSN)	30 + (Impact Factor × 10)
Research article published as co-author in an indexed journal	70% of the above score
First-author publication in a non-indexed journal	5 points (maximum 15)
Co-author publication in a non-indexed journal	3 points (maximum 9)
Author or editor of an international book (ISBN)	60 points
Author or editor of a national book (ISBN)	30 points
Author of an international book chapter	10 points
Author of a national book chapter	5 points
Conference abstract as presenting author	1 point (maximum 15)

Academic Presentations

Item	Score
Short courses taught	1 point/2 hours (maximum 10)
Invited lectures, keynote talks or panel presentations	1 point (maximum 10)
Submission of biological sequences to electronic databases	1 point (maximum 10)

Participation on Examination Committees

Item	Score
Doctoral dissertation examination committee	2 points

Item	Score
Master's dissertation examination committee	1 point
Undergraduate thesis or scientific initiation examination committee	0.5 point (maximum 2 points per event)

Scientific Meetings

Item	Score
Participation in congresses, symposia or conferences	0.5 point (maximum 10)

Student Supervision

Item	Score
Supervision of undergraduate theses or specialization monographs	6 points
Co-supervision of undergraduate theses	2 points

Patents

Item	Score
Patent application filed	10 points
Patent granted	60 points

Science Education and Outreach

Item	Score
Scientific outreach article published in print or online media	2 points (maximum 10)

The following activities will NOT be scored

1. Attendance at lectures.
2. Mandatory curricular internships.
3. Mandatory activities related to undergraduate or graduate courses.
4. Laboratory seminars or presentations delivered within the applicant's own research group.

APPENDIX III

RESUME TEMPLATE

1. Identification

2. Education/Training

3. Scoring table

- Fill in the table according to the items and scoring criteria in Annex II,
- Follow the chronological order from most recent to oldest,
- Indicate the score and the page where the certificate appears
- Insert the necessary rows while maintaining the specified formatting regarding the numbering of the items described in Annex II.

Item	Description	Score	Certificate (indicate the page number and/or document number where the proof is located)
Additional Academic Qualifications			
<i>Total points</i>			
Professional Experience			



Programa de Pós-Graduação em Biologia Celular e Molecular

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<i>Total points</i>			
Awards and Honors			
<i>Total points</i>			
Scientific Productions			
<i>Total points</i>			
Academic Presentations			
<i>Total points</i>			
Participation on Examination Committees			
<i>Total points</i>			



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Scientific Meetings			
<i>Total points</i>			
Student Supervisions			
<i>Total points</i>			
Patents			
<i>Total points</i>			
Science Education and Outreach			
<i>Total points</i>			

APPENDIX IV

Research Areas of the Faculty Members Offering Positions

Alexander W. Biondo

Applicants admitted through this Public Notice will have the opportunity to conduct research in the area of Molecular Biology of Pathogens, within the One Health framework, focusing on vulnerable human populations, their animals, and their shared environments, with particular emphasis on indigenous peoples, *quilombola* communities, *caçara* communities, incarcerated populations, homeless individuals, and urban waste recyclers.

Andrea Rodrigues Avila

Investigation of the role of environmental pollutants in the development of parasitic diseases, with emphasis on alterations in host–parasite interactions caused by chronic exposure to pollutants. The project employs endothelial infection models with *Toxoplasma gondii* together with molecular biology and proteomics approaches to identify altered pathways and elucidate the mechanisms of action of environmental contaminants.

Bruno Dallagiovanna

Among craniofacial anomalies, cleft lip and palate (CL/P) affects approximately one in every 600 live births. These anomalies have a significant long-term impact on speech, hearing, appearance, cognition, overall health, and social integration. The project investigates the genetic basis of isolated CL/P through whole-genome sequencing (WGS) of patients and family trios treated at the Comprehensive Care Center for Cleft Lip and Palate (CAIF) in Paraná State. Urine-derived epithelial progenitor cells obtained from selected patients carrying target variants will be reprogrammed into induced pluripotent stem cells (iPSCs). These iPSCs will be differentiated into multiple human tissue models, including mesoderm, cartilage, bone, and neural crest-derived cells, to investigate the functional consequences of the identified variants.

Carolina Oliveira

The Laboratory of Inflammatory and Neoplastic Cells develops projects involving molecules and nanomaterials with potential applications in anticancer therapies. The successful applicant will develop an innovative project investigating nanomaterial-based approaches for the treatment of metastatic melanoma, exploring their effects on tumor microenvironment cells using both in vitro and in vivo models. The project offers



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an interdisciplinary and collaborative environment for students interested in basic research and scientific innovation.

Ciro A. Oliveira Ribeiro

Study of the role of environmental pollutants in cancer prognosis.

Glaucio Valdameri

Successful applicants may conduct research on mechanisms of drug resistance in cancer. The project aims to identify and characterize the molecular mechanisms of novel inhibitors targeting major ABC transporters. The study combines in vitro models (stably transfected cell lines), in silico analyses, and animal models for validation of the most promising inhibitors. Additional information about the laboratory is available on its website: <https://qqlcdr.ufpr.br/portal/>

José Eduardo Vargas

Investigation of the molecular mechanisms involved in cancer progression and their association with cellular senescence, aiming to identify biomarkers and potential therapeutic targets through experimental and bioinformatics approaches.

Lia Sumie Nakao

Our research group investigates redox and cellular mechanisms mediated by the enzyme QSOX1 and its role in regulating processes such as cell migration and proliferation, with emphasis on tissue repair, cellular adaptation, and tumor progression. Projects employ biochemical, molecular and cellular biology techniques, morphometric analyses, and experimental models to investigate QSOX1 under physiological and pathological conditions. Applicants with an interest in experimental research and redox biology are encouraged to apply.

Lucélia Donatti

The Laboratory of Adaptive Biology develops research within the Program's research lines Biology of Cellular Processes and Cellular and Environmental Toxicology. Research focuses on understanding metabolic plasticity and ecological and molecular mechanisms in tropical and Antarctic aquatic organisms (marine and freshwater), particularly fish and gastropods, exposed to environmental stressors. Experimental approaches include enzymatic, morphological, omics, and bioinformatics techniques. The laboratory is funded by CNPq, the Brazilian Navy, and PROANTAR (Brazilian Antarctic Program).



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Luiza Helena Gremski

Research focuses on understanding how recombinant phospholipases D modulate cellular processes in tumor cells and skin cells, particularly inflammatory pathways, intracellular signaling, and tissue remodeling. The group also investigates these mechanisms to support the development of novel therapeutic and diagnostic strategies for brown spider (*Loxosceles*) envenomation, while exploring the biomedical potential of these toxins.

Marcel Ivan Ramirez

The laboratory conducts research primarily in the fields of host–parasite interactions, immunology, cell and molecular biology, and extracellular vesicles.

Silvio Sanches Veiga

Research focuses on the mechanisms by which recombinant phospholipases D from *Loxosceles* spider venoms modulate cellular processes in tumor cells, particularly cell division, proliferation, migration, and microvesicle-mediated signaling pathways.

Silvio Marques Zanata

Research in Cellular and Molecular Neurobiology aimed at understanding the cellular and molecular mechanisms underlying neuronal differentiation, with emphasis on cell–extracellular matrix interactions and intracellular signaling mediated by Rho GTPases. The laboratory also develops monoclonal antibodies (biological therapeutics) and recombinant proteins, as well as studies protein–protein interactions using advanced molecular biology techniques.
