



CALL FOR APPLICATIONS No. 01/2027

SELECTION OF REGULAR STUDENTS FOR THE PROFESSIONAL MASTER'S AND DOCTORAL PROGRAMS IN BIOTECHNOLOGY *STRICTO SENSU* FOR ADMISSION IN THE FIRST AND SECOND SEMESTERS OF 2027

The Rector of the State University of Montes Claros (Unimontes), through the Office of the Dean of Graduate Studies and the Board of the Graduate Program in Biotechnology (PPGB), in the exercise of the powers conferred by the institutional regulations and current legislation, hereby announces to all interested parties, by means of this Call for Applications, the Selection Processes for admission to the Professional Master's and Professional Doctoral Programs in Biotechnology, *Stricto Sensu*, in accordance with the rules set out below.

NOTES:

Before submitting the application, candidates are advised to read the rules of Call for Applications **01/2027** and its respective Annexes.

After the application has been approved, candidates are advised to follow, whenever possible, the official website of Unimontes - www.unimontes.br or of the PPGB - <https://biotecnologia.unimontes.br>, paying attention to publications and any notices and corrections.

Table I – Schedule of Dates		
ITEM	EVENT	DATES (Admission in the first semester of 2027)
1	Publication of the Call for Applications	28/10/2026
2	Deadline for challenges to the Call for Applications	From 28/10/2026 to 5:00 p.m. on 01/11/2026
3	Publication of the results of the challenges to the Call for Applications	01/11/26 until 6:00 p.m.
4	Applications	From 8:00 a.m. on 01/11/2026 to 11:59 p.m. on 30/11/2026
5	Submission of Documents (<i>online</i> via Google Forms) – Master's and Doctorate, at the time of application.	Until 11:59 p.m. on 30/11/2026
6	Preliminary publication of approved applications	02/12/2026
7	Appeal period for rejected applications	03/12/2026 to 07/12/2026 at 12:00 p.m.
8	Results of appeals against rejected applications	07/12/2026
9	Selection Exam for Master's Candidates	08/12/2026
10	Presentations, with oral examination, of the preliminary research projects of doctoral candidates	08/12/2026, 09/12/2026 and 10/12/2026
11	Preliminary results of the master's exams and of the doctoral project presentations	11/12/2026
12	Deadline for appeals against the exams (master's) and the evaluation of preliminary projects (doctorate)	11/12/2026 to 15/12/2026 (12:00 p.m.)
13	Publication of the results of the appeals against the evaluation of exams and preliminary projects	15/12/2026 until 5:00 p.m.)
14	Interviews with master's candidates	16/12/2026 and 17/12/2026
15	Preliminary results – master's and doctorate	18/12/2026
16	Deadline for appeals against the preliminary results	19/12/2026 to 23/12/2026
17	Final Results – master's and doctorate	From 30/12/2026 onwards



1. Applications

1.1 Eligibility for the Selection Process

1.1.1 For candidates to the Professional Master's in Biotechnology:

a) Graduates or undergraduate students in their final year of full-length degree programs in Biological Sciences, Pharmaceutical Sciences, Health Sciences, Engineering or related fields (agronomists, veterinarians, biologists, pharmacists, biochemists, physicians, biomedical scientists, chemists, physicists, bioprocess engineers, biotechnologists and other fields of knowledge, subject to assessment by the selection committee).

1.1.2 For candidates to the Professional Doctorate in Biotechnology:

a) Holders of a master's degree or master's students in Biological Sciences, Health Sciences, Pharmaceutical Sciences, Engineering or related fields (biologists, biochemists, biomedical scientists, biotechnologists, pharmacists, chemists, bioprocess engineers, agronomists, physicians, veterinarians, physicists and other fields of knowledge, subject to assessment by the selection committee).

1.1.2.1 For master's students, completion of the program (thesis defense) must take place by 31/01/2027.

1.1.3 Places:

Places will be filled in order of ranking, using the established criteria, both for open competition and for those under the affirmative action policies and policies for the democratization of student access to the State University of Montes Claros (**in accordance with Resolution No. 024 CEPEX/2021**). Twenty percent (20%) of the total number of places will be reserved for Black candidates, and places will also be reserved for Indigenous candidates, persons with disabilities and Unimontes public servants. Affirmative action places that are not filled will be reallocated to open-competition candidates.

1.1.3.1 In total, up to 33 (thirty-three) places will be offered in the Selection Process, 11 (eleven) for the master's and 22 (twenty-two) for the doctorate, distributed among the three (3) research lines of the PPGB (**Tables I and II**). Twenty-one (21) places are for open competition, 06 (six) places for self-declared Black candidates [03 (three) for the doctorate, 03 (three) for the master's]; 01 (one) master's place for persons with disabilities, 01 (one) doctoral place for Indigenous candidates, 02 (two) supplementary places for Unimontes administrative staff, 01 (one) for the master's and 01 (one) for the doctorate, and 02 (two) supplementary internationalization places, 01 (one) for the master's and 01 (one) for the doctorate, reserved for foreign candidates not residing in Brazil (**Table II**). Regarding the requirement of a medical report for places reserved for persons with disabilities, the specific nature of **Autism Spectrum Disorder - ASD** will be taken into account, given that persons with this disorder are legally equated to persons with disabilities under Federal Law No. 12,764/2012; for the purpose of



proving this disability, presentation of the **Ciptea** (Identification Card for Persons with Autism Spectrum Disorder) shall be sufficient for candidates with ASD, under State Decree No. 48,321/2021 and State Law No. 24,532/2023. For this reason, the presentation of the **Ciptea** will be accepted in place of the medical report for the application of persons with autism spectrum disorder (ASD).

1.1.4 Supplementary internationalization places for foreign candidates not residing in Brazil

The supplementary internationalization places provided for in this Call are intended exclusively for foreign candidates not residing in Brazil, regardless of nationality, subject to the same academic requirements for admission to the Professional Master's or Professional Doctorate in Biotechnology. Selection will be carried out according to the specific criteria set out in this Call, ensuring its eliminatory and classificatory nature, impartiality, transparency and the assessment of academic and scientific merit. For the purposes of this Call, a foreign candidate not residing in Brazil is one who does not hold Brazilian nationality and has habitual residence outside the national territory on the date of application. For the purposes of this Call, foreign candidates may send their documents for the selection by e-mail to ppgb@unimontes.br.

1.2 Application process.

The application process consists of two steps:

a) Completion of the electronic application form (via **Google Forms** - <https://forms.gle/dxCNeSFAj9b8GAeb7>) available together with the Call on the PPGB website - <https://biotecnologia.unimontes.br> and on the Unimontes website - www.unimontes.br.

Table I. Number of open-competition places for 2027

Candidate	Places 1 st semester 2027
Master's candidates	05
Doctoral candidates	16

Table II. Number of places and supporting documents related to affirmative action and internationalization for the first semester of 2027.

Candidate	Places	Supporting document
Black candidates	03 master's and 03 doctoral.	(i) Self-declaration (Annex IV of subitem 2.1.1), stating that the candidate is a Black person, signed by the candidate; (ii) School transcript proving that the candidate completed all of secondary education in a public school.
Candidates with disabilities (as defined under Minas Gerais State Law No. 13,465 of 12/01/2000).	01 master's.	Medical report describing the specific features of the disability.
Indigenous candidates	01 doctoral.	Self-declaration (Annex IV of subitem 2.1.1) signed by the candidate.
Supplementary place for technical-administrative staff of the State University of Montes Claros - Unimontes	01 master's 01 doctoral	Proof of employment by means of a statement issued by the Human Resources Department of the State University of Montes Claros
Supplementary internationalization places – foreign candidates not residing	01 master's and 01 doctoral	Copy of a valid passport and a document or statement proving habitual residence outside Brazil on the date of



in Brazil		application.
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b) Submission of the Lattes Curriculum and the scanned supporting documents of the updated Lattes Curriculum in a single PDF file (**via Google Forms – see item 1.4 of this Call**) over the internet.

c) Unimontes is not responsible for any problem with online applications caused by communication failures, power outages, congestion of communication lines, or other technical factors that prevent the connection or data transfer within the application period.

1.3 Application period

The application periods are shown in **Table I – Schedule of Dates (page 1)**. Applications must be submitted exclusively over the internet through the electronic form (see item 1.2). For the purposes of this Call, foreign candidates may send their documents for the selection by e-mail to ppgb@unimontes.br.

1.3.1 Validity

This Call will be valid from the date of publication until the publication of the final results, as set out in the Schedule of Dates.

1.4 Application procedures

a) Completion of the Application Form (Google Forms).

b) **IMPORTANT: All scanned supporting documents must be saved as PDF, merged into a single file, and the file then uploaded to the Google Forms form.**

c) **By applying to the selection process, the candidate authorizes Unimontes to use his/her personal data for this specific purpose, in accordance with Federal Law No. 13,709/2018 (General Personal Data Protection Law - LGPD) and its amendments.**

1.5 Application documents

1.5.1 Candidates to the Professional Master's in Biotechnology

a) Application Form (**ANNEX I**) completed digitally, dated and signed, indicating the prospective advisor (**Table III of this Call**). The advisor chosen by the candidate will determine the topics covered in the written exam (**Table III – page 8**) and the references (**Annex IX – page 17**) the candidate should study for the exam. When choosing a prospective advisor, the candidate should consider the research and innovation topics developed by the advisors.

b) Official photo identification document or passport (for foreign candidates).

c) Copy of the Undergraduate Diploma (or Certificate) or a Statement from the Registrar's Office of the Higher Education Institution.

d) Copy of the undergraduate academic transcript.

e) Letter of commitment (**ANNEX II**).

g) Curriculum Evaluation Criteria (**ANNEX IV**) **COMPLETED digitally by the candidate**. Failure to



complete it will result in the non-approval of the candidate's application.

h) Updated *Lattes/CNPq Curriculum* www.lattes.cnpq.br, or *Curriculum vitae* [for foreign candidates only] **duly supported by scanned copies of all items included** to be considered for scoring as listed in **ANNEX IV**.

i) For applications to affirmative action places, the supporting document must also be submitted (**See Table II**)

1.5.2. Candidates to the Professional Doctorate in Biotechnology

a) Application Form (**ANNEX I**) completed digitally, dated and signed, indicating the prospective advisor (**Table III** of this Call). The advisor chosen by the candidate will determine the topics with which the preliminary projects to be presented must be associated. When choosing an advisor, the candidate should consider the research and innovation topics developed by the advisors.

b) Official identification document or passport (for foreign candidates).

c) Preliminary research project (up to 12 pages, **ANNEX III template** – via Google Forms - <https://forms.gle/dxCNeSFAj9b8GAEb7>), developed in accordance with the topics of the chosen advisors (Table III). The project must involve technological innovation activities (**development of products and processes, partnerships with companies, cooperatives and associations in product development activities, creation of technology-based companies, among others**).

d) Copy of the Master's Diploma (or Certificate) or a Statement from the Registrar's Office of the Higher Education Institution.

e) Copy of the master's academic transcript.

f) Letter of commitment (**ANNEX V**).

g) Curriculum Evaluation Criteria. The candidate must **complete ANNEX VI digitally**. Failure to complete it will result in the non-approval of the candidate's application.

h) Updated *Lattes/CNPq Curriculum* www.lattes.cnpq.br, or *Curriculum vitae* [for foreign candidates only] **duly supported by scanned copies of all items included** to be considered for scoring as listed in **ANNEX VI**.

i) For the application to be approved, doctoral candidates must have in their curriculum, with the corresponding proof, at least one of the following items:

- Article published or accepted for publication (with proof). The article must have an impact factor ≥ 0.6 . The Qualis can be consulted in the 'notices' section of the website <https://biotecnologia.unimontes.br>.
- Book, book chapter or Manual published by a national or international publisher with ISBN.
- Patent application published in the Industrial Property Electronic Journal (RPI) of the National Institute of Industrial Property (INPI);



- Product developed and registered with the competent authority;
- Software registered with INPI.
- Technical report on the validation of industrial methods and/or processes (registered or published, with proof).

j) For applications to affirmative action places, the supporting document must also be submitted (according to Table II).

1.5.3 Supporting documents for the curriculum, scanned and saved as PDF in the same order as the items listed in the curriculum evaluation criteria - ANNEX IV [master's candidates] or ANNEX VI [doctoral candidates]. The document must include the date and place.

1.5.4 Documents will not be checked upon electronic receipt.

1.6 Conditional and in-person applications will not be accepted.

1.7 Once the application has been submitted, no changes to the submitted documents will be allowed.

1.8 Applying implies the candidate's full acceptance of the rules established in this Call and in the legislation in force.

1.9 Applications will be approved by the selection committee. The list of candidates whose applications have been approved will be published on the Program's website <https://biotecnologia.unimontes.br> and on the Unimontes website www.unimontes.br in accordance with the Schedule of Dates of the selection process for regular master's and doctoral students.

1.10 Grounds for rejection of applications:

- a) Absence of any document listed in subitem 1.5.
- b) Application in which the candidate has not indicated suggested advisors in ANNEX I.
- c) Failure to complete the curriculum evaluation criteria [annexes IV (master's) and VI (doctorate)].

2. Selection Process

2.1 Affirmative action places (in accordance with Resolution No. 024 CEPEX/2021)

2.1.1 - The ranking list will consist of the candidates approved in the selection process, taking into account the number of places and the type of competition chosen by the candidate: affirmative action or open competition.

2.1.1.1 Candidates applying for the supplementary internationalization places will compete exclusively among themselves, separately for the Master's and the Doctorate, subject to the criteria and minimum scores established in this Call. Unfilled places of this kind will not be automatically converted into open-competition places, unless otherwise decided by the PPGB Board in accordance with the applicable institutional rules.

2.1.2 – Self-declared Black candidates who are approved beyond the number of places of their 1st-choice advisor may preferably be reallocated to remaining open-competition places of the advisors



indicated as 2nd choice.

2.1.3 – The Examining Boards reaffirm their commitment to complying with the legislation applicable to the selection, and will base all decisions in this Selection Process on the resolutions governing the matters concerned, so as to act in accordance with Resolution No. 024 CEPEX/2021.

2.2 Selection committee

The selection process will be eliminatory and classificatory, will be carried out in accordance with this Call, and will be the responsibility of the Selection Committee, composed of three PPGB professors (**Table III**). If a committee member is unable to participate, he/she may be replaced by any other professor listed in Table III.

2.3 Stages of the selection process.

2.3.1 For candidates to the Professional Master's in Biotechnology, the selection process will consist of 3 stages:

- a) Closed-book written exam with open-ended questions, of an eliminatory nature. The bibliographic references related to the main professor suggested as advisor and the professor's topics (**Table III**) are found in Annex IX, on page 17 of this Call.
- b) Curriculum Evaluation (according to Annex IV), of a classificatory nature.
- c) Interview, of a classificatory nature.

The list of approved applications will be published on the website of the PPGB <https://biotecnologia.unimontes.br> and of Unimontes www.unimontes.br in accordance with the schedule of dates of this Call. Following this information is the sole responsibility of the candidate.

2.3.1.1 Assessment by examination for the master's:

- a) The written exams for the master's will be eliminatory and classificatory. Candidates must obtain a minimum score of 60% (sixty percent) of the total; the exams will be graded by an evaluation committee composed of 3 (three) professors (**Table III, pages 08 and 09**) and will be worth 100 points. Candidates should check the topics to which the advisor is linked (**Table III**) to identify which references (**Annex IX – page 17**) should be used to prepare for the written exam or, for foreign candidates, for the scientific oral examination.

2.3.1.1.1 Specific conditions for foreign candidates not residing in Brazil – Master's

For foreign candidates not residing in Brazil applying for the supplementary internationalization place of the Professional Master's, the written exam will be replaced by a scientific oral examination, of an eliminatory and classificatory nature, held by videoconference before an evaluation committee composed of 3 (three) PPGB professors.

The scientific oral examination will be worth 100 (one hundred) points and will assess knowledge



related to the research and innovation topics of the prospective advisor indicated as first choice, based on the topics and bibliographic references set out in Table III and Annex IX. Candidates must obtain a minimum score of 60% (sixty percent) to pass this stage.

The oral examination may be conducted in Portuguese or English, at the candidate's choice at the time of application. The date and time will be announced through the same official channels used for the other stages of the selection process.

TABLE III – Group of advisors* and evaluation committees according to the research and innovation topics developed by the professors.

Places Semester I	Evaluation Committee/ Advisor/Available places*	Research and innovation topics
3 Master's 3 Doctorate	Afrânio Farias de Melo Júnior - Leader* (1 master's and 1 doctorate) Murilo Malveira Brandão*(1 master's and 1 doctorate) Elytania Veiga Menezes* (1 master's and 1 doctorate) Dorothea Schmith França – Alternate	TOPIC A Bioprospecting, characterization and conservation of genetic resources Characterization of residues and technological development
2 Master's 1 Doctorate	Vanessa de Andrade Royo – Leader*(1 master's and 1 doctorate) Dorothea Schmith França*(1 master's) Verônica de Melo Sacramento Fernando Cassiano Ribeiro - Alternate	TOPIC B Pharmacology Pharmacognosy Development of Products Using Biodiversity Raw Materials
1 Master's 2 Doctorate	Alysson Steve M. Lacerda – Leader*(1 doctorate) Ramon Alves de Oliveira*(1 master's and 1 doctorate) Fernando Cassiano Ribeiro Elytania Veiga Menezes - Alternate	TOPIC C Optimization and artificial intelligence Management of Cooperatives and Small Businesses Strategic Management and Innovation Tools Intellectual Property and Commercialization Strategies for Products and Services Technical-Economic Feasibility and Innovation Management Model for Biofactories and Bioinputs.
1 Master's 1 Doctorate	Dario Alves de Oliveira – Leader*(1 master's) Geusa Simone de Freitas* (1 doctorate) Ricardo Rodrigues Bacchi Murilo Malveira Brandão - Alternate	TOPIC D Development of Products Using Biodiversity Raw Materials. Biodiversity and Intellectual Property Protection Morphofunctional study of tissues subjected to physical and chemical stimuli, focusing on the evaluation of bioproducts through experimental tests in animal models and validated alternative methods
2 Master's 5 Doctorate	Leonardo Monteiro Ribeiro – Leader*(2 doctorate) Yule Roberta Ferreira Nunes*(1 master's and 2 doctorate) Henrique Maia Valério*(1 master's and 1 doctorate) Guilherme Pereira Dias - Alternate	TOPIC E Ecology of Plant Populations and Communities. Plant Reproduction, Development and Cultivation. Environmental Microbiology and Use of Natural Resources in Bioprocesses.
1 Master's 6 Doctorate	William James Nogueira – Leader*(2 doctorate) Ígor Viana Brandi*(1 master's and 2 doctorate) Junio Cota Silva*(2 doctorate) Ana Paula Venuto Moura - Alternate	TOPIC F Prospecting of Metabolites and Development of Microbial Processes. Characterization, Control and Diagnosis of Human and Animal Diseases. Prospecting of New Nutritional Sources and Supplements.



		Separation Processes in the Food Industry Microbial Cultures for the Production of Bioactive Compounds and Recombinant Proteins.
2 Master's 3 Doctorate	Ana Paula Venuto Moura – Leader*(1 doctorate) Mauro Aparecido de S. Xavier*(1 doctorate) Janete Maria da S. Alves*(2 master's and 1 doctorate) Dario Alves de Oliveira - Alternate	TOPIC G Infectious and Parasitic Diseases: control, diagnosis and treatment. Identification of microorganisms by genomics and proteomics, prospecting of metabolites and development of microbial processes. Recombinant DNA technology, development of processes and products of commercial interest.

NOTE: Master's and doctoral candidates should consult the topics of interest in Table III above to choose the two names of prospective advisors to be entered in Annex I. The first choice will determine the references to be used by candidates in their preparation. Professors marked with (*) have places as advisors in the respective topics.

2.3.1.2 Curriculum Evaluation

The curriculum evaluation is classificatory and will be carried out according to the Curriculum Evaluation Criteria (**ANNEX IV**), by scoring the activities carried out, which must be detailed in the Lattes Curriculum or *Curriculum Vitae* [for foreign candidates] and proven by the scanned documents attached at the time of application.

2.3.1.3 Interview

The interview will be conducted by three PPGB professors (Table III). Interviews will be held in accordance with the schedule of dates of the selection process for regular master's and doctoral students, at a location to be announced on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br. It is the candidate's responsibility to check the results in the list of candidates approved for the interview. In the interview, each of the criteria listed below will be assessed with equal weight, for a possible final score of up to 30 points:

- a) Academic profile (10 points)
- b) Professional profile (10 points).
- c) Availability to meet the program requirements (10 points).

2.3.1.3.1. For foreign candidates, the interview will be conducted together with the scientific oral examination.

2.3.1.4 Results

a) The final score for master's candidates will be calculated as the sum of the scores of the written exam, the curriculum analysis and the interview (100 + 100 + 30), **only for candidates who have obtained a score equal to or higher than 60% in the written exam or, for foreign candidates, in the scientific oral examination.**

b) Candidates will be ranked in descending order of score, by research line, and those within the



number of places (open competition) will be considered approved.

c) Candidates may not obtain a score below 60% in the written exam; otherwise they will be disqualified.

d) It is not mandatory to fill the total number of places in the Selection Process.

e) Only candidates ranked within the number of places may be called to enroll in the PPGB.

2.3.1.4.1 In the event of a tie between candidates, the following criteria will be applied:

a) Highest score in the written exam;

b) Highest score in the Curriculum (**see annex IV**);

c) Older age.

2.3.1.4.2 The results will be published by the Selection Committee after the selection process is completed. The Final Results, after the appeal period, will be published in accordance with the Schedule of Dates of the selection process for regular master's and doctoral students on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br.

2.4 Calling of ranked candidates

2.4.1 Available affirmative action places will be filled respecting the candidate's choice of main advisor. Open-competition places will then be filled according to the ranking obtained and the places available.

2.4.2 After publication of the Final Results, places that become vacant due to the withdrawal of approved candidates may be filled by candidates ranked in the immediately following positions, within the number of places available in any of the research lines. This process must be validated by the Selection Committee, which will have full powers to decide on this matter, observing the rules of this Call and Resolution No. 024 CEPEX/2021 and other relevant resolutions.

2.5 Candidates must indicate two names of prospective advisors according to the topics of interest and advisors available in Table III, to be entered in Annex I. For candidates to the Professional Doctorate in Biotechnology, the selection process will consist of two stages:

a) Analysis and presentation of the preliminary research project;

b) Curriculum Evaluation (Annex VI).

The list of approved applications will be published according to the schedule of dates (Table I) on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br. Following this information is the responsibility of the candidate.

2.5.1 Selection and analysis of research projects

a) The analysis and presentation of research projects is eliminatory and classificatory. Candidates must obtain a minimum score of 60% (sixty percent) of the total.

b) The final results will be published according to the schedule of dates (Table I) on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br.



c) Projects will be evaluated and selected by an evaluation committee (**Table III**) composed of three professors according to the topic, and will be worth 100 points.

2.5.1.1 Criteria for the evaluation of doctoral projects:

- a) Alignment of the Research Project with the research line and relevance of the project to the proposed topic (20 points);
- b) Coherence of the various elements that make up a research project and of the topic presented (30 points);
- c) Ability to write clearly and consistently (15 points);
- d) Capacity for autonomous and critical thinking (15 points);
- e) Relevance of the references used in preparing the Project (10 points);
- f) Use of ABNT (Brazilian Association of Technical Standards) guidelines (10 points).

2.5.1.1.1 The final score of the Project will be the total of the points awarded by the members of the selection board, and those who obtain a score equal to or higher than 60% (sixty percent) of the points will be considered approved at this stage.

2.5.1.1.2 Only candidates whose preliminary projects are approved will proceed to the curriculum evaluation. The order, venues and times of the oral examinations, to be held in person, will be published on the websites <https://biotecnologia.unimontes.br> and www.unimontes.br.

2.5.1.1.3 Specific conditions for foreign candidates not residing in Brazil – Doctorate

For foreign candidates not residing in Brazil applying for the supplementary internationalization place of the Professional Doctorate, the presentation and oral examination of the preliminary project will be held by videoconference, with the criteria, scoring and minimum score of 60% (sixty percent) established for the other candidates fully maintained.

The presentation and oral examination may be conducted in Portuguese or English, at the candidate's choice at the time of application. The examining board will assess the scientific merit, methodological coherence and feasibility of the proposal, its adherence to the PPGB research and innovation lines, and the candidate's ability to discuss the preliminary project scientifically.

2.5.1.2 Curriculum Evaluation

The curriculum evaluation will be classificatory and will be based on the Curriculum Evaluation Criteria (ANNEX VI, completed digitally by the candidate), by scoring the activities carried out, which must be detailed in the Lattes Curriculum or *Curriculum Vitae* (for foreign candidates) and proven by scanned documents attached by each candidate at the time of application, through the electronic form.

2.5.1.3 Presentation of the preliminary project followed by oral examination

The evaluation of the preliminary project will be eliminatory and classificatory. The evaluation of the 15 (fifteen) minute presentation followed by oral examination will be carried out by an evaluation



committee composed of three PPGB professors (Table III). Presentations and oral examinations will take place according to the schedule of dates of this Call, on dates to be announced on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br. It is the candidate's responsibility to check the results in the list of candidates approved for the presentation followed by oral examination. The presentation followed by oral examination will be worth up to 100 points.

2.5.2 Results

a) The final score will be calculated as the sum of the scores of the evaluation of the written preliminary projects + presentation/oral examination and curriculum analysis (100 + 100), only for candidates who have obtained a score equal to or higher than 60% (sixty percent) in the evaluation of the preliminary projects (**Item 2.5.1**).

b) Candidates will be ranked in descending order of score, by research line, and those within the number of places for open competition and affirmative action will be considered approved.

c) Candidates may not obtain a score below 60% in the project evaluation in the 1st stage; otherwise they will be disqualified.

d) It is not mandatory to fill the total number of places in the Selection Process.

e) Only candidates ranked after publication of the final results may be called to enroll in the PPGB.

2.5.2.1 Open-competition places will be filled according to the ranking obtained and the places available. Available affirmative action places will then be filled, respecting the ranking obtained and the places available.

2.5.2.2 In the event of a tie between candidates, the following criteria will be applied:

a) Highest score in the evaluation and presentation of the preliminary project (1st stage).

b) Highest score in the Curriculum.

c) Older age

2.5.2.3 The results will be published by the Selection Committee after the selection process is completed. The Final Results, after the appeal period, will be published according to the schedule of dates of this Call on the PPGB website <https://biotecnologia.unimontes.br> and the Unimontes website, www.unimontes.br.

2.5.3 Calling of ranked master's and doctoral candidates

After publication of the Final Results, places that become vacant due to the withdrawal of approved candidates may be filled by candidates ranked in the immediately following positions, within the number of places.

3. Scholarships

3.1 Approval of a candidate does not imply any commitment by the PPGB or Unimontes to grant a scholarship.



4. Appeals

4.1 Duly substantiated appeals must be filed only by the candidates or by a legal representative, stating the identity of the appellant together with the application number, in accordance with the Schedule of Dates of this Call (**Table I**).

4.2 The PPGB will publish the results of the appeals on the website <https://biotecnologia.unimontes.br> and the Unimontes website www.unimontes.br. It is the responsibility of the candidate, or of his/her appointed attorney, to access the information within the deadlines established in this Call in order to receive the digital reply to the appeal, which will remain available for a maximum period of fifteen days from publication, after which the document can no longer be accessed.

4.3 Appeals sent to the PPGB Selection Committee by ordinary mail or by any other means not listed herein will be rejected.

4.4 Appeals will be judged by a PPGB appeals committee specially established for this purpose.

4.5 Candidates may file challenges to this Call within 5 (five) working days, to be sent electronically to the e-mail address ppgb@unimontes.br

5. Enrollment

5.1 Enrollment of candidates ranked within the number of places of this Call will take place on a date and through an electronic form to be announced together with the final results of the master's and doctoral selection. Approved candidates must upload the documents to the electronic form and also send them to the e-mail address ppgb@unimontes.br.

5.2 Candidates who do not enroll within the specified deadlines or fail to submit the required documents will be considered to have withdrawn. At the discretion of the PPGB Board, ranked candidates may be called in a number equal to that of the candidates who withdrew.

5.3 At the time of enrollment, candidates must submit the following documents:

- a) Request on the appropriate form, duly completed digitally (initial enrollment request - <https://prematricula.pos.unimontes.br/login>). The following documents must also be sent in .pdf format to the PPGB e-mail address ppgb@unimontes.br.
- b) Copy of the Undergraduate Diploma (master's candidates) or Master's Diploma or Certificate of completion of the program (doctoral candidates);
- c) Copy of the Academic Transcript of the Undergraduate Program (master's candidates) or of the Master's Program (doctoral candidates);
- d) Simple copy of proof of compliance with Military Service obligations, for male candidates.
- e) Simple copy of proof of compliance with electoral obligations.
- f) Simple copy of Identity Card or passport.



- g) Simple copy of the Individual Taxpayer Registry (CPF).
- h) Simple copy of Birth or Marriage Certificate.
- i) Two recent 3 x 4 cm photos.
- J) Plan of the courses to be taken in the program, on the form available at https://biotecnologia.unimontes.br/wp-content/uploads/2025/05/Planejamento_Disciplinas_Ms_Ds.docx, signed by the advisor; complete it and send it to the e-mail address ppgb@unimontes.br.

5.4 The documents referred to in subitem 5.3 must be legible and free of erasures.

5.5 By enrolling, candidates agree to comply with the regulations and statutes of Unimontes.

6. Disciplinary Rules

6.1 The PPGB Selection Committee will have broad powers to guide, conduct and supervise the work of the Selection Process.

6.2 Candidates who are proven to have committed or contributed to fraud, breached discipline, or disrespected anyone vested with authority to supervise, coordinate, oversee or guide the execution of any of the stages will be excluded from the Selection Process.

6.3 In addition to exclusion from the Selection Process, candidates dealt with under the previous subitem will be subject to other penalties, taking into account the seriousness of the occurrence and the material, moral and/or personal damage they may have caused.

6.4 Candidates who have taken part in the Selection Process by providing false documents or information or by using other unlawful means, duly proven, will be eliminated at any time (even after enrollment). Candidates who fail to attend any of the stages of the selection for the master's and doctoral programs will also be eliminated.

7. General provisions

7.1 The documents mentioned in subitem 1.5 that are not collected by eliminated candidates after the end of the Selection Process will become the property of the PPGB, which will dispose of them appropriately 60 (sixty) days after publication of the final results.

7.2 In the event of a fortuitous event, force majeure or just cause preventing the Selection Process from taking place, and strictly in that sense, any act of cancellation/annulment/revocation of the selection process will be duly justified by the Administration of Unimontes, together with the PPGB Coordination and the Selection Committee, in compliance with the law in force, so as to minimize any losses to candidates.

7.3 Unimontes, together with the PPGB Board, in the exercise of its didactic-pedagogical and administrative autonomy, will admit the candidates ranked in the Selection Process who are duly enrolled, and may, during the period of completion of the Program, modify curricula and extend or



restrict its duration.

7.4 Unimontes, together with the PPGB Board, reserves the right to change the shift and/or start time of the stages, as well as their dates, provided this is widely publicized through the available means and channels of communication.

7.5 Supplementary Calls, Corrections to the Call or Resolutions may be published by the Selection Committee on the PPGB website (<https://biotecnologia.unimontes.br>) and the Unimontes website (www.unimontes.br) , provided this is widely publicized through the available means and channels of communication.

7.6 In compliance with the State Administrative Procedure Law - State Law No. 14,184 of January 31, 2002 - and to prevent members of the board from being in the situation indicated - suspicion: Art. 63 – The suspicion of an authority or public servant may be raised if he/she **a)** has a close friendship or notorious enmity with the interested party or with his/her spouse, partner, relative or relative by affinity up to the third degree. **b)** has published intellectual output with members of the examining board; **c)** is related to candidates up to the third degree; in accordance with Resolution No. 024 CEPEX/2021.

7.7 Cases not covered by this Call will be decided by the PPGB Board.

Professor Henrique Maia Valério
Chair of the PPGB Selection Committee

Professor Murilo Malveira Brandão
PPGB Coordinator

Professor Marlon Cristian Toledo Pereira
Dean of Graduate Studies of Unimontes

Professor Wagner de Paulo Santiago
Rector of Unimontes

Annex IX

Bibliographic references to be used for the written exam and the scientific oral examination, and choice of two names of prospective advisors. The choice must be made according to the table of main advisors and their respective research and innovation topics (Table III)

A - Topics:

- Bioprospecting, characterization and conservation of genetic resources.
- Characterization of residues and technological development.

1. FERREIRA, M. E.; GRATTAPAGLIA, D. **Introdução ao uso de marcadores moleculares em análise genética**. 3. ed. Brasília: EMBRAPA-CENARGEN, 220p. 1998.
2. SIMÕES, C. M. O.et al. **Farmacognosia: da planta ao medicamento**. Editora da UFRGS/ Editora UFSC, 2004, 5 ed.
3. MATIAS, F. **Práticas e Protocolos Básicos de Biologia Molecular**. 1ª ed. Editora Edgard Blücher. São Paulo, 2017.
4. Faleiro, Fábio Gelape. **Marcadores genético-moleculares aplicados a programas de conservação e uso de recursos genéticos**. Planaltina, DF : Embrapa Cerrados, 2007. 102 p. : il. ISBN 978-85-7075-035-8. Available at: <https://www.embrapa.br/busca-de-publicacoes/-/publicacao/570287/marcadores-genetico-moleculares-aplicados-a-programas-de-conservacao-e-uso-de-recursos-geneticos>.

B - Topics:

- Pharmacology
- Pharmacognosy
- Development of products using biodiversity raw materials

1. **INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL (INPI)**. Home page. INPI, [n.d.]. Available at: <https://www.inpi.gov.br>. Accessed on: 23 Sep. 2025.
2. SIMÕES, C. M. O.et al. **Farmacognosia: da planta ao medicamento**. Editora da UFRGS/ Editora UFSC, 2004, 5 ed.
3. ANSEL, H, C., POPOVICH, N. G., Jr. ALLEN, L. V. **Formas Farmacêuticas e Sistemas de Liberação de Fármacos**. 9a edição, Artmed, 719p, 2013.
4. BRUNTON, Laurence L. (Org.). **As Bases farmacológicas da terapêutica de Goodman & Gilman**. 13. ed. Porto Alegre: Artmed, 2019.
5. GUIDO, R.V.C.; ANDRICOPULO, A.D.; OLIVA, G. **Planejamento de fármacos, biotecnologia e química medicinal: aplicações em doenças infecciosas**. Revista Estudos Avançados, v. 24, n. 70, p. 81-98, 2010.
6. BARREIRO, E.J.; FRAGA, C.A.M. **Química medicinal: as bases moleculares da ação dos fármacos**, 3. ed. Porto Alegre: Artmed, 2015.

C - Topics:

- Optimization and Artificial Intelligence
- Management of Cooperatives and Small Businesses
- Strategic Management Tools, Innovation
- Intellectual Property and Commercialization Strategies for Products and Services
- Technical-Economic Feasibility and Innovation Management Model for Biofactories and Bioinputs

1. SULEYMAN, M; BHASKAR, M. A próxima onda: Inteligência artificial, poder e o maior dilema do século XXI. 2023.
2. RUSSELL, SJ; Norvig, P. **Inteligência Artificial - Uma Abordagem Moderna**. 2022.
3. Talbi, EG. **Metaheuristics: From Design to Implementation**. 2009.
4. TIDD, Joe; BESSANT, John. **Gestão da inovação**. 5. ed. Porto Alegre: Bookman, 2015.
5. OSTERWALDER, Alexander; PIGNEUR, Yves. **Business Model Generation: inovação em modelos de negócios**. Rio de Janeiro: Alta Books, 2011.
6. INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL (Brasil). **A caminho da inovação: proteção e negócios com bens de propriedade intelectual: guia para o empresário**. 3. ed. rev. atual. Brasília, DF: INPI, 2023.



D - Topics:

- Development of products using biodiversity raw materials
- Biodiversity and intellectual property protection.
- Morphofunctional study of tissues subjected to physical and chemical stimuli, focusing on the evaluation of bioproducts through experimental tests in animal models and validated alternative methods

1. SIMÕES, C. M. O, et al. **Farmacognosia: da planta ao medicamento**. Editora da UFRGS/ Editora UFSC, 2004, 5 ed.
2. **INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL (INPI)**. Home page. INPI, [n.d.]. Available at: <https://www.inpi.gov.br>. Accessed on: 23 Sep. 2025.
3. **ESPACENET**. Home page. Espacenet, [n.d.]. Available at: <<https://worldwide.espacenet.com/>>. Accessed on: 23 Sep. 2025.
4. **ALVES DE OLIVEIRA, Dario; DE ABREU MOREIRA, Patrícia; FARIAS DE MELO JÚNIOR, Afrânio; SILVA PIMENTA, Marcio Antonio**. Potencial da biodiversidade vegetal da Região Norte do Estado de Minas Gerais. *Revista Unimontes Científica*, [s. l.], v. 8, n. 1, p. 23–34, 2020. Available at: <<https://www.periodicos.unimontes.br/index.php/unicientifica/article/view/2331>>. Accessed on: 23 Sep. 2025.
5. **MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO (MCTI)**. PEIXOTO, A. L; LUZ, J. R. P; BRITO, M. A (Org). **Conhecendo a biodiversidade**. 2016. Available at: <https://repositorio.mcti.gov.br/handle/mctic/4760>. 196 p. Accessed on: 25 Sep. 2025. Pp 68-84.
6. ROUBIK, D. W. Stingless bee (Apidae: Apinae: Meliponini) Ecology. *Annu. Ver. Entomol.* 68: 231-256. 2023.
6. SOARES, Diamani Gomes; FELISBINO, Maria Beatriz. **Testes toxicológicos para avaliação de irritação e corrosão cutânea: métodos alternativos ao uso de animais**. **Conselho Regional de Biomedicina – 1ª Região**, 2017. Available at: https://crbm1.gov.br/site2019/wp-content/uploads/2023/07/DIAMANI_GOMES_SOARES_FELISBINO_FINAL.pdf. Accessed on: 20 May 2025.
7. **PROFISSÃO BIOTEC. Métodos alternativos ao uso de animais de experimentação**. Available at: <https://profissaobiotec.com.br/metodos-alternativos-animais-experimentacao/>. Accessed on: 20 May 2025.
8. **CONSELHO NACIONAL DE CONTROLE DE EXPERIMENTAÇÃO ANIMAL (CONCEA)**. Resolução Normativa nº 56, de 5 de outubro de 2022. **Reconhece métodos alternativos ao uso de animais em atividades de pesquisa no Brasil**. Available at: https://antigo.mctic.gov.br/mctic/opencms/legislacao/outros_atos/resolucoes/Resolucao_normativa_Concea_56_de_05102022.html. Accessed on: 20 May 2025.
9. **BRASIL. Lei nº 11.794, de 8 de outubro de 2008**. Regula os procedimentos para o uso científico de animais; revoga a Lei nº 6.638, de 8 de maio de 1979; e dá outras providências. *Diário Oficial da União: seção 1*, Brasília, DF, ano 145, n. 196, p. 1, 9 Oct. 2008. Available at: https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/lei/l11794.htm. Accessed on: 20 May 2025.

E - Topics

- Ecology of plant populations and communities.
- Plant reproduction, development and *in vitro* cultivation
- Environmental microbiology

1. RAY F. EVERT e SUSAN E. EICHHORN. RAVEN, **Biologia Vegetal**. 8ª ed. Guanabara Koogan, 2014.
2. (available at the Unimontes Central Library)
3. Chapter 21 (Plants and People) –
4. Chapter 22 (Early Development of the Plant Body)
5. Chapter 23 (Cells and Tissues of the Plant Body) –
6. Chapter 24 (The Root | Structure and Development)
7. Chapter 25 (The Shoot System | Primary Structure and Development)
8. Chapter 26 (Secondary Growth in Stems)
9. Chapter 27 (Regulation of Growth and Development | Plant Hormones)
10. Chapter 28 (External Factors and Plant Growth) –
11. Chapter 29 (Plant Nutrition and Soils) –
12. Chapter 31 (Dynamics of Communities and Ecosystems)
13. Chapter 32 (Global Ecology)
14. Melo, Itamar Soares de. **Microbiologia ambiental** / edited by Itamar Soares de Melo and João Lúcio de Azevedo. — 2nd ed. rev. enl. - Jaguariúna: Embrapa Meio Ambiente, 2008. 647p. ISBN 978-85-85771-44-7.



programas de conservação e uso de recursos genéticos. Planaltina, DF : Embrapa

F - Topics:

- Prospecting of metabolites and development of microbial processes
- Prospecting of new nutritional sources and supplements
- Separation processes in the food industry
- Microbial cultures for the production of bioactive compounds and recombinant proteins

1. Rosano, G. L. and Ceccarelli, E. A. (2014) 'Recombinant protein expression in *Escherichia coli*: Advances and challenges'. **Frontiers in Microbiology**, 5(APR), pp. 1–17. doi: 10.3389/fmicb.2014.00172.
2. ZAHA, A. **Biologia Molecular Básica**. 5ª ed. Mercado Aberto. Porto Alegre, 2014.
3. NELSON, D. L.; COX, M. M. **Princípios de Bioquímica de Lehninger**. 5ª Ed., Artmed, Porto Alegre, 1274p. 2011. Caps. 2, 3, 4, 5, 6, 7, 8, 10, 11 e 13.
4. SCHMIDELL, W. e colaboradores. **Biotecnologia Industrial**. v. 2 Editora Edgard Blucher Ltd, 2021.
5. **Effect of pre-treatment and drying method on physico-chemical properties and dry fractionation behaviour of mealworm larvae. (*Tenebrio molitor* L.)**; Purschke, B., Brüggem, H., Scheibelberger, R., Jäger, H.; *Eur Food Res Technol* (2018) 244:269–280; <https://doi.org/10.1007/s00217-017-2953-8>.
6. Silva, A.G.T. **Imunologia aplicada: fundamentos, técnicas laboratoriais e diagnósticos**. 1. ed.- São Paulo: Saraiva: Érica, 2014.
7. de Neves, David Pereira. **Parasitologia Humana** - 14ª Edição. Editorial Editora Atheneu Ltda, 2022.
1. BORZANI, W.; AQUARONE, E.; SCHMIDELL, W.; LIMA, U. A. **Biotecnologia Industrial**. v. 1,2,3 e 4. São Paulo: Blucher, 2001.
2. FELLOWS, P. J. **Tecnologia do processamento de alimentos: Princípios e prática**. Editora Artmed. 2ª EDIÇÃO, 2006.
3. PESSOA JR., A.; KILIKIAN, B. V.; **Purificação de Produtos Biotecnológicos**. Ed. Manole. 2005.
4. DORAN, P. M.; **Bioprocess Engineering Principles**, Ed. Academic Press, 1995.

G - Topics:

- Identification of microorganisms by genomics and proteomics, prospecting of metabolites and development of microbial processes
- Characterization, control and diagnosis of human and animal diseases.
- Recombinant DNA technology, development of processes and products of commercial interest.

1. **Electrochemical paper-based antigen sensing platform using plant-derived monoclonal antibody for detecting SARS-CoV-2**. Jutamas Jaewjaroenwattana, Waranyoo Phoolcharoen, Ekawat Pasomsub, Prinjaporn Teengam, Orawon Chailapakul. *Talanta*-August ,2022. <https://doi.org/10.1016/j.talanta.2022.123783>
2. Rosano, G. L. and Ceccarelli, E. A. (2014) 'Recombinant protein expression in *Escherichia coli*: Advances and challenges'. **Frontiers in Microbiology**, 5(APR), pp. 1–17. doi: 10.3389/fmicb.2014.00172.
3. Fernandes, L.F.; Damasceno, G.A.A.D.S.; Almeida, A.C.; Cardoso, L.; Xavier, M.A.S.; Pinheiro, T.P.P.; Da Cruz, G.H.S.; Dourado, H.F.S.; Silva, W.S.; Xavier, A.R.E.O. Identification and characterization of methicillin-resistant *Staphylococcus* spp. isolated from surfaces near patients in an intensive care unit of a hospital in southeastern Brazil. **Journal of the Brazilian Society of Tropical Medicine**. Vol.:53:(e20200244): 2020 doi.org/10.1590/0037-8682-0244-2020.
4. Bezerra, E.A., Soares, R. A. B.; Xavier, M. A. S.; Júnior, M.B., Pereira, W.V.S. Godoy, C.M., Guimarães, M.R.; Xavier, A.R.E.O. Molecular identification of *Histoplasma capsulatum* in patients with disseminated histoplasmosis and acquired immunodeficiency syndrome. **Annals of the Brazilian Academy of Sciences**. (2024) 96(Suppl. 1): e20231287 DOI 10.1590/0001-3765202420231287.
5. Freud, L, R. Signal peptides for recombinant protein secretion in bacterial expression systems. **Microbial Cell Factories**, v. 17, n. 1, p. 1–10, 2018.
6. Gombert, A. K.; Kilikian, B. V. Recombinant gene expression in *Escherichia coli* cultivation using lactose as inducer. **Journal of Biotechnology**, v. 60, n. 1–2, p. 47–54, 1998.
7. Rosano, G. L.; Ceccarelli, E. A. Recombinant protein expression in *Escherichia coli*: Advances and challenges. **Frontiers in Microbiology**, v. 5, n. APR, p. 1–17, 2014.
8. ZAHA, A. **Biologia Molecular Básica**. 5ª ed. Mercado Aberto. Porto Alegre, 2014.
9. BORZANI, W.; SCHMIDELL, W.; ALMEIDA LIMA, U.; AQUARONE, E. 2001. **Biotecnologia Industrial**:



biotecnologia na produção de alimentos. v.1 a 4. Edgard Blücher Ltda: São Paulo.

10. BORZANI, W. 2001. **Biotechnologia Industrial: fundamentos.** 2001. Edgard Blücher Ltda: São Paulo.

11. LIMA, U.A. 2000. **Biotechnologia Industrial.** Processos fermentativos e enzimáticos. 2001. EdgardBlücher, v. 3. São Paulo.

12. TORTORA, G.; CASE, L. C.; BAIR W.; WEBER.; FUNKE, B.R. **Microbiologia.** 14 Ed. Artmed, Rio Grande do Sul, 2024

13. BROWN. **Clonagem gênica e análise de DNA: Uma introdução.** 4. ed. Porto Alegre: Artmed, 2003.

14. NELSON, D. L.; COX, M. M.; HOSKINS, A. A. Lehninger Principles of Biochemistry. 8. ed. New York: Macmillan Learning, 2021.

15. BERG, J. M.; TYMOCZKO, J. L.; GATTO JR., G. J.; STRYER, L. **Biochemistry.** 10. ed. New York: W. H. Freeman/Macmillan Learning.

16. VOET, D.; VOET, J. G.; PRATT, C. W. **Fundamentals of Biochemistry: Life at the Molecular Level.** 5. ed. Hoboken: Wiley, 2016.

17. SILVA, M. J. e; CECILIO, M. S.; PAZINATO, M. S. **Biochemistry learning in higher education: a systematic review on methodologies and teaching resources.** Biochemistry and Molecular Biology Education, v. 54, n. 1, p. 29–48, 2026. DOI: 10.1002/bmb.70027.

18. HOWELL, M. E. *et al.* Interactive learning modules with 3D printed models improve student understanding of protein structure–function relationships. **Biochemistry and Molecular Biology Education**, v. 48, n. 4, p. 356–368, 2020. DOI: 10.1002/bmb.21362.

19. RIGSBY, R. E.; PARKER, A. B. Using the PyMOL application to reinforce visual understanding of protein structure. **Biochemistry and Molecular Biology Education**, v. 44, n. 5, p. 433–437, 2016. DOI: 10.1002/bmb.20966.

20. HOWITT, S. *et al.* An expanded framework for biomolecular visualization in the classroom: learning goals and competencies. **Biochemistry and Molecular Biology Education**, v. 45, n. 1, p. 69–75, 2017.

21 HOWELL, M. E. *et al.* Student understanding of DNA structure–function relationships improves from using 3D learning modules with dynamic 3D printed models. **Biochemistry and Molecular Biology Education**, v. 47, n. 3, p. 303–317, 2019. DOI: 10.1002/bmb.21234.