



BIOTECHNOLOGY AND LIFE SCIENCE	
CYCLE	XXXIX
COORDINATOR	Prof. Marco VENTURA email: <a href="mailto:marco.ventura@unipr.it">marco.ventura@unipr.it</a> Department of Chemistry, Life Sciences and Environmental Sustainability
DURATION	3 years
STARTING DATE OF THE PHD PROGRAM	01/11/2023
<b>TRAINING OBJECTIVES</b>	
<p>The PhD in Biotechnology and Biosciences aims to train experts who can carry out advanced research activities in the biological disciplines and biotechnology. The Doctor's research themes concern the study of the function, organization and expression of the genome of microbial, plant and animal organisms (including humans), to deepen their basic knowledge, also in view of possible applications in biotechnology. The methodologies used are mainly those of genetic, microbiology, molecular biology, biochemistry and applied biology. Starting from this common objective and from a highly cross-cutting advanced teaching activity, in order to train PhDs with highly qualified skills in specific areas of Biotechnology and Life Sciences, three main areas of research defined as such: 1) environmental; 2) genetics and microbiology; 3) biochemical-molecular. PhD students will be involved full-time in a research project, to which they will also make critical and proactive contributions. In this way, they will acquire a marked scientific and management autonomy, also thanks to the numerous scientific, national and international collaborations in which they will be involved.</p>	
<b>RESEARCH AREAS</b>	
<ul style="list-style-type: none"><li>• Environmental</li><li>• Biomolecular</li><li>• Genetics and microbiology</li></ul>	
<b>ADMISSION REQUIREMENTS</b>	<p>Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:</p> <ul style="list-style-type: none"><li>– Laurea specialistica or Laurea magistrale (second cycle master's degree)</li><li>– Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);</li><li>– Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program</li></ul> <p><b>Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2023</b></p>

POSITIONS PUT OUT TO COMPETITION*		10
(Modified by Rector Decree n. 1320 of 19.07.2023)		
With Scholarship		10
Position with Scholarship		
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	<ul style="list-style-type: none"><li>• Environmental</li><li>• Biomolecular</li><li>• Genetics and microbiology</li></ul>
1	Scholarship funded by University of Parma (University funds)	<ul style="list-style-type: none"><li>• Genetics and microbiology</li></ul>
1	Scholarship co-funded by Fondazione Cariparma	<ul style="list-style-type: none"><li>• Genetics and microbiology</li></ul>



<b>Position with Scholarship</b> <b>LINKED TO SPECIFIC TOPICS (art. 11 of the Competition notice)</b> <b>(Modified by Rector Decree n. 1320 of 19.07.2023)</b>		
During the Oral Exam, applicants may express and/or confirm their interest of being assigned a scholarship linked to a specific research topic. The Examination Board will evaluate their eligibility based on specific competences, experience and specific aptitudes of the applicants		
N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholarship financed with funds under the PNRR– Mission 4 component 1 ( <b>Ministerial Decree 118/2023 art. 8</b> “PNRR Research”) CUP D92J23000150006 	<b>Research Topics: Genetics and microbiology:</b> Cardiovascular risk in a changing environment: identification of new biomarkers of genetic susceptibility and environmental risk.
1	Scholarship financed with funds under the PNRR– Mission 4 component 1 ( <b>Ministerial Decree 118/2023 art. 8</b> “PNRR Research”) CUP D92J23000150006 	<b>Research Topics: Genetics and microbiology:</b> Use of yeast as a model for the study of mutations associated with neuropathies and for the search for drugs with a potential therapeutic action.
1	Scholarship financed with funds under the PNRR– Mission 4 component 1 ( <b>Ministerial Decree 118/2023 art. 8</b> “PNRR Research”) CUP D92J23000150006 	<b>Research Topics: Molecular Biology:</b> CRISPR-Cas genome editing of hyperegulatory enhancers in hormone-sensitive tumours.
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 ( <b>Ministerial Decree 117/2023</b> ) and co-financed by the Company Ri.Circola S.r.l. CUP D92J23000300004 	<b>Research Topics: Environmental</b> Biotechnology for circular economy.
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 ( <b>Ministerial Decree 117/2023</b> ) and co-financed by the Company Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna “Bruno Ubertini” CUP D92J23000300004 	<b>Research Topics: Biomolecular</b> Bioinformatic analysis of Next Generation Sequencing data for infection control

ADMISSION PROCEDURES		
<b>Assessment of QUALIFICATIONS:</b> up to 40 points (a minimum score of 18 points shall be required to be admitted to the Oral Exam) <b>ORAL EXAM:</b> up to 80 points <b>Minimum score for ELIGIBILITY:</b> 70/120		
<b>Foreign Language</b>	Language the fluency of which shall be assessed during the Oral Exam The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.	<b>ENGLISH</b>
<b>ORAL EXAMINATION INDICATION</b>		
<b>THE ORAL EXAM TAKES PLACE IN THE PRESENCE.</b> (The REMOTE ORAL EXAM is allowed for candidates only in isolation / quarantine for COVID-19 virus infection or due to illness / hospitalisation certified by a medical report. To this end, candidates must submit a <b>motivated REQUEST</b> as per the model attached to the competition announcement)		



THE INTERVIEW MAY BE HELD ALSO IN ENGLISH

## LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

### MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

<b>ANNEX A</b>	(art. 5 of the Competition notice)
<b>Identification Document</b>	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae et studiorum</b>	No specific CV format is required (see art. 4 of the Competition notice)
<b>Abstract of degree thesis</b>	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)
<b>Academic Qualifications</b>	<b>Certificates and academic transcript of records for both Bachelor' and Master' degrees</b> containing the following details for each degree held: (art. 4 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).

### LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)

<b>Curriculum Vitae et studiorum</b>	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	<b>Up to 5 points</b>
<b>Graduation mark</b>	Score related to the final mark: - 110 with honours (magna cum laude): 20 points; - 110: 18 points; - From 103 to 109: points 4-16 (2 points for each mark unit); - Until 102: 3 points.	<b>Up to 20 points</b>
<b>Average of the exam marks</b> (if the candidate will attain the degree no later than 31 October 2023)	Score related to the average of the exam marks: - 30/30: 18 points; - From 22/30 to 29/30: points 2-16 (2 points for each unit average score)	<b>Up to 18 points</b>
<b>Graduation thesis</b>	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)	<b>Up to 6 points</b>
<b>Scientific Publications</b>	Publications in <i>peer-reviewed</i> international journals: 2 points for each publication (for evaluation purposes it is mandatory to attach a pdf copy of each publication to the application)	<b>Up to 6 points</b>
<b>Communications to conferences, publication in indexed national journals, book chapters</b>	1 point for each conference abstract, publication in indexed national journals or book chapters (for evaluation purposes it is mandatory to attach a pdf copy of each term to the application)	<b>Up to 3 points</b>

### ORAL EXAM

Interview Program	Evaluation CRITERIA	POINTS
-------------------	---------------------	--------



<p>The ORAL EXAM is intended to assess the aptitude of the applicant to the research as well as the general knowledge of issues connected to the PhD course</p>	<p>The Oral Exam will focus on critical reading and discussion of a scientific article chosen by the candidate among those proposed by the Committee within the each of the three main research topics. Candidates will be asked by the Committee members to discuss and explain the contents of the scientific publication they have selected. During this Oral Exam and interview, knowledge of the English language will also be evaluated.</p>	<p><b>Up to 80 points</b></p>
---	--	-------------------------------

## SCHEDULE OF THE ADMISSION EXAMS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <http://unipr.esse3.cineca.it/Home.do> in the days preceding the date of the Oral Exam.

<b>ORAL EXAM</b>	<b>DATE</b>	12 September 2023 (with possible extension in the following days)
	<b>TIME</b>	09:30 AM (Italian Time)
	<b>PLACE</b>	AULE A + B PODERE AMBOLANA (Cascina Ambolana) Parco Area delle Scienze, 33/A - Campus Universitario 43124 PARMA - ITALY
<b>ALTRE INDICAZIONI</b>		<p><b>The applicant MUST indicate in the application his/her preference for one of the three main research topics proposed in the selection announcement (Environmental, Genetics and microbiology, Biomolecular).</b></p> <p>For foreign candidates, admission examinations may be held in English as per candidate's request.</p>