BIOTECHNOLOGY AND LIFE SCIENCE	
CYCLE	**XL**
COORDINATOR	Prof.ssa Elena MAESTRI email: elena.maestri@unipr.it Department of Chemistry, Life Sciences and Environmental Sustainability
DURATION	3 years
STARTING DATE OF THE PHD PROGRAM	01/11/2024
POSITIONS PUT OUT TO COMPETITION	**8 (Modified with Rector Decree n. 1556 of 02.07.2024)**
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS Oral Exam in PRESENCE or REMOTELY
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission: – Laurea specialistica or Laurea magistrale (second cycle master's degree) – Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations); – Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree **by 31.10.2024**

TRAINING OBJECTIVES

The Ph.D. Course in Biotechnology and Life Sciences aims to train experts to carry out advanced research in the field of biological disciplines and biotechnology. The research topics of the Ph.D. Course are concerned with the study of the function, organization and expression of the genome of microbial, plant and animal organisms (including human beings), in order to deepen the basic knowledge, also with a view to possible applications in biotechnology. The methodologies used are mainly those of genomics, including functional genomics, genetics, molecular biology, biochemistry, applied biology and computational biology. Building on this common goal and a strongly cross-cutting advanced teaching activity, to train PhDs with highly qualifying skills in specific areas of Biotechnology and Life Sciences, three main areas of research have been identified as follows: 1) environmental biotechnologies; 2) genetic and evolutionary biotechnologies; and 3) molecular biotechnologies. PhD students will be involved full-time in a research project, to which they will also make critical and propositional contributions. In this way, they will acquire a marked scientific and managerial autonomy, also thanks to the numerous scientific collaborations, national and international, in which they will be involved.

RESEARCH AREAS

- Environmental biotechnologies
- Genetic and evolutionary biotechnologies
- Molecular biotechnologies

Position with Scholarship		
N°	***Funding entity***	***Research Topic***
2	Scholarship funded by University of Parma (Ministerial funds)	• Environmental biotechnologies • Genetic and evolutionary biotechnologies
1	Scholarship funded by University of Parma (University funds)	• Molecular biotechnologies
1	Scholarship co-funded by Fondazione Cariparma	• Environmental biotechnologies

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice) * Modified with Rector Decree n. 1556 of 02.07.2024		
N°	***Funding entity***	***BOUND RESEARCH TOPIC***
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J23000420006	**RESEARCH TOPIC Genetic and evolutionary biotechnologies** Genetic and evolutionary biotechnologies: Assessment of new biomarkers of exposure to urban atmospheric particulates in relation to the ongoing transition between fossil fuel vehicles and electric vehicles
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (**Ministerial Decree 630/2024**) and co-financed by the Company preclinics S.r.l. CUP D92J24000210004	**RESEARCH TOPIC Molecular biotechnologies** Molecular biotechnologies: Characterization of reduced-size antibodies (nano-body, pico-body) and development of an innovative platform for their selection for diagnostic and therapeutic purposes.
1	Scholarship funded by Chiesi Farmaceutici S.p.A.	Characterization of in vivo and ex vivo models of neonatal pathologies using multi-omics technologies to identify disease-linked cell populations and genes

POSITION RESERVED	
Reserved to **Holders of RESEARCH GRANT** within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe (**FutureData4EU**)"	**1**

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 40 points
(a minimum score of 18 points shall be required to be admitted to the Oral Exam)
ORAL EXAM: up to 80 points
Minimum score for ELIGIBILITY: 70/120

ORAL EXAM PROGRAM

The ORAL EXAM WILL BE HELD IN PRESENCE and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit **a motivated REQUEST** as per the model attached to the competition announcement)

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.
The choice of research topic must be indicated in the application form ANNEX A.

Foreign Language the fluency of which shall be assessed during the Oral Exam	**ENGLISH**	The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

SCHEDULE OF THE ADMISSION EXAMS			
ASSESSMENT OF QUALIFICATIONS		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	
ORAL EXAM	**DATE**	2nd September 2024 (with possible extension in the following days)	
	TIME	09:00 am (Italian Time)	
	PLACE	ROOMS A + B PODERE AMBOLANA (Cascina Ambolana) Parco Area delle Scienze, 33/A - Campus Universitario 43124 PARMA - ITALY	
FURTHER INFORMATION		**The choice of the research area to be expressed in Annex A is MANDATORY and determines the choice of the topic of discussion of the oral exam.**	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	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)	
Academic Qualifications	**Certificates and academic transcript of records for both Bachelor' and Master' degrees** containing the following details for each degree held: (art. 3.2 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)		
Curriculum Vitae et studiorum	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.	**Up to 5 points**

Graduation mark	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.	**Up to 20 points**
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)	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)	**Up to 18 points**
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)	**Up to 6 points**
Scientific Publications	Publications in indexed international journals (WOS, Scopus): 2 points for each publication (for evaluation purposes it is mandatory to attach a pdf copy of each publication to the application)	**Up to 6 points**
Communiations to conferences, publication in indexed national journals, book chapters	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)	**Up to 3 points**

EVALUATION ORAL EXAM		
Interview Program	**Evaluation CRITERIA**	**POINTS**
The ORAL EXAM is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	The candidates will be summoned individually by the Examination Board to discuss the contents of the scientific publication they have selected from the proposals relating to the research topic. During this test, knowledge of the English language will also be assessed. The evaluation is based on the candidate's preparation and the critical sense demonstrated.	**Up to 80 points**