




DRUG SCIENCES	
CYCLE	XL
COORDINATOR	Prof. Fabio SONVICO email: <a href="mailto:fabio.sonvico@unipr.it">fabio.sonvico@unipr.it</a> Food and Drug Department
DURATION	3 years
STARTING DATE OF THE PHD PROGRAM	01/11/2024
CURRICULA	1. Innovation in Pharmaceutical Sciences 2. Products for the food and health markets
POSITIONS PUT OUT TO COMPETITION	<b>16 (Modified with Rector Decree n. 1556 of 02.07.2024)</b>
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission: <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> Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree <b>by 31.10.2024</b>
<b>TRAINING OBJECTIVES</b>  The PhD Course in “Drug Sciences” has the objective to train PhDs with backgrounds and experiences suitable for entry the field of pharmaceutical research relatively to the design, discovery, development, production and control of medicinal and health products, and to understand pharmacologically active substances mechanisms of action at the biomolecular level.  The course provides teaching dedicated directly to PhD students in the scientific fields mentioned above, as well as in multidisciplinary and interdisciplinary fields. Multi- and interdisciplinarity are typical characteristics of the PhD course, which addresses the final practical objective (producing innovation in drug sciences) from different points of view and with different approaches.	
<b>RESEARCH AREAS</b> <ul style="list-style-type: none"> <li>• Biochemistry and Molecular Biology</li> <li>• Biopharmaceutics – Pharmacokinetics</li> <li>• Bio-organic chemistry</li> <li>• Experimental Pharmacology and Toxicology</li> <li>• Drug Design and Synthesis</li> </ul>	

Position with Scholarship		
N°	Funding entity	Research Topic
3	Scholarship funded by University of Parma (Ministerial funds)	<ul style="list-style-type: none"> <li>• Biochemistry and Molecular Biology</li> <li>• Biopharmaceutics – Pharmacokinetics</li> <li>• Drug Design and Synthesis</li> </ul>

1	Scholarship funded by University of Parma (University funds)	• Experimental Pharmacology and Toxicology
1	Scholarship co-funded by Fondazione Cariparma	• Drug Design and Synthesis

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	Scholarship funded by Food and Drug Department (funds "Departments of Excellence 2023-2027" program)	Characterization and valorization of complex natural matrices for the generation of components with high pharmaceutical, nutritional and cosmetic value and design of advanced formulations capable of maximizing the effectiveness and reducing the environmental impact of the production, use and disposal of active ingredients
1	Scholarship funded by Food and Drug Department	Sustainable Asymmetric Synthesis of Function-Rich Heterocycles
1	Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 PNRR -M4C2- "Dynamics of recruitment of macromolecular complexes active on the mycobacterial orisome: mechanistic details and target validation" CUP D53D23010750001)	Design and synthesis of peptides and peptidomimetics as inhibitors of DNA replication in mycobacterium tuberculosis
1	Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002 	Identification of natural products as gene repressors towards a new paradigm to fight antibacterial resistance
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company VisoStatics S.r.l. CUP D92J24000320004 	Design and synthesis of new antiviral molecules with a broad spectrum of action for the treatment of acute infections caused by emerging and re-emerging viruses
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Chiesi Farmaceutici S.p.A. CUP D92J24000320004 	Peptides and proteins for inhalation
1	Scholarship funded by Chiesi Farmaceutici S.p.A.	Integration of ex vivo/in vivo imaging approaches focused on the investigation of the pharmacokinetics of inhaled drugs

POSITION RESERVED	
Reserved for <b>EMPLOYEES</b> of Company "Chiesi Farmaceutici S.p.A." (with salary maintenance)	1
Reserved for <b>EMPLOYEES</b> of Company "Azienda Unità Sanitaria Locale di Piacenza" (with salary maintenance)	1
Reserved for <b>EMPLOYEES</b> of Company "ERBC Group S.r.l." (with salary maintenance)	1
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKŁODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe (FutureData4EU)"	1

## ADMISSION PROCEDURES

**Assessment of QUALIFICATIONS:** up to 50 points  
(a minimum score of 30 points shall be required to be admitted to the Oral Exam)  
**ORAL EXAM:** up to 70 points  
**Minimum score for ELIGIBILITY:** 70/120

## ORAL EXAM PROGRAM

**THE ORAL EXAM TAKES PLACE IN THE PRESENCE.**

**The ORAL EXAM includes the presentation of the research project** and 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

### 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

2<sup>nd</sup> September 2024 (with possible extension to 3<sup>rd</sup> September 2024)

#### TIME

08.30 am (Italian Time)

#### PLACE

Food and Drug Department  
Parco Area delle Scienze, 27/A  
43124 PARMA - ITALY

### FURTHER INFORMATION

**The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.**

**THE INTERVIEW MAY BE HELD  
ALSO IN ENGLISH**

For foreign candidates, the admission examinations may be held 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	<b>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees</b> 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).	
Research Project	The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focused on an original research topic and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results. It should be noted that the Examination Board can use tools useful for verifying the originality of the submitted Project. <u>The research project does not represent a constraint with respect to the following choice of the doctoral thesis</u> , that shall be defined together with the supervisor and approved by the Academic Board.	
<b>LIST OF EVALUABLE QUALIFICATIONS</b> (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.	<b>Up to 20 points</b>
Graduation thesis	Consistency of the Master’s Degree thesis with the doctoral program research topics	<b>Up to 10 points</b>
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria: <ul style="list-style-type: none"><li>Scientific value and ground-breaking nature of the proposal: 5 points</li><li>description and structure of the proposal: 5 points</li><li>consistency with the themes of the doctorate: doctorate proposal feasibility: 5 points</li></ul>	<b>Up to 15 points</b>
Scientific Publications	Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings.	<b>Up to 5 points</b>
<b>EVALUATION ORAL EXAM</b>		
Interview Program	<b>Evaluation CRITERIA</b>	<b>POINTS</b>
The ORAL EXAM includes the presentation of the research project and 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	<ul style="list-style-type: none"><li>knowledge of the foreign language: max 10 points</li><li>research project argumentation: max 30 points</li><li>general knowledge of scientific aspects related to the PhD course: max 30 points</li></ul>	<b>Up to 70 points</b>