



NEUROSCIENCES	
CYCLE	XXXIX
COORDINATOR	Prof. Luca BONINI email: luca.bonini@unipr.it Department of Medicine and Surgery
DURATION	3 years
STARTING DATE OF THE PHD PROGRAM	01/11/2023
CURRICULA	1. Neuroscience 2. Behavioural Biology
TRAINING OBJECTIVES	
<ul style="list-style-type: none">• Provide a global and interdisciplinary view of the proposed research sectors, offering a high degree of specialization in these research fields• Acquire skills and abilities in the autonomous use of at least one neuroscientific investigation technique• Promote the development of networks of national and international relations and exchanges aimed at sharing and deepening the investigated research topic	
RESEARCH AREAS	
<ul style="list-style-type: none">• Integrated neuroscience: comparative neurophysiology and neuroethology, cognitive and social neuroscience, cognitive psychology, psychology of perception and action, psychobiology, psychophysiology.• Behavioral biology: biological basis of social, competitive, and parental behavior, gene/environment interactions on the development of behavior, cognitive ethology and emotions in animals and humans	
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">– 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 31.10.2023

POSITIONS PUT OUT TO COMPETITION *		
(Modified by Rector Decrees n. 1320 of 19.07.2023 and n. 1397 of 28.07.2023)		8
With Scholarship		8
Positions with Scholarship		
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	---
1	Scholarship funded by University of Parma (University funds)	---
1	Scholarship co-funded by Fondazione Cariparma	---



Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Competition notice) (Modified by Rector Decrees n. 1320 of 19.07.2023 and n. 28.07.2023)		
N°	Funding entity	BOUND RESEARCH TOPIC
1	<p>PhD scholarship funded within the PNRR research program called "MNESYS - A multiscale integrated approach to the study of the nervous system in health and disease" related to the notice Extended partnerships Investment 1.3 creation of "Partnerships extended to universities, research centers, companies for the financing of basic research projects" - Notice 341 of 15/03/2022 - funded by the European Union – NextGenerationEU CUP D93C22000930002</p>	<p>Mother, placenta and foetus cross-talk in neonatal hypoxic ischemic injury: new biomarkers modulated during different heling time point.</p>
1	<p>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 117/2023) and co-financed by the Company Lombardini22 S.p.A. CUP D92J23000390004</p>	<p>Investigation of the neural activity to understand the effect of virtual environments on social cognition</p>
1	<p>Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 117/2023) and co-financed by the Company Fondazione IRCCS Istituto Neurologico "Carlo Besta" CUP D92J23000390004</p>	<p>Structural and functional characterization with magnetic resonance imaging of neural mechanisms underlying neurological disease</p>

ADMISSION PROCEDURES		
<p>Assessment of QUALIFICATIONS: up to 40 points (a minimum score of 20 points must be obtained to be admitted to the Oral Exam) ORAL EXAM: up to 80 points Minimum score for ELIGIBILITY: 70/120</p>		
Foreign Language	<p>Language the fluency of which shall be assessed during the Oral Exam The evaluation of this language will be oral and will consist in the discussion of the research project presented in English.</p>	ENGLISH
ORAL EXAMINATION INDICATION		
<p>THE ORAL EXAM TAKES PLACE IN THE PRESENCE. (The REMOTE ORAL EXAM is allowed for candidates residing abroad or temporarily abroad for study / work reasons or in isolation / quarantine for COVID-19 virus infection. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement)</p>		
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		
ANNEX A	(art. 5 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. 4 of the Competition notice)	
Degree thesis	Abstract of the second cycle master's degree thesis and the full thesis in pdf format. Undergraduate applicants must submit the draft of the thesis approved by their supervisor.	
Academic Qualifications	<p>Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 4 of the Competition notice):</p> <p>University that granted the degree - Type of degree (first cycle/second cycle/single cycle)</p> <p>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).</p>	
Research Project	<p>Written in English, 3 pages with single spacing in Times New Roman 12, including bibliography, it must focusing on an original research topic (unpublished, developed personally by the candidate. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project) and it shall be structured as follows: introduction of the problem in the scientific context, relevance of the problem, objectives, expected results.</p> <p><u>It does not represent a constraint with respect to the following choice of the doctoral thesis</u>, which will be assigned by the Academic Board.</p>	
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.	Up to 40 points
Curriculum Vitae et Studiorum will be evaluated based on the following qualifications and scores:		
Graduation mark	<p>Score related to the final mark:</p> <ul style="list-style-type: none"> - 110 with honours (magna cum laude): 10 points; - 110: 7 points - From 108 to 109: 5 points - From 106 to 107: 3 points - 105-106: 1 point - Under 105: 0 points 	Up to 10 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2023)	<p>Score related to the average of the exam marks:</p> <ul style="list-style-type: none"> - From 29/30 to 30/30: 10 points - From 28/30 to 28.99/30: 7 points - From 27/30 to 27.99/30: 5 points - From 26/30 to 26.99/30: 3 points - Under 26/30: 0 points 	Up to 10 points
Graduation thesis	<p>Congruence with the research topics of the PhD course and methodological quality of the experimental or bibliographic work.</p> <ul style="list-style-type: none"> ○ Experimental thesis related to the PhD program of Neuroscience: 10 points ○ Non-experimental and relevant thesis: 5 points ○ Thesis not relevant: 0 points 	Up to 10 points
Research Project	<p>Project evaluation score:</p> <ul style="list-style-type: none"> ○ scientific value: 2.5 points ○ structure of the proposal: 2.5 points ○ proposal feasibility in relation to the specific research topics of the PhD course: 2.5 points ○ originality of the proposal: 2.5 points 	Up to 10 points



Statement of Research Interest	Short text – maximum 1 page – in Italian or in English	Up to 2 points
Scientific publications	<ul style="list-style-type: none">○ Each article in a peer-reviewed international journal: 1 point○ Each book chapter: 0.4 points○ abstracts/papers/posters presented at conferences or symposia: 0.3 points <p>The same categories are half valued if in Italian. The points of the publications are normalized for post-graduate years, that is, divided by the numbers of post-graduate years.</p>	Up to 5 points
Other Academic qualifications	Other academic qualifications consistent with the research topics of this PhD program	Up to 3 points



ORAL EXAM		
Interview Program	Evaluation CRITERIA	POINTS
<p>The ORAL examination includes:</p> <p>A1) Neurosciences: the oral report on 2 topics chosen by lot from those indicated in the list below:</p> <ol style="list-style-type: none"> 1) The origin of the nervous impulses 2) The synapses 3) The reflexes 4) Molecular and cellular bases of signal transduction 5) The motor system 6) The visual system 7) The somatosensory system 8) The autonomic nervous system 9) Neurobiology of language 10) Neurobiology of attention 11) Neurobiology of emotions 12) Memory and learning <p>A2) Behavioural Biology: the oral report on 2 topics chosen by lot from those indicated in the list below:</p> <ol style="list-style-type: none"> 1) Individual and social learning 2) Imprinting and development of behavior 3) Genetic and epigenetic of behavior 4) Parental effort and sexual selection 5) Social behavior, reproductive systems and parental care 6) Aggression, assault and social hierarchies 7) Hormones, neurotransmitters and behavior 8) Parental selection and altruism 9) Behavioral evolution 10) Communication and emotions emozioni <p>B) The presentation and discussion of the research project, aimed at verifying the candidate's aptitude for scientific research. The discussion will take in English to evaluate the knowledge and the fluency of the language</p>	<ul style="list-style-type: none"> ○ Up to 40 points for the oral report on the two topics extracted (up to 20 points per topic) ○ Up to 20 points for the project presentation ○ Up to 20 points for knowledge of the foreign language 	<p>Up to 80 points</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.

ORAL EXAM	DATE	12 September 2023
	TIME	09:00 AM (Italian Time)
	PLACE	ROOM 1 Department of Medicine and Surgery Integrated Biotechnological Plexus Via Volturno, 39 – 43125 PARMA - ITALY
ALTRE INDICAZIONI	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	