



NEUROSCIENCES		
Cycle	XXXVI	
Coordinator	Prof. Vittorio GALLESE Department of Medicine and Surgery email: vittorio.gallese@unipr.it	
Duration	3 years	
Starting date of the PhD program	01/11/2020	
Research Topics		
<ul style="list-style-type: none">• Integrative neurosciences: comparative neurophysiology and neuroethology, cognitive and social neuroscience, cognitive psychology, psychology of perception and action, psychobiology, psychophysiology• Behavioural Biology: biological basis of social, agonistic and parental behaviour, gene-environment interactions on development of behaviour, cognitive ethology and ethology of emotions in non-human and human animals		
Training Objectives		
<ul style="list-style-type: none">• To give a global and interdisciplinary view of the proposed research fields providing a deep research focus.• To acquire skills and abilities in the autonomous use of at least one neuroscientific technique.• To promote the effective dissemination of the research through the development of national and international scientific networks.		
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		
Undergraduate applicants may also submit applications with the obligation of getting their degree by October 31st 2020 .		
POSITIONS PUT OUT TO COMPETITION		
With Scholarship		6
Without Scholarship		1
Reserved to holders of scholarship within specific internationale mobility programs		1
	TOTAL	8
Positions with University Scholarship		
N°	Funding entity	Research Topic
4	Scholarship Ministerial funds	<ul style="list-style-type: none">• Integrative neurosciences
1	Scholarship co-funded by Fondazione Cariparma	<ul style="list-style-type: none">• Behavioural Biology



Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Call for applications)

During the Oral Exam, applicants may express their interest in being assigned a scholarship dedicated to a specific research topic to the Examination Board. The Board will express its judgement on eligibility to be assigned the scholarship in consideration of the specific competences, experience and specific aptitudes of the applicants.

N°	Funding entity	BOUND RESEARCH TOPIC
1	Funded by the Department of Medicine and Surgery (Project MIUR "GANGLIA" R16PWSFBPL)	<ul style="list-style-type: none">Neurophysiological mechanisms underlying the encoding of executed and observed actions in cortico-basal ganglia circuits

Reserved to holders of scholarship within specific internationale mobility programs

N°	Agreements/Cooperations/Mobility Programs
1	Reserved to holders under the Project of the Italian Space Agency "MARSE-PRE: Biological and functional markers for precision astronautic medicine"

ADMISSION PROCEDURES

Assessment of QUALIFICATIONS: up to 40 points

(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 80 points (of which 20 points reserved for presentation of the research project)

Minimum score for ELIGIBILITY: 70/120

ADMISSION PROCEDURES for positions reserved to holders of scholarship within specific international mobility programs

Assessment of QUALIFICATIONS: up to 80 points
(a minimum score of 50 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 40 points
(of which 30 points reserved for presentation of the research project and 10 points for the knowledge of English language)

Minimum score for ELIGIBILITY: 70/120

Foreign Language

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 translating of a scientific text.

APPLICANTS SHALL TAKE THE EXAM REMOTELY.

For further details please refer to the relevant provision laid down in art. 7 of the Call for applications.

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 Call for Applications)
- Scanned Copy of a **valid identification document** with photo
- **Curriculum Vitae et studiorum** (art. 4 of the Call for Applications)
- **Abstract of the second cycle master's degree thesis.** Undergraduate applicants may submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)



- **Certificates and academic transcript of records for both Bachelor' and Master' degrees** containing the following details for each degree held: (art. 4 of the Call for Applications):
 - 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 (**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, significance of the problem, methodology and experimental design/data analysis, expected results.
It does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.

Further qualifications that may be attached to the application, if in possession of the applicant

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

- **Scientific Publications:** Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.
- **Academic qualifications:** First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program
- **Mobility experience abroad** (e.g. Erasmus or similar);
- **Any other document** certifying the applicant's training and abilities (scholarships or research grants, contracts relating to the topics covered during the PhD course, awards etc).

EVALUATION CRITERIA

QUALIFICATION	EVALUTATION CRITERIA	POINTS
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
The candidate's Curriculum Vitae et Studiorum will be evaluated based on the following qualifications and scores:		
Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 10 points - 110: 7 points; - From 105 to 109: 4 points; - 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 2020)	Score related to the average of the exam marks: - From 29/30 to 30/30: 10 points - From 27/30 to 28.9/30: 8 points - Under 27/30: 0 points	Up to 10 points



Graduation thesis	<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>Points relating to the research project shall be allocated on the basis of the following criteria:</p> <ul style="list-style-type: none"> ○ Scientific value and ground-breaking nature of the proposal: 2.5 points ○ description and structure of the proposal: 2.5 points ○ proposal feasibility: 2.5 points ○ originality of the proposal: 2.5 points 	Up to 10 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 qualifications	<p>1 point for every important post-graduate experience (research grant, scholarship, non-curricular internships, mobility experience abroad, a post graduate master's degree, specialization degree, etc.)</p>	Up to 5 points
ORAL EXAMINATION	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>	<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 	Up to 80 points



<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</p>		
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LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT
Positions reserved to holders of scholarship within specific international mobility programs

Curriculum Vitae et studiorum	Including academic career and postgraduate experience	Up to 80 points
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The candidate's Curriculum Vitae et Studiorum will be evaluated based on the following qualifications and scores

Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 10 points - 110: 7 points; - From 105 to 109: 4 points; - Under 105: 0 points	Up to 10 points
Graduation thesis	<ul style="list-style-type: none"> ○ Experimental thesis / meta-analysis related to the PhD program of Neurosciences – curriculum Behavioural Biology: 10 points ○ Non-experimental and relevant thesis: 5 points ○ Thesis not relevant: 0 points 	Up to 10 points
Research Project	Relevance of the presented research project to the aims of the Italian Space Agency project "MARSE-PRE: Biological and functional markers for precision astronautic medicine"	Up to 50 points
Statement or Research Interest	Relevance of the research topics of Neurosciences PhD-curriculum Behavioural Biology and to the aims of the Italian Space Agency project "MARSE-PRE: Biological and functional markers for precision astronautic medicine"	Up to 3 points



Scientific publications	<ul style="list-style-type: none">○ Each article in a peer-reviewed international journal: 2 points○ Each book chapter: 1.5 points○ abstracts/papers/posters presented at conferences or symposia: 1 point <p>The points of the publications are normalized for post-graduate years, that is, divided by the numbers of post-graduate years.</p>	Up to 3 points
Reference Letters	Presentation of the candidate by researchers and teachers of recognized scientific competence	Up to 1 points
Other qualifications	2 points for every important post-graduate experience 1 point for every important pre-graduate experience (research grant, scholarship, non-curricular interships, mobility experience abroad, post graduate master's degree, specialization degreee, etc)	Up to 3 points

SCHEDULE OF THE ADMISSION EXAMS

ORAL EXAM	DATE	15 September 2020
	TIME	09:00 am (Italian time)
	PLACE	remotely using the Microsoft Teams platform