



International PhD Programme in NEUROSCIENCE in collaboration with Université Laval Université Clermont Auvergne	
DISCIPLINARY SCIENTIFIC AREA	05 - BIOLOGICAL SCIENCES; 06 - MEDICAL SCIENCES; 11b - PSYCHOLOGICAL SCIENCES
COORDINATOR	PROF. PAOLA FADDA
HEAD DEPARTMENT	DEPARTMENT OF BIOMEDICAL SCIENCES
DURATION	3 YEARS
EDUCATIONAL OBJECTIVES AND RESEARCH TOPICS	<p>The PhD programme in Neuroscience aims at training independent scientists to carry out basic and clinical neuroscience research, by means of multidisciplinary approaches.</p> <p>The Neuroscience PhD programme specifically aims at:</p> <ol style="list-style-type: none"> 1) Transmitting the knowledge of neuroanatomy and neurophysiology and sensorial physiology, the understanding of developmental and functional mechanisms of central and peripheral nervous systems; 2) Understanding the physio-pathological bases of diverse pathologies such as psychiatric diseases (anxiety, depression, bipolar disorders, psychotic disorders and schizophrenia, addictive disorders, eating disorders), neurodegenerative diseases, epilepsy, dementia, migraine, pain, and their related therapeutic approaches. <p>Educational objectives:</p> <ul style="list-style-type: none"> - Training in both basic and clinical neuroscience. - Acquisition of research methodology by means of classical and innovative techniques in histochemistry, neurochemistry molecular biology, electrophysiology, genetics and behavioural analyses, in the fields of basic and clinic neuroscience. - Stimulate independent research and thinking, and methodological accuracy. - Introduce the PhD students into scientific networks with national and international researchers. <p>Specifically, during the first PhD year, the lectures and the seminars will be devoted to basic neuroscience, including biomedical statistics, neuroanatomy, neurophysiology, neuropharmacology, in vivo and ex vivo research methods, animal use in research, and research ethics. During the second and third years, the lectures and the seminars will focus on neurological disorders covered in relation to neuropathology and clinical-therapeutic management. Supported by the tutor, the PhD student will acquire technical skills required to master the experiments, including the use of instruments, data analysis and interpretation.</p> <p>Research fields:</p> <p>The PhD Academic Board includes both basic and clinical researchers from UniCa and foreign Universities within the international PhD agreements. Researchers hold different skills and multiple collaborations with national and international research centres. Some Academic Board members belong</p>



	<p>to the CNR Institute of Neuroscience.</p> <p>The PhD programme is settled at the UniCa Departments of Biomedical Sciences, Medical Science and Public Health, which actively collaborate with Italian and foreign Universities, research centres and private companies/industries.</p> <p>Because of the discrete skills of the members of the PhD Academic Board, the research covers multiple neuroscience topics, including neuroanatomy, neurophysiology, neurobiology, neuropathology and neurodegenerative mechanisms, neuropsychopharmacology, behavioural neuroscience, diagnostic biomarkers, and the testing of novel compounds active in the CNS.</p> <p>The field of Neuroscience is greatly increasing thanks to the approaches available with combining diverse disciplines within molecular and cellular biology and physics, which enable the understanding of extremely complex mechanisms within the CNS. As a result, the field of neuroscience involves an increasing number of different types of scientists and is becoming an independent biomedical field of great relevance for human health.</p> <p>The Neuroscience PhD programme offers a highly qualified scientific education based on practical training within productive and internationally renowned research groups, in order to provide the required skills to work in the scientific research field.</p> <p>Main professional positions for PhD graduates in Neuroscience are:</p> <ul style="list-style-type: none"> - Academic career; - Hospital and public health services (Istituto Superiore di Sanità, CNR, IRCCS); - Research activity in pharmaceutical companies, and biotech; - Research activity in public and private services for pre-clinical research. - Management and development of new biotech; <p>The acquired theoretical and practical skills apply to fields beyond the neuroscience as well.</p> <p>Regione Autonoma della Sardegna envisions the support to Research as one of the main objectives for local economic and cultural development, which has led to the establishment of several private and public companies in the biomedical and pharmacological field. In this context, the PhD Programme offer is specifically tailored to impart the professional requirements for such job opportunities.</p> <p>The interaction with local enterprises begins during the PhD training period throughout collaborative relations between the PhD Academic Board and the companies located in the Scientific and Technologic Park of Sardinia, within the projects founded by MUR and Regione Autonoma della Sardegna.</p>
<p>ELIGIBILITY AND OTHER REQUIREMENTS FOR CANDIDATES</p>	<p>LM-6 <i>Biologia</i> LM-9 <i>Biotecnologie mediche, veterinarie e farmaceutiche</i> LM-13 <i>Farmacia e farmacia industriale</i> LM-21 <i>Ingegneria biomedica</i> LM-41 <i>Medicina e chirurgia</i> LM-42 <i>Medicina veterinaria</i> LM-51 <i>Psicologia</i> LM-55 <i>Scienze cognitive</i> LM-60 <i>Scienze della natura</i> 6/S (<i>specialistiche in biologia</i>) 9/S (<i>specialistiche in biotecnologie mediche, veterinarie e farmaceutiche</i>)</p>



	<p>14/S (<i>specialistiche in farmacia e farmacia industriale</i>) 26/S (<i>specialistiche in ingegneria biomedica</i>) 46/S (<i>specialistiche in medicina e chirurgia</i>) 47/S (<i>specialistiche in medicina veterinaria</i>) 58/S (<i>specialistiche in psicologia</i>) 63/S (<i>specialistiche in scienze cognitive</i>) 68/S (<i>specialistiche in scienze della natura</i>) and all the equivalent degrees awarded according to the old Italian Regulations.</p> <p>Foreign applicants: If the title presented by the foreign applicant does not suit those titles included in the Italian educational system, the application will be individually evaluated to verify the applicant's eligibility.</p>
ADMISSION TESTS	<p>ASSESSMENT OF QUALIFICATIONS AND CURRICULUM VITAE, VIDEO CONFERENCE INTERVIEW. ENGLISH SKILLS. The interview may be in English.</p>
ADMISSION TEST FOR FOREIGN APPLICANTS	<p>ASSESSMENT OF QUALIFICATIONS AND CURRICULUM VITAE, VIDEO CONFERENCE INTERVIEW. ENGLISH SKILLS. The interview may be in English upon request. The reference letters must be written in English, following the form available at https://www.unica.it/unica/page/it/dottoratiricerca (How to apply for PhD selection: Guidelines and forms - Annex C), on letterhead of the University of the professor or expert in the scientific field(s) of the PhD programme, who signs and dates it.</p>
POSITIONS	5
SCHOLARSHIPS	4 FUNDED BY UNIVERSITY OF CAGLIARI (MUR PL FUNDS), 1 OF WHICH RESERVED FOR A FOREIGN CANDIDATE.
POSITIONS WITHOUT SCHOLARSHIP	1
REFERENCE PERSON	PROF. PAOLA FADDA - EMAIL: pfadda@unica.it – TEL. 0706754326/4312
WEBSITE	http://people.unica.it/dottoratoneuroscienze/