

PhD Programme in MOLECULAR AND TRANSLATIONAL MEDICINE	
Curriculum 1: MOLECULAR ONCOLOGY AND PATHOLOGY Curriculum 2: NUTRITIONAL AND METABOLIC SCIENCES	
DISCIPLINARY SCIENTIFIC AREAS	03 - CHEMICAL SCIENCES; 05 - BIOLOGICAL SCIENCES; 06 - MEDICAL SCIENCES
COORDINATOR	PROF. ANDREA PERRA
HEAD DEPARTMENT	DEPARTMENT OF BIOMEDICAL SCIENCES
DURATION	3 years
LEARNING OUTCOMES AND RESEARCH TOPICS	<p>The three-year programme in Molecular and Translational Medicine at UniCA offers an interdisciplinary training of study and research that provides students with the knowledge and research skills required for a successful research career in biomedical sciences. The Programme has two research tracks, molecular oncology and pathology, and nutritional and metabolic sciences, which together encompass interdisciplinary research and graduate training programme suited for training young scientists for future appointments in academic institutions, research centers, or the biotech industry. The faculty comprises over 30 high rank Italian and international scientists, whose scientific interests cover a wide range of biomedical topics highly relevant to human health. PhD students in the molecular oncology and pathology track investigate genetic/epigenetic alterations and molecular epidemiology of solid and hematologic cancers, cancer biomarkers of diagnostic and prognostic value, genes involved in the pathogenesis of rare genetic diseases, molecular mechanisms of neurodegeneration, molecular pathogenesis of infectious diseases and interactions of pathogens with the host. PhD students in the nutritional and metabolic sciences track investigate the nutritional and metabolic impact of nutrients in physiological and pathophysiological conditions where the nutritional and / or metabolic component is particularly relevant.</p> <p>The multidisciplinary nature of the research of the Faculty member of the PhD programme will be accomplished through frontal lectures and seminars on topics of oncology, genetics, molecular biology, virology, pharmacology, epidemiology, statistics, nutrition, metabolism, bioinformatics, computational biophysics and omic sciences. There will also be courses in common with other PhD programmes on gender equality, innovation and intellectual property and technology transfer.</p> <p>The training course also includes research stays of 8-18 months in universities or international public or private research centres, to develop the ability to work in different scientific contexts.</p> <p>The preparation achieved at the conclusion of the training course will make the PhD in Molecular and Translational Medicine competitive for post-doc positions in Universities and National and International Research Centres, and/or for admission into academia, in Industries/Public and Private Institutions operating in the biomedical, health and nutrition fields.</p> <p>Training plan articulation:</p> <p>1st year</p> <p>Formulation of the research project and assignment of the Supervisor.</p> <p>Research activities</p> <p>Educational-seminary and activities related to the topic of the thesis and the general themes of the training course (participation in seminars held by the Faculty member of the PhD programme, attendance at scientific congresses, critical analysis of the scientific literature).</p>

	<p>Presentation to the Faculty member of the PhD programme of the results obtained in the first year (Progress Report in seminary form). Annual report 2nd year Research activities. Educational-seminary and activities related to the topic of the thesis and the general themes of the training course (participation in seminars and scientific conferences, critical analysis of the scientific literature, design activities). Internships abroad. Presentation to the Faculty member of the PhD programme of the research activities carried out and the results obtained in the second year (Progress Report in seminary form). Processing of the data and drafting papers describing the scientific work on the project results. Annual report Teaching activities to support in-house students of the Grades I and II degrees (exercises, thesis), and teachers (exams) 3rd year Research activities. Educational-seminary and activities related to the topic of the thesis and the general themes of the training course (participation in seminars and scientific conferences, critical analysis of the scientific literature, design activities). Internships abroad. Presentation to the Faculty member of the PhD programme of the research activities carried out and the results obtained during the three years of doctorate, (Final Report in seminary form). Processing of the data and drafting papers describing the scientific work on the project results. Teaching activities to support in-house students of the Grades I and II degrees (exercises, thesis), and teachers (exams) Thesis (in English) Thesis Dissertation (in English)</p>
<p>ELIGIBILITY AND OTHER REQUIREMENTS FOR CANDIDATES (ART. 2 - NOTICE OF COMPETITION)</p>	<p>LM-6 Biologia LM-9 Biotecnologie mediche, veterinarie e farmaceutiche LM-13 Farmacia e farmacia industriale LM-41 Medicina e chirurgia LM-61 Scienze della nutrizione umana LM-67 Scienze e tecniche delle attivita' motorie preventive e adattate LM-68 Scienze e tecniche dello sport LM-70 Scienze e tecnologie alimentari 6/S (specialistiche in biologia) 9/S (specialistiche in biotecnologie mediche, veterinarie e farmaceutiche) 14/S (specialistiche in farmacia e farmacia industriale) 46/S (specialistiche in medicina e chirurgia) 69/S (specialistiche in scienze della nutrizione umana) 75/S (specialistiche in scienze e tecnica dello sport) 76/S (specialistiche in scienze e tecniche delle attivita motorie preventive e adattative) 78/S (specialistiche in scienze e tecnologie agroalimentari) e tutte le lauree del Vecchio Ordinamento equivalenti.</p>

	Foreign Candidates: Degrees equivalent to those indicated above.
ADMISSION TESTS	ASSESSMENT OF QUALIFICATIONS AND CURRICULUM VITAE, AND VIDEOCONFERENCE INTERVIEW The interview will mainly focus on the presentation and discussion of the candidate's research project (to be written using the form available on the webpage https://unica.it/dottoraticerca - "Instructions for registration to the competition and forms - Annex C"), in order to assess the adequacy of the profile with regard to personal competence in the disciplinary field of the project, aptitude for scientific research and linguistic knowledge (English language).
POSITIONS	2
SCHOLARSHIPS	2 funded by NRRP Ministerial Decree no. 630/2024
CONTACT PERSONS	PROF. ANDREA PERRA EMAIL: andrea.perra@unica.it - TEL. +390706758392 PROF. VALERIA SOGOS EMAIL: sogos@unica.it - TEL. +390706754087
WEBSITE	http://people.unica.it/molecularmedicine/
SCHOLARSHIPS FUNDED BY MINISTERIAL DECREE NO. 630/2024	
SCHOLARSHIP 1 - CUP F22B24000270005	
RESEARCH PROJECT	Study and formulation of Pane Carasau for people with metabolic disorders
PRINCIPAL INVESTIGATOR	Prof. Alberto Angioni
DESCRIPTION OF DOCTORAL TRAINING	The training envisaged for the PhD student includes lectures and seminars on multidisciplinary topics related to nutritional and metabolic sciences, molecular biology and omics. The PhD student will attend courses on gender equality, innovation and valorisation of intellectual property and technology transfer in common with other PhDs. The PhD student will carry out research stays in university centres and industrial companies both in Italy and abroad, in order to facilitate his/her work placement in scientific/industrial contexts. Teaching and research activities will be enhanced by the involvement of Visiting Professors recruited through the University Programme. The website in English will allow the dissemination beyond the Italian borders, improving its visibility, of information concerning the PhD programme, including the research activities of the academic staff and their CVs.
COMPANY	CARAPAN s.r.l. Address: via Po n° 4, Cagliari, Italy Contact person: Luca Picciau
NO. OF MONTHS TO BE SPENT IN THE COMPANY	12
FOREIGN INSTITUTION	Department of Public Health, Section of Social Medicine, Faculty of Health Sciences, University of Copenhagen Address: Øster Farimagsgade 5 1353 København K, Denmark
NO. OF MONTHS TO BE SPENT IN THE FOREIGN INSTITUTION	6
SCHOLARSHIP 2 - CUP F22B24000270005	
RESEARCH PROJECT	Research and Development of Carbon-13-tagged Molecules for Pharmacometabolic Investigations in Molecular and Translational Medicine
PRINCIPAL INVESTIGATOR	Prof. Luigi Atzori
DESCRIPTION OF DOCTORAL TRAINING	It includes lectures and seminars on multidisciplinary topics in molecular biology, nutritional and metabolic sciences, and omics. In addition, joint courses are planned with other PhDs on gender equality and on innovation

	and valorisation of intellectual property and technology transfer. Research stays of PhD students in university and non-university centres, also of an industrial nature, in Italy and abroad, are envisaged, in order to facilitate their job placement in a variety of scientific contexts. Visiting Professors recruited through the University Programme in collaboration with the Autonomous Region of Sardinia will also be involved in teaching and research. The website in English will offer visibility to information concerning the PhD, including the research activities of the academic staff and their CVs.
COMPANY	A Meras Annos s.r.l. Address: via Grazia Deledda 3, Gonnese Contact person: Ing. Antonio Martini
NO. OF MONTHS TO BE SPENT IN THE COMPANY	6
FOREIGN INSTITUTION	The Rowett Institute, University of Aberdeen Address: Foresterhill, Aberdeen AB25 2ZD Aberdeen, Regno Unito
NO. OF MONTHS TO BE SPENT IN THE FOREIGN INSTITUTION	6