



UNIONE EUROPEA  
Fondo Sociale Europeo



Università degli Studi di Cagliari

**International PhD Course in  
MOLECULAR AND TRANSLATIONAL MEDICINE  
in cooperation with Université Laval**

Curriculum 1: Molecular Oncology and Pathology

Curriculum 2: Nutritional and Metabolic Sciences

DISCIPLINARY SCIENTIFIC AREA	06 - MEDICAL SCIENCES; 05 - BIOLOGICAL SCIENCES; 03 - CHEMICAL SCIENCES
COORDINATOR	PROF. SEBASTIANO BANNI
HEAD DEPARTMENT	DEPARTMENT OF BIOMEDICAL SCIENCES
DURATION	3 YEARS
EDUCATIONAL OBJECTIVES AND RESEARCH TOPICS	The three-year program 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 Program has two research tracks, molecular oncology and pathology, and nutritional and metabolic sciences, which together encompass interdisciplinary research and graduate training program 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.
ELIGIBILITY AND OTHER REQUIREMENTS FOR CANDIDATES	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-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) 78/S (specialistiche in scienze e tecnologie agroalimentari) and all the equivalent degrees awarded according to the old Italian Regulations.  Academic qualification issued by a foreign university, comparable in



	duration and content to the Italian titles requested and providing access to PhD courses in the country of achievement, recognized as equivalent degrees in Medicine, Biology, Pharmacy, Biotechnology; Pharmaceutical Chemistry, Human nutrition.
ADMISSION TESTS	ASSESSMENT OF QUALIFICATIONS, CURRICULUM VITAE, WRITTEN TEST AND INTERVIEW. The written exam and the interview can be performed in English.
TOPICS OF WRITTEN TEST	<ul style="list-style-type: none"> <li>- Cell cycle and its alterations in cancer development</li> <li>- Genetic/epigenetic modifications in cancer development</li> <li>- Prognostic/diagnostic tumor markers associated and cell tumor biology</li> <li>- Genes and pathogenesis of rare genetic diseases.</li> <li>- Cellular and molecular interactions between host and pathogens</li> <li>- Immunological, metabolic and/or redox changes in pathological processes</li> <li>- Nutrition and pathophysiology of nervous, endocrine, gastroenterological and cardiovascular system</li> <li>- Effect of dysmetabolic and nutritional changes on adverse effects of therapy</li> </ul>
POSITIONS	6
SCHOLARSHIPS	4 P.O.R. SARDEGNA F.S.E. 2014 - 2020 (AREE DI SPECIALIZZAZIONE D.G.R. N. 43/12 DEL 01.09.2015: 5. BIOMEDICINA; 3. AGRIFOOD); 1 CRS4 PROJECT "Understanding cancer evolution by Next Generation Sequencing". It will be awarded to a candidate successfully positioned in the ranking list, obtaining the best score and a positive evaluation on the adequacy of his/her CV in carrying out the specific research topic connected to this scholarship.
POSITIONS WITHOUT SCHOLARSHIP	1
REFERENCE PERSON	PROF. SEBASTIANO BANNI - EMAIL: <a href="mailto:banni@unica.it">banni@unica.it</a> - TEL. +390706754128 PROF.SSA VALERIA SOGOS - EMAIL: <a href="mailto:sogos@unica.it">sogos@unica.it</a> - TEL. +390706754087.
WEBSITE	<a href="http://people.unica.it/molecularmedicine/">http://people.unica.it/molecularmedicine/</a>