



UNIVERSITÀ
DEGLI STUDI
FIRENZE

Da un secolo, oltre.

DOCTORAL PROGRAMME IN CLINICAL SCIENCES

Director prof. Gian Maria Rossolini

XL cycle – academic year 2024/2025

BIOMEDICAL AREA	
ADMINISTRATIVE OFFICE	Department of Experimental and Clinical Medicine
WEB	www.dmsc.unifi.it/dottorato_in_scienze_cliniche
CURRICULA	<ol style="list-style-type: none">1. Clinical Pathophysiology and Pathophysiology of Aging, Emergency Medicine, and Nursing Sciences2. Clinical and Experimental Medicine and Radiology3. Clinical Medicine and Pathology of Musculoskeletal System and Calcified Tissues4. Anesthesiology, Pain Therapy and Surgical Sciences5. Psychology6. Infectious Diseases and International Cooperation, Global Health and Occupational Medicine
AVAILABLE POSITIONS: 9 Positions with Scholarship: 7 Position without Scholarship: 2* <i>* standard ranking only</i>	
RANKING LIST FOR STANDARD POSITIONS SCHOLARSHIPS AVAILABLE: 6	University of Florence
RANKING LISTS FOR POSITIONS WITH SPECIFIC RESEARCH TOPICS SCHOLARSHIPS AVAILABLE: 1	Department of Experimental and Clinical Medicine Thematic: "The role of big data analysis and artificial intelligence in improving prostate cancer diagnosis and treatment within an international oncologic registry programme"
STUDY/RESEARCH PERIODS ABROAD	3 months
DOCUMENTS REQUIRED FOR THE ADMISSION (under penalty of exclusion)	<ul style="list-style-type: none">● Copy of the Identification Document● Self-declaration for qualifications obtained in Italy (laurea Triennale, Specialistica o Magistrale o ciclo unico) with a list of all exams taken and

	<p>their marks, title of the thesis and graduation mark (download the form here make sure you fill in in all the fields)</p> <ul style="list-style-type: none"> • Qualifications obtained abroad (Bachelor’s and Master Degrees or combined cycle Degree) with a list of all exams taken and their marks, title of the thesis and graduation mark. <p><i>The same documentation except for the final mark must be submitted by those who will graduate by 31/10/2024</i></p>															
DOCUMENTS REQUIRED FOR THE EVALUATION	<p>MANDATORY</p> <ul style="list-style-type: none"> • Curriculum Vitae et Studiorum (European Format) • Research Project • Copy of the M.Sc. Thesis (or equivalent) <p>OPTIONAL</p> <ul style="list-style-type: none"> • Publications and other qualification documents (if any) 															
RESEARCH PROJECT	<p>The Research Project must be written in English in a document containing a maximum of 12,000 characters, including spaces and notes, it must include abstract, introduction, methods, expected results, and references. The Project must refer, in a specific way, to at least one of the topics listed in the "Thematics" section.</p> <p>The candidate can either submit the same research project for the standard positions and for the position with specific research topic or submit several separate projects. The application must, however, clearly specify to which position refers each project.</p>															
INTERVIEW MODE	<p>Remotely (videocall)</p> <p>The interview can be conducted in English language.</p>															
INFORMATION ABOUT THE INTERVIEW	<p>The interview consists of a discussion of the research project for the purpose of evaluating the candidate's research aptitude.</p>															
EVALUATION MARKS	<table border="1"> <thead> <tr> <th>parameter</th> <th>minimum score</th> <th>maximum score</th> </tr> </thead> <tbody> <tr> <td>Curriculum vitae, research project, publications and other qualification documents (if any)</td> <td>40/120</td> <td>60/120</td> </tr> <tr> <td colspan="3">Applicants who obtain a mark of at least 40/120 in the evaluation of the above parameters will be admitted to the interview</td> </tr> <tr> <td>Interview: discussion of the research project to assess applicant’s aptitude for research</td> <td>40/120</td> <td>60/120</td> </tr> <tr> <td colspan="3" style="text-align: center;">Eligibility is achieved with a minimum score of 80/120</td> </tr> </tbody> </table>	parameter	minimum score	maximum score	Curriculum vitae, research project, publications and other qualification documents (if any)	40/120	60/120	Applicants who obtain a mark of at least 40/120 in the evaluation of the above parameters will be admitted to the interview			Interview: discussion of the research project to assess applicant’s aptitude for research	40/120	60/120	Eligibility is achieved with a minimum score of 80/120		
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THEMATICS	<p>Curriculum in Clinical Pathophysiology and Pathophysiology of Aging, Emergency Medicine, and Nursing Sciences</p> <p><u>Nursing area</u></p> <p>1. Organ donation in nursing sciences</p>															

2. Clinical risk in nursing sciences
3. Nursing Management of signs and symptoms

Medical Area

1. Study of the pathogenetic, clinical and therapeutic mechanisms and of the microbiota and its modulation in rare immunovascular, autoinflammatory and metabolic diseases of adults
2. Pathophysiology, risk factors and antithrombotic therapies of atherothrombosis
3. Pathophysiology, risk factors and antithrombotic therapies of venous thromboembolic disease
4. Geriatric pathophysiology and epidemiology
5. Pathophysiology and clinical epidemiology fragility and geriatric syndromes
6. Aging of the vascular system and age-related diseases (cardiological, neurological, vascular): pathophysiology, clinic and rehabilitation
7. Neurodegenerative diseases of the elderly: pathophysiology, clinic and rehabilitation
8. Innovative socio-health approaches for the treatment of the elderly and of geriatric syndromes
9. Innovative organizational models in Emergency Medicine
10. Development of new methodologies of advanced simulation to improve efficiency/efficacy of trauma team

Curriculum in Clinical and Experimental Medicine and Radiology

1. Biological basis (cellular, molecular, genetic, metabolic, microbiologic, hormonal) of immune dysregulation and of related diseases (chronic inflammatory diseases, immunodeficiencies, autoimmunity, cancer)
2. Biomarkers, phenotyping, sex and precision therapies in immune dysregulatory diseases
3. The role of the new MRI (Diffusion, Perfusion) and CT parameters (Perfusion with techniques of reduction of the dose in MultiSlice-CT and ConeBeam-CT) in the pre and post therapy evaluation of the different anatomic areas (neuro and head, heart and chest, abdomen and pelvis)
4. New Imaging techniques in the evaluation of microcirculation of fibrosing autoimmune diseases (skin, lung, musculoskeletal system)
5. Radiomics
6. Genetic basis and clinical/laboratory stratification of common variable of immunodeficiency as prototype of immune dysregulation diseases: infections, autoimmunity, and tumors
7. Predisposing factors, physiopathology, organ involvement and innovative therapeutic approaches to autoimmunity
8. Predisposing factors, physiopathology, and innovative therapeutic approaches in allergic diseases
9. Predisposing factors, physiopathology, and innovative therapeutic approaches in systemic fibrosing autoimmune diseases
10. Study of the relationships between the immune system and the microbiota in the genesis of chronic inflammatory diseases and neoplasia

11. Study of the intratumor and peripheral immune response in solid tumors
12. Translational aspects of chronic hepatopathies and primitive tumors of liver
13. Cancer immunotherapy: strategies of treatment implementation and personalization
14. Oncogenesis and biomarkers of neoplastic evolution secondary to hepatic viruses
15. Crioglobulinemic syndromes and lymphoproliferative disorders in the infections hepatitis virus-related
16. Immunotherapy in autoimmunity and rare immune mediated diseases.
17. New classification and organ involvement in rheumatic diseases

Curriculum in Clinical Medicine and Pathology of Musculoskeletal System and Calcified Tissues

1. Innovative methods of assisted orthopaedic surgery
2. New biomaterials for orthopaedic and trauma surgery
3. Analysis and evaluation of the interaction between biomaterials and bone in prosthetics and traumatology
4. Tumor and pseudotumor pathologies of the musculoskeletal system
5. New technologies in osteoarticular reconstructions in orthopaedic surgery
6. Mineral and bone metabolism in clinical models of calcified tissue diseases
7. Clinic of mineral and bone metabolism pathologies such as primary and secondary osteoporosis, osteomalacia and rare diseases of mineral and skeletal metabolism
8. Translational studies in mineral and bone metabolism disorders
9. Studies of analysis and intervention (nutritional, physiatriac and pharmacological) for primary and secondary prevention of mineral and bone metabolism pathologies
10. Technological innovation in the assessment and rehabilitation treatment of people with disabilities associated with musculoskeletal pathology
11. Artificial intelligence applied to patient stratification and prediction of rehabilitation recovery in the field of musculoskeletal pathology

Curriculum in Anesthesiology, Pain Therapy and Surgical Sciences

1. New techniques and technologies in the field of general, urological, thoracic, cardiac, pediatric, and vascular surgery
2. Molecular precision medicine in the field of oncological pathology of surgical interest
3. Optimization of the surgical procedure in the pre-, intra- and post-operative phases
4. Simulation in learning new surgical techniques
5. Development of transplantation: from immunotherapy to surgery
6. Molecular basis of inflammatory, neuropathic, and oncological pain

	<p>Curriculum in Psychology</p> <ol style="list-style-type: none"> 1. Psychological and/or psychosocial mechanisms implicated in the onset or maintenance of psychological distress, mental disorders and physical illnesses 2. Research methods in clinical and health psychology 3. Psychological interventions in psychological distress, mental disorders and physical illness <p>Curriculum in Infectious Diseases and International Cooperation, Global Health and Occupational Medicine</p> <ol style="list-style-type: none"> 1. Epidemiology, clinical and diagnostic research on emerging and re-emerging infections as a global health issue 2. Parasitic diseases and host response in endemic and non-endemic areas 3. Vector-borne diseases and other emerging infections: one-health approach 4. Antimicrobial resistance as a global problem: one-health approach 5. Allergic diseases and bronchial asthma in mobile populations 6. Emerging risk factors in Occupational Medicine: one-health approach
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EXAMINATION SCHEDULE		
	DATA	ORA
INTERVIEW	July 16 th , 2024	09:00 a.m.
<p>The list of candidates admitted to the interview and the final ranking will be published at the following web page: https://www.unifi.it/p12593</p>		