



DOCTORAL PROGRAM IN CLINICAL SCIENCES

Coordinator Prof. Marco Matucci Cerinic

BIOMEDICAL AREA	
ADMINISTRATIVE OFFICE	Department of Experimental and Clinical Medicine
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 Pathology, in Musculoskeletal Diseases and Calcified Tissues4. Anesthesiology, Pain Therapy and Surgical Sciences5. Psychology6. Global Health, Occupational Health, and International Cooperation on Mobile Populations
AVAILABLE POSITIONS: 12 Positions with Scholarship: 10 Positions without Scholarship: 2* <i>* standard ranking only</i>	
RANKING LIST FOR STANDARD POSITIONS SCHOLARSHIPS AVAILABLE: 9	6 – University of Florence 3 – Department of Experimental and Clinical Medicine – Ministerial Project "Departments of Excellence 2018-2022" with the following topics: <ol style="list-style-type: none">1. "Antimicrobial resistance in the context of migrations and international travels"2. "Cross-linking between immune response and microbiota: the ethnicity impact in the inflammatory-correlated diseases"3. "Novel immunological nano-based tools for tuberculosis and helicobacter diagnosis in migrants and Caucasian patients"
RANKING LIST FOR SPECIFIC RESEARCH TOPICS SCHOLARSHIPS POSITION AVAILABLE: 1	1 – Tuscan Transplantation Organization – Careggi University Hospital <i>"Development of research and teaching regarding organ donation and transplantation"</i>
STUDY/RESEARCH PERIODS ABROAD	Not mandatory
DOCUMENTS REQUIRED FOR THE ADMISSION (under penalty of exclusion)	<ul style="list-style-type: none">• Copy of the Identification Document• <u>Replacement Declaration Form</u> self-declaration for:<ul style="list-style-type: none">- Italian Degree required for the access- transcript of records with marks (<i>for those candidates whose degrees will be awarded within the 31st October 2019</i>)- acknowledgment of compliance for any other qualification documents enclosed with the application• Foreign Degree required for the access (<i>those candidates whose degrees will be awarded within the 31st October 2019 shall enclose the list of the examinations completed with marks</i>)

<p>DOCUMENTS REQUIRED FOR THE EVALUATION</p>	<p>MANDATORY</p> <ul style="list-style-type: none"> • Curriculum Vitae et Studiorum (European Format) • Research Project <p>OPTIONAL</p> <ul style="list-style-type: none"> • Publications and qualification documents if any • List of exams taken for the achievement of the Master of Science (M.Sc.) degree (or equivalent) and related final score, if any • Copy of the M.Sc. Thesis (or equivalent) 															
<p>REFERENCE LETTERS</p>	<p>A section is provided in the online application to specify the e-mail addresses of two professors/researchers willing to provide information about candidates training path and activities performed within a scientific field related to the Ph.D. course.</p>															
<p>RESEARCH PROJECT</p>	<p>The Research Project must be written in English in a document containing a maximum of 12,000 characters, including spaces. It should include: Abstract, Introduction, Methods, Expected Results, and References. The Project must be attributable, in a specific way, to one or more of the topics listed in the "Thematics" section.</p>															
<p>MODALITY OF EVALUATION</p>	<ul style="list-style-type: none"> • Evaluation of the Research Project, the Curriculum, the Publications, any other titles. • Interview <p>As detailed in the section below "Evaluation Marks"</p>															
<p>OTHER LANGUAGE FOR THE EXAMINATION</p>	<p>English</p>															
<p>SKYPE INTERVIEW</p>	<p>YES – possible for foreign residents only</p>															
<p>EVALUATION MARKS</p>	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Maximum score</th> <th>Minimum score</th> </tr> </thead> <tbody> <tr> <td>Evaluation of titles (Curriculum Vitae - Research Project – Publications, and any other titles)</td> <td>30/120</td> <td>60/120</td> </tr> <tr> <td>Interview: discussion of the Project. The following items will be examined: quality, exposing, innovation, internationalization, motivation.</td> <td>30/120</td> <td>60/120</td> </tr> <tr> <td colspan="3">Admission to the interview is subject to the achievement of the minimum overall score of 30/120 relative to the parameters: research project, curriculum, publications, and any other titles</td> </tr> <tr> <td colspan="3">The eligibility is achieved with a minimum score of 60/120</td> </tr> </tbody> </table>	Parameter	Maximum score	Minimum score	Evaluation of titles (Curriculum Vitae - Research Project – Publications, and any other titles)	30/120	60/120	Interview: discussion of the Project. The following items will be examined: quality, exposing, innovation, internationalization, motivation.	30/120	60/120	Admission to the interview is subject to the achievement of the minimum overall score of 30/120 relative to the parameters: research project, curriculum, publications, and any other titles			The eligibility is achieved with a minimum score of 60/120		
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<p>THEMATICS</p>	<p>Curriculum Clinical Pathophysiology and Pathophysiology of Aging, Emergency Medicine, and Nursing Sciences</p> <p><u>Nursing area</u></p> <ol style="list-style-type: none"> 1. Organ donation in nursing sciences. 2. Clinical risk in nursing sciences. 3. Nursing Management of signs and symptoms. <p><u>Medical Area</u></p> <ol style="list-style-type: none"> 1. Pathogenetic and Therapeutic Mechanisms of immunovascular diseases. 															

2. Pathophysiology of atherosclerosis.
3. Mechanisms of action, efficacy and safety of antithrombotic therapy.
4. Pathophysiology of acute coronary syndromes.
5. Atherogenic dyslipidemias: from genetic diagnosis to treatment.
6. Venous thromboembolism: new pathogenetic mechanisms.
7. Biomolecular mechanisms of aging and age-related diseases.
8. Pathophysiology and clinical epidemiology of age-related fragility and disability.
9. Aging of cardiovascular system and age-related cardiomyopathies.
10. Pathophysiology and clinical epidemiology of the cognitive decline in the elderly.
11. The management of major traumas in Italy and Europe.
12. Development of new methodologies of advanced simulation for the implementation of the trauma team efficiency.
13. Pathophysiology of, and new rehabilitation approaches to, freezing of gait in Parkinson's diseases.
14. Rehabilitation interventions based on powered exoskeleton in subjects with spinal cord injury.
15. Rehabilitation approaches to rheumatoid arthritis in older subjects
16. Innovative approaches to rehabilitation of subjects with stroke: action observation therapy, motor imagery, mirror therapy.

Curriculum in Clinical and Experimental Medicine and Radiology

1. Biological basis (cellular, molecular, genetic, metabolic, microbiologic, hormonal) of immune dysregulation (chronic inflammatory diseases, immunodeficiencies, cancer, autoimmunity).
2. Biomarkers, phenotyping, gender and precision therapies in immune dysregulatory diseases.
3. The role of the new MRI (Diffusion, Perfusion, Spettroscopy) 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 skin, lung and microcirculation of fibrosing autoimmune diseases.
5. Skin, lung and musculoskeletal Imaging.
6. The CT post-mortem study: a new imaging tool in forensic medicine.
7. Genetic basis and clinical/laboratory stratification of common variable immunodeficiency as prototype of immune dysregulation diseases, infections, autoimmunity and tumors.
8. Predisposing factors, physiopathology, organ involvement and therapeutic approaches to autoimmunity.
9. Predisposing factors, physiopathology, and innovative therapeutic approaches in allergic diseases.
10. Predisposing factors, physiopathology, and innovative therapeutic approaches in fibrosing autoimmune diseases.
11. Correlation between the immune system and the microbiota in the genesis of chronic inflammatory diseases and neoplasias.
12. Study of the intratumor and peripheral immune response in solid tumors.
13. Translational aspects of chronic hepatopathies and primitive tumors of the liver.
14. Cancer immunotherapy: strategies of treatment implementation and personalization.

15. Oncogenesis and biomarkers of neoplastic evolution secondary to hepatic viruses.
16. Crioglobulinemic syndromes and lymphoproliferative disorders in hepatic viruses infections.
17. Immunotherapy in autoimmunity and rare immune mediated diseases.
18. New classification and organ involvement in rheumatic diseases.

Curriculum in Clinical Pathology, in Musculoskeletal diseases and calcified tissues

1. Computer- and robotic-assisted orthopaedic surgery for joint replacement.
2. New biomaterials for orthopedic surgery and traumatology.
3. Analysis and evaluation of the interaction between biomaterials and bone in orthopaedic surgery and traumatology.
4. Mineral and bone metabolism alterations in clinical models and calcified tissues diseases.

Curriculum in Anesthesiology, Pain Therapy and Surgical Sciences

Surgical area

1. New mini-invasive technology in general, urologic and e vascular surgery.
2. Molecular precision medicine in gastrointestinal oncology.
3. Guided surgery guided by the virtual reality in 3D- D.
4. New technologies in the mini-invasive and conservative surgery in Crohn disease.
5. Optimization of the surgical procedure in the pre-, intra- e postsurgical phase in IBD.
6. Role of simulation in the learning of new surgical techniques.
7. The development of renal trapiantology: from immunotherapy to surgery.
8. Technological innovations in the surgical treatment of benign prostate hypertrophy.
9. Gender dysphoria: from psychological to surgery problems.
10. The role of neuronal and non-neuronal TRP channels in inflammatory neuropatic and oncologic pain.
11. Molecular bases of the GGRP dependent mechanism in the genesis of pain in headache.
12. Advanced surgical treatments for acute and chronic cardiac failure.

Anesthesiology Area

1. Advantges and limits of the use of long term central venous catheterism
2. The pathways of perioperative medicine.
3. Perioperative acute renal damage perioperatorio in high complexity interventions.

Curriculum in Psychology:

1. Psychological and psychosocial mechanisms underlying the onset and the maintenance of psychological distress, psychiatric disorders, and organic disease.
2. Research methods in clinical and health psychology.
3. Psychological interventions in psychological distress, psychiatric disorders, and organic disease.

	<p>Curriculum in Global Health, Occupational Health, and International Cooperation on Mobile Populations</p> <ol style="list-style-type: none"> 1. Epidemiology and clinics of emergent/re-emergent infections in countries with a medium/low income and in mobile/migrant populations. 2. Diagnostic approach of emergent/re-emergent infections in countries with a medium/low income and in mobile/migrant populations. 3. Parasitoses and allergic diseases in developing countries and in mobile populations. 4. Tuberculosis and host response in countries with a medium/low income and in mobile/migrant populations. 5. Allergic diseases in mobile populations. 6. Emerging and Re-Emerging Occupational Risks: Innovative Strategies for Health and Safety Protection of Workers. 7. Workplace Health Promotion (WHP): from Evidence-Based Medicine to Practice.
<p>Further information available at the following web page: https://www.dmsc.unifi.it/vp-26-dottorato-di-ricerca-in-scienze-cliniche.html</p>	

EXAMINATION SCHEDULE			
	DATE	TIME	PLACE
INTERVIEW	26 th June 2019	08:30 a.m.	Nuovo Ingresso Careggi (NIC) Aula Magna Largo Brambilla, 3 -Florence
<p>The list of candidates admitted to the interview and the final competition ranking will be published at the following web page: https://www.unifi.it/p11549.html</p>			