# Doctoral Programme in Clinical Sciences

**Coordinator prof. Marco Matucci Cerinic**

## Biomedical Area

### Administrative Office

Department of Experimental and Clinical Medicine

## Curricula

1. Clinical Pathophysiology and of Aging and Nursing Sciences
2. Clinical and Experimental Medicine and Radiology
3. Pathology and Clinic of the Locomotor Apparatus and the Calcified Tissues
4. Anaesthetic and Surgical Sciences
5. Psychology and Pain Management
6. Global Health and International Cooperation on Mobile Populations

## Positions Available: 14

**Positions with scholarship:** 11  
**Positions without scholarship:** 3*  
*standard ranking only

<table>
<thead>
<tr>
<th>Ranking List for</th>
<th>UNIVERSITY OF FLORENCE – Progetto Ministeriale “Dipartimenti di Eccellenza 2018–2022” with the following thematics:</th>
</tr>
</thead>
</table>
| Standard Positions - scholarships available: 10 | 1. "Epidemiology and clinical features of the emergent and re-emergent infections in resident or migrant latino-american population”  
2. "Diagnostic approach to emergent and re-emergent infections in resident or migrant latino-american population”  
3. "Masté project: from the epidemiological investigation on the prevalence of the two major hepatic viruses, HBV e HCV, in migrants of the florentine area, to the inclusion of infected patients in accessible and fair therapeutic pathways” |
| Tuscan Transplantation Organisation (OTT) – Careggi Hospital |

| UNIVERSITY OF FLORENCE – Fondo Pluriennale Piano Strategico 2018 “Paleopathology: Characterisation of the human paleomicrobiome and the immune response through the development of silico interaction models” |
| Tuscan Transplantation Organisation (OTT) – Careggi Hospital |

## Reserved Positions

No

## Study/Research Periods Abroad

Not required

## Documents to Be Enclosed with the Application

### Mandatory Documents

- Copy of the Identification Document
- Replacement Declaration Form
- Curriculum vitae et studiorum
- Research project

### Optional Documents

- Publications and any other qualification documents
REFERENCE LETTERS

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.

RESEARCH PROJECT

The project must be in English (maximum 12,000 characters with spaces included) with the following outline:
- summary
- background
- aims and objectives
- methodology
- expected results
- references

The project needs to address one of the specific thematics of the Ph.D. programme. At evaluation the following elements will be considered: quality, presentation, innovation, internationalisation.

MODALITY OF EVALUATION

- Evaluation of curriculum vitae, research project, publications and other qualification documents
- Interview as detailed in the section below “Evaluation Marks”

OTHER LANGUAGE FOR THE EXAMINATION

English

SKYPE INTERVIEW

NO

EVALUATION MARKS

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>curriculum vitae, publications and other qualification documents, research project</td>
<td>30/100</td>
<td>50/100</td>
</tr>
</tbody>
</table>

Applicants who obtain a score of at least 30/100 in the evaluation of the above parameters will be admitted to the interview.

| Interview: discussion of the research project | 30/100 | 50/100 |

Eligibility is achieved with a minimum score of 60/100

THEMATICS

Curriculum in Clinical physiopathology, aging and nursing sciences

Nursing area
1. Organ donation in nursing sciences
2. Clinical risk in nursing sciences
3. Nursing Management of signs and symptoms

Medical Area
1. Pathogenetic and Therapeutic Mechanisms of immunovascular diseases
2. Physiopathology of atherosclerosis
3. Mechanisms of action, efficacy and safety of antithrombotic therapy
4. Physiopathology of acute coronary syndromes
5. Atherogenic dyslipidemias: from the genetic diagnosis to the treatment
6. Venous thromboembolic disease: new pathogenetic mechanisms
7. Aging and age correlated disease biomolecular mechanisms
8. Physiopathology and clinical epidemiology of age correlated fragility and disability
9. Aging of cardiovascular system and age correlated myocardiopathies
10. Physiopathology 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

Curriculum in Clinical and Experimental Medicine and Radiology:
1. The biological bases (cellular, molecular, genetic, metabolic, microbiologic, hormonal) of immune disregulaed diseases (chronic inflammatory diseases, immunodeficiencies, cancer, chronic autoimmunity)
2. Biomarkers phenotipization, gender and precision therapies in immunodisregulated diseases
3. The role of the new MRI (Diffusion, Perfusion, Spectroscopy) 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. Study of genetic bases and clinical/laboratory stratification of common variable immunodeficiency as prototype of immunodisregulation diseases, infections, autoimunity and tumors
6. Predisposing factors, physiopathology, organ involvement and therapeutic approaches to autoimmunity
7. Predisposing factors, physiopathology, and innovative therapeutic approaches in Allergic diseases
8. Predisposing factors, physiopathology, and innovative therapeutic approaches in fibrosing autoimmune diseases
9. Study of the correlation between the immune system and the microbiota in the genesis of chronic inflammatory diseases and neoplasias
10. Study of the intratumoral and peripheric immune response in solid tumors
11. Translational aspects of chronic hepatopathies and primitive tumors of the liver
12. Cancer immunotherapy: strategies of implementation and personalisation of the treatment
13. Oncogenesis and biomarkers of neoplastic evolution secondary to hepatic viruses
14. Crioglobulinemic syndromes and lymphoproliferative disorders in hepatic viruses infections
15. Immunotherapy in autoimmune and rare immunemediated diseases
16. New classification and organ involvement in rheumatic diseases

Curriculum in Clinical Pathology, in Musculoskeletal diseases and calcified tissues
1. Innovative surgical methodologies of prosthetic surgery
2. Biomaterials for orthopedic surgery
3. Analysis and evaluation of prostheses interaction
4. Mineral and bone metabolism in clinical models of the diseases of the calcified tissues
Curriculum in Anesthesiology and Surgery

**Surgical area**
1. New miniinvasive technology in general, urologic and vascular surgery
2. Molecular precision medicine in gastrointestinal oncology
3. Guided surgery guided by the virtual reality in 3D-D
4. New technology in the miniinvasive and conservative surgery in Crohn disease
5. Optimization of the surgical procedure in the pre-, intra- and postsurgical phase in IBD
6. Role of simulation in the learning of new surgical techniques
7. The development of renal transplantology: from immunotherapy to surgery
8. Technological innovations in the surgical treatment of benign prostate hypertrophy
9. Gender dysphoria: from psychological to surgery problems

**Anesthesiology Area**
1. Advantages 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 and Pain Therapy

1. The role of neuronal and non-neuronal TRP channels in inflammatory neuropathic and oncologic pain
2. Molecular bases of the GGRP dependent mechanism in the genesis of pain in headache
3. Psychological and Psychosocial mechanisms implicated in the onset and maintenance of pain and disease
4. Research methods in clinical and health psychology
5. Psychological interventions in chronic and non-chronic pain disturbances

Curriculum in global health and International cooperation on mobile populations

1. Epidemiology and clinics of emergent/reemergent infections in countries with a medium low income and in mobile/migrant populations
2. Diagnostic approach emergent/reemergent infections in countries with a medium low income and in mobile/migrant populations
3. Parasitoses and allergic diseases in countries in development 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

Further information available at the following web page:
https://www.dm.sc.unifi.it/vp-319-nuova-pagina-dottorato.html

---

**EXAMINATION SCHEDULE**

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>PLACE</th>
</tr>
</thead>
</table>
| 18 September 2018 | 8:30 a.m. | CUBO  
Viale Pieraccini, 6 – Florence  
“Aula Piccola” |

The list of candidates admitted to the interview and the final ranking will be published at the following web page: https://www.unifi.it/p11361.html