



## TRASLATIONAL MEDICAL AND SURGICAL SCIENCES

<b>Cycle</b>	<b>XXXV</b>
<b>Coordinator</b>	Prof. Carlo FERRARI Department of Medicine and Surgery email: <a href="mailto:carlo.ferrari@unipr.it">carlo.ferrari@unipr.it</a>
<b>Duration</b>	3 years
<b>Starting date of the PhD program</b>	01/11/2019

### Research Topics

1. Stem cells in diagnosis and treatment of neoplasia, chronic and degenerative disorders, cardiovascular, bone, joint and muscle diseases.
2. Translational medicine and immunologic dysregulation of respiratory, digestive, skin, infectious, endocrine, and kidney diseases and of vasculitis.
3. Plasticity, function and diagnostic-therapeutic use of genomic, transcriptomic, proteomic and metabolomic platforms of cells, organs and tissues to prevent or treat neoplasia, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetric-neonatal diseases as well as in response to environmental factors, lifestyles and pharmaceuticals.
4. Development and “theranostic” function of technologically advanced imaging and phenotyping platforms to prevent or treat neoplasia, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetric-neonatal illnesses as well as in response to environmental factors, lifestyles and pharmaceuticals.
5. Development and application of technologically advanced devices and/or biological tools, to measure and support and/or to replace the function of cells, tissues or organs in medical and/or surgical diseases.
6. Advanced and innovative strategies for recovery and functional rehabilitation to prevent or treat neoplasia, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetric-neonatal illnesses as well as in response to environmental factors, lifestyles and pharmaceuticals.
7. Roles of governance and organization of healthcare systems and services in the prevention and care of socially and economically highly relevant disorders, including, but not limited to, environmental and professional diseases.
8. Role of microbiota and microbiome in translational medicine and surgery.
9. Retrieval and role of “big data” in translational medicine and surgery.
10. Role of advanced technologies, including robotics, in translational surgery.

### Training Objectives

The PhD Program in Translational Medical and Surgical Sciences is a typical multidisciplinary PhD program, in which the common denominator among most diverse research pathways is the critical transition from bench to bedside, i.e. clinical application in real patients. This close link between bench research and clinical research will expedite the transfer of experimental discoveries and methods to clinical practice. The close contact with clinical activity will allow the PhD students to face also real problems in the clinical arena, ranging from diagnosis to treatment and from prevention to rehabilitation, all of which are deeply involved in human disease and in patient care. The fast, two-way exchange between clinics and lab will bring back to the lab the results of clinical and epidemiological observations, closely linking experimental research to questions and goals stemming directly from real world data and unmet needs of the patient. The final goal of the PhD Program in Translational Medical and Surgical Sciences, therefore, is to provide a highly qualifying PhD educational pathway, offering the students top notch opportunities, know-how and technological tools and enabling them to carry out cutting edge translational research in national or foreign, public or private Institutions, including, but not limited to, Universities, Research Centers and PharmaMed Industries.



## Admission requirements

Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:

- Laurea specialistica or Laurea magistrale (second cycle master's degree)
- Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);
- Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs

Undergraduate applicants may also submit applications with the obligation of getting their degree by **October 31<sup>st</sup> 2019**.

### POSITIONS PUT OUT TO COMPETITION

<b>With Scholarship</b>	7
<b>Without Scholarship</b>	2
<b>Reserved to holders of Research Grant</b>	1
<b>Reserved to holders of scholarship within specific international mobility programs</b>	2
<b>TOTAL</b>	<b>12</b>

### Positions with University Scholarship

N°	<i>Funding entity</i>	<i>Research Topic, if any</i>
<b>3</b>	Scholarship Ministry funds	---
<b>1</b>	Scholarship University funds	---
<b>1</b>	Scholarship co-funded by Fondazione Cariparma	---

### Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Call for applications)

During the Written Exam, applicants may express their interest in being assigned a scholarship dedicated to a specific research topic to the Examination Board. The Board will express its judgement on eligibility to be assigned the scholarship in consideration of the specific competences, experience and specific aptitudes of the applicants.

N°	<i>Funding entity</i>	<i>BOUND RESEARCH TOPIC</i>
<b>1</b>	Funded by the Department of Medicine and Surgery	<ul style="list-style-type: none"> <li>• Models of bio-psycho-socio spiritual and environmental medicine in the primary health care in different cultural settings</li> </ul>
<b>1</b>	Funded by Azienda USL di Piacenza	<ul style="list-style-type: none"> <li>• Objective evaluation of "listening effort"</li> </ul>

### Position reserved to holders of Research Grant

N°	<i>Subject area of the research</i>
<b>1</b>	International collaboration between advanced health care systems and less performing systems on the quality of primary health care



Position reserved to holders of scholarship within specific international mobility programs	
N°	<i>Agreements/Cooperations/Mobility Programs</i>
2	Reserved for scholarship holders under the program, promoted by the Italian Agency for Development Cooperation (AICS) with resolution no. 169 of 12.21.2017, called "The Partnership for Knowledge" (AID 11374)
<b>ADMISSION PROCEDURES</b>	
<b>Assessment of QUALIFICATIONS:</b> up to 30 points <b>WRITTEN EXAM:</b> up to 60 points <b>ORAL EXAM:</b> up to 30 points <b>Minimum score for ELIGIBILITY:</b> 70/120	
<b>ADMISSION PROCEDURES for positions reserved to scholarship holders within specific international mobility programs</b>	<b>Assessment of QUALIFICATIONS: up to 120 points</b> <b>Minimum score for ELIGIBILITY: 70/120</b>
<b>Foreign Language</b>	Language fluency which shall be assessed during the Oral Exam: <b>ENGLISH</b> . The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.
<b>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</b>	
<b>Mandatory documents to be attached to the on-line application</b>	
<ul style="list-style-type: none"> <li>– <b>ANNEX A</b> (art. 5 of the Call for Applications)</li> <li>– Scanned Copy of a <b>valid identification document</b> with photo</li> <li>– <b>Curriculum Vitae et studiorum</b> (art. 4 of the Call for Applications)</li> <li>– <b>Abstract of the second cycle master's degree thesis.</b> Undergraduate applicants may submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)</li> <li>– <b>Certificates and academic transcript of records for both Bachelor' and Master' degrees</b> containing the following details for each degree held: (art. 4 of the Call for Applications):               <ul style="list-style-type: none"> <li>○ University that granted the degree</li> <li>○ Type of degree (first cycle/second cycle/single cycle)</li> <li>○ Name of the degree program</li> <li>○ Date of graduation</li> <li>○ Final mark</li> <li>○ List of exams and corresponding scores (academic transcript of records)</li> <li>○ Translation into Italian or English (only for degrees issued in languages other than Italian or English)</li> </ul> </li> </ul>	
<b>Further qualifications that may be attached to the application, if in possession of the applicant</b> (only qualifications attested by a document drawn up in Italian or in English)	
<ul style="list-style-type: none"> <li>– <b>Research Project:</b> The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focused on an original research topic and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results, argumentation;  <u>it does not represent a constraint with respect to the following choice of the doctoral thesis</u>, that shall be defined together with the supervisor and approved by the Academic Board;</li> </ul>	



- **Statement of Research Interest:** Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests;
- **Scientific Publications:** Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.
- **Reference Letters:** a maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities (The candidate must upload them through the procedure of the competition online registration)
- **Academic qualifications:** First or Second level Master's degree and/or specialization degree in subjects consistent with the research topics of this PhD program;
- **Mobility experience abroad** (e.g. Erasmus or similar);
- **Any other document** certifying the applicant's training and abilities (grants, awards, etc.)

## EVALUATION CRITERIA

QUALIFICATION	EVALUTATION CRITERIA	POINTS
<b>Curriculum Vitae et studiorum</b>	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark	<b>Up to 6 points</b>
<b>Graduation mark</b>	Score related to the final mark: - 110 with honours (magna cum laude): 4 points - 110: 3 points - From 106 to 109: 2 points - From 102 to 105: 1 point	<b>Up to 4 points</b>
<b>Average of the exam marks</b> (if the candidate will attain the degree no later than 31 October 2019)	Score related to the average of the exam marks: - 30/30: 4 points - From 28/30 to 29/30: 3 points - From 26/30 to 28/30: 2 points - From 24/30 to 25/30: 1 point	<b>Up to 4 points</b>
<b>Graduation thesis</b>	Consistency of the Master's Degree thesis with the doctoral program research topics	<b>Up to 1 point</b>
<b>Research Project</b>	Points relating to the research project shall be allocated on the basis of the following criteria: ○ Scientific value and ground-breaking nature of the proposal: max 6 points ○ description and structure of the proposal: 1 point ○ proposal feasibility: 1 point	<b>Up to 8 points</b>
<b>Statement of Research Interest</b>		<b>Up to 1 point</b>
<b>Scientific publications</b>	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc	<b>Up to 5 points</b>
<b>Reference Letters</b>	written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities	<b>Up to 2 points</b>
<b>Other qualifications</b>	Grants, mobility experience abroad, awards, internships, etc	<b>Up to 3 points</b>



WRITTEN EXAMINATION	EVALUATION CRITERIA	POINTS
The WRITTEN EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul style="list-style-type: none"> <li>○ good argument about the project and clear presentation: up to 10 points</li> <li>○ scientific relevance: up to 10 points</li> <li>○ methodological and/or technological innovation: up to 10 points</li> <li>○ Experimental design: up to 10 points</li> <li>○ Translationality: up to 10 points</li> <li>○ Feasibility: up to 10 points</li> </ul>	<b>Up to 60 points</b>
ORAL EXAMINATION	EVALUATION CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul style="list-style-type: none"> <li>○ good argument about the project: up to 10 points</li> <li>○ Discussion of the critical points of the project: up to 8 points</li> <li>○ Framing of the project in the field of knowledge of the sector: up to 5 points</li> <li>○ Ability to mitigate risks deriving from unexpected results: up to 5 points</li> <li>○ knowledge of the foreign language: up to 2 points</li> </ul>	<b>Up to 30 points</b>
LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT Positions reserved to scholarship holders within specific internationale mobility programs		
<b>Curriculum Vitae et studiorum</b>	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark	<b>Up to 25 points</b>
<b>Graduation thesis</b>	Consistency of the Master's Degree thesis with the doctoral program research topics	<b>Up to 5 points</b>
<b>Research Project</b>	Points relating to the research project shall be allocated on the basis of the following criteria: <ul style="list-style-type: none"> <li>○ Scientific value and ground-breaking nature of the proposal: max 25 points</li> <li>○ description and structure of the proposal: max 5 points</li> <li>○ proposal feasibility: max 5 points</li> </ul>	<b>Up to 35 points</b>
<b>Statement of Research Interest</b>	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	<b>Up to 5 points</b>
<b>Scientific Publications</b>	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc	<b>Up to 25points</b>
<b>Reference Letters</b>	Written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities	<b>Up to 10 points</b>
<b>Other qualifications</b>	Grants, mobility experience abroad, awards, internships, language certificates, etc	<b>Up to 15 points</b>



## SCHEDULE OF THE ADMISSION EXAMS

<b>WRITTEN EXAM</b>	<b>DATE</b>	13 September 2019
	<b>TIME</b>	09:00 am
	<b>PLACE</b>	Department of Medicine and Surgery Building 26 – Internal Medicine CLASSROOM Via A. Gramsci, 14 - 43126 PARMA - ITALY
<b>ORAL EXAM</b>	<b>DATE</b>	13 September 2019
	<b>TIME</b>	03.00 pm
	<b>PLACE</b>	Department of Medicine and Surgery Building 26 – Internal Medicine CLASSROOM Via A. Gramsci, 14 - 43126 PARMA - ITALY
<b>OTHER INFORMATION</b>	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	