



## TRASLATIONAL MEDICAL AND SURGICAL SCIENCES

<b>CYCLE</b>	<b>XXXIX</b>
<b>COORDINATOR</b>	Prof. Nicola SVERZELLATI email: <a href="mailto:nicola.sverzellati@unipr.it">nicola.sverzellati@unipr.it</a> Department of Medicine and Surgery
<b>DURATION</b>	3 years
<b>STARTING DATE OF THE PHD PROGRAM</b>	01/01/2024
<b>TRAINING OBJECTIVES</b>	
<p>The PhD Program in Translational Medical and Surgical Sciences is a multidisciplinary program, in which the common denominator of the various research activities conducted by the PhD students is represented by the application of the acquired knowledge to clinical practice. In fact, the close link between preclinical and clinical research will allow discoveries and methodological skills acquired through experimental studies to be transferred into medical practice. Such a link will enable PhD students to deal with real problems, ranging from diagnosis to therapy and from prevention to rehabilitation, all of which deeply connected with human diseases and patient care.</p> <p>The bidirectional exchange between lab and clinical research will bring back to the lab the results of clinical and epidemiological observations, and at the same time it will anchor experimental research to issues that originate from real-world inputs and tests carried out directly on humans.</p> <p>Therefore, the final goal of the PhD Program in Translational Medical and Surgical Sciences is to provide a highly qualifying training to the PhD students, offering them opportunities, skills and technological resources necessary to practice translational research at a high level in either public or private Institutions, national or international, including, but not limited to, Universities, Research Institutes and PharmaMed Industries.</p>	
<b>RESEARCH TOPICS (The applicant <b>MUST</b> indicate one research topic in the ANNEX A)</b>	
<ol style="list-style-type: none"><li>1. Stem cells in the diagnosis and treatment of neoplasms, chronic and degenerative disorders, cardiovascular diseases and musculoskeletal diseases;</li><li>2. Translational medicine and immunologic dysregulation of gastrointestinal, respiratory, infective, haematological, oncological, endocrinological, nephrological and dermatological diseases, and of vasculitis;</li><li>3. Plasticity, function and diagnostic-therapeutic use of genomic, transcriptomic, proteomic and metabolomic platforms of cells, organs and tissues to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;</li><li>4. Development and “theragnostic” function of imaging and technologically advanced phenotyping platforms to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;</li><li>5. Development and application of technologically advanced devices (i.e. biological devices), to measure and support and/or replace the function of cells, tissues or organs in medical and/or surgical diseases;</li><li>6. Advanced and innovative strategies for recovery and functional rehabilitation to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;</li><li>7. Role of governance and organization of healthcare systems and services in the prevention and care of disorders with a potentially high social and economic impact, including, but not limited to, environmental and professional diseases;</li><li>8. Role of microbiota and microbiome in translational medicine and surgery;</li><li>9. Retrieval and role of “big data” in translational medicine and surgery;</li><li>10. Role of advanced technologies, including robotics, in translational surgery;</li><li>11. Role of qualitative and quantitative imaging in the diagnosis of neoplasms, infections and chronic degenerative diseases.</li></ol>	



<b>ADMISSION REQUIREMENTS</b>	<p>Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:</p> <ul style="list-style-type: none"> <li>– Laurea specialistica or Laurea magistrale (second cycle master's degree)</li> <li>– Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);</li> <li>– Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program</li> </ul> <p>Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by <b>31.12.2023</b></p>
-------------------------------	---

<b>POSITIONS PUT OUT TO COMPETITION*</b>		<b>7</b>
<b>(Modified by Rector Decree n. 2106 of 02.11.2023 and by Rector Decree n. 2160 of 13.11.2023)</b>		
<b>With Scholarship</b>		<b>6</b>
Reserved to holders of scholarship funded by foreign States		<b>1</b>
Position with Scholarship		
N°	Funding entity	Research Topic, if any
2	Scholarship funded by University of Parma (Ministerial funds)	---
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Competition notice) <b>(Modified by Rector Decree n. 2106 of 02.11.2023 and by Rector Decree n. 2160 of 13.11.2023)</b>		
N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (Prof. Lauretani funds PRIN2020 CUP D95F2200042001)	Sarcopenia and motoric frailty in older persons
1	Scholarship funded by Department of Medicine and Surgery (funds Prof. Missale Project 2022STZ583 PNRR-M4C2-I1.1 - PRIN 2022 CUP D53D23001930006 e funds Prof. Ferrari FERRARI_2021_CT_AOUPR_TOSCANALIFE) 	Strategies for Natural Killer lymphocyte response enhancement in immunotherapy of hepatocellular carcinoma
1	Scholarship funded by Department of Medicine and Surgery (Project PRIN 2022-PNRR "ADVANCE - Accelerated Diagnosis and non-inVasive strategies for AN early prediCtion of malignant transformation in hEreditary cancer predisposition syndrome: from NF1-associated benign precursor lesion to Malignant Peripheral Nerve Sheath Tumor (MPNST)" cod. CUP D53D23016670001) 	Genomic analysis for the comprehension and monitoring of Mendelian and complex genetic disorders
1	Scholarship funded by Department of Medicine and Surgery (Project PRIN 2022-PNRR "Effectiveness of a tiered strategy including screening and mobile app intervention for children with symptoms of long COVID-19: a territorial-based, randomized controlled trial (R.E.C.O.V.E.R.) cod. CUP D53D23001960006) 	Long Covid in pediatric age



Position reserved to HOLDERS OF SCHOLARSHIP FUNDED BY FOREIGN STATES	
N°	University or Foreign State
1	Reserved to holders of University of Rwanda

## ADMISSION PROCEDURES

**ASSESSMENT OF QUALIFICATIONS:** up to 45 points

**ORAL EXAM:** up to 75 points

**MINIMUM SCORE FOR ELIGIBILITY:** 70/120

<b>Foreign Language</b>	Language the fluency of which shall be assessed during the Oral Exam The knowledge of the English language will be assessed orally and will consist in reading and translating a scientific text	<b>ENGLISH</b>
-------------------------	---	----------------

**ORAL EXAMINATION INDICATION:** Applicants admitted to the ORAL EXAM can take it **in PRESENCE**.

**THE INTERVIEW MAY BE HELD ALSO IN ENGLISH**

## LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

### MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

<b>ANNEX A</b>	(art. 5 of the Competition notice)
<b>Identification Document</b>	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae et studiorum</b>	No specific CV format is required (see art. 4 of the Competition notice)
<b>Abstract of degree thesis</b>	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)
<b>Academic Qualifications</b>	<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 Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).
<b>Research Project</b>	The research project, written in Italian or in English according to the attached format, shall be focused on an original research topic ( <b>unpublished, developed personally by the applicant. It should be noted that the Examination Board can use IT tools to verify the originality of the submitted Project</b> ) and structured as follows: scientific context, significance of the problem, expected results. <u>The research project does not represent a constraint with respect to the following choice of the doctoral thesis</u> , that shall be defined with the supervisor and approved by the Academic Board.

### LIST OF EVALUABLE QUALIFICATIONS

(only qualifications attested by a document drawn up in Italian or in English)

<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 9 points</b>
--------------------------------------	--	-----------------------



<b>Graduation mark</b>	Score assignable for the final mark: - 110 with honours (magna cum laude): 5 points - 110: 3 points - From 106 to 109: 2 points - From 102 to 105: 1 point	<b>Up to 5 points</b>
<b>Average of the exam marks</b> (if the applicant will attain the degree no later than 31 <sup>st</sup> December 2023)	Score assignable for the average of the exam marks: - 30/30: 5 points - From 28/30 to 29/30: 3 points - From 26/30 to 27/30: 2 points - From 24/30 to 25/30: 1 point	<b>Up to 5 points</b>
<b>Graduation thesis</b>	Congruence with the research topics of the PhD course and quality of the research methodology	<b>Up to 2 points</b>
<b>Research Project</b>	Score assignable for the research project: <ul style="list-style-type: none"> <li>• Scientific value and ground-breaking nature of the proposal: max 8 points</li> <li>• Description and structure of the proposal: max 2 points</li> <li>• Proposal feasibility: 1 point</li> <li>• Congruence with the training objectives of the PhD program: 1 point</li> </ul>	<b>Up to 10 points</b>
<b>Statement of Research Interest</b>	Short text – maximum 1 page – in Italian or in English, aimed at explaining the applicant's reasons to attend the PhD program and at describing her/his specific research interests.	<b>Up to 1 point</b>
<b>Scientific Publications</b>	Articles and/or reviews published on peer-reviewed scientific journals, abstracts of papers or posters presented at conventions or meetings; book chapters, etc.	<b>Up to 9 points</b>
<b>Reference Letters</b>	A maximum of 2 letters, written by Professors or Researchers from the applicant's University or from other Universities or from experts in the research field working in public or private research facilities. The reference letters must be produced on the letterhead of the University/Operating Unit/Structure of the Referee and attached to the online application by the applicant.	<b>Up to 3 points</b>
<b>Other Academic qualifications</b>	<ul style="list-style-type: none"> <li>• Second level Master's degree and Specialization: 3 points</li> <li>• First level Master's degree and/or Advanced training and/or specialization and/or Higher Education course: 1 point</li> </ul>	<b>Up to 3 points</b>
<b>Other experiences (training, work, research, teaching, etc.)</b>	<ul style="list-style-type: none"> <li>• Research activities (basic, applied, translational, etc.) carried out in any way, including those covered by research grant, and conducted as a staff member of research units</li> <li>• Working activity</li> <li>• Activities at accredited laboratories</li> <li>• Professional and/or training internship</li> <li>• Language proficiency certificates</li> <li>• Periods of study abroad, outside the country of origin (e.g. Erasmus or similar programmes)</li> </ul> Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)	<b>Up to 3 points</b>
<b>ORAL EXAM</b>		
<b>Interview Program</b>	<b>Evaluation CRITERIA</b>	<b>POINTS</b>
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>• Ability to argument the project proposal: up to 30 points</li> <li>• Discussion of the critical points of the project: up to 18 points</li> <li>• Ability to provide an adequate scientific context to the project proposal: up to 15 points</li> <li>• Ability to mitigate risks deriving from unexpected results: up to 10 points</li> <li>• Knowledge of the English language: up to 7 points</li> </ul>	<b>Up to 75 points</b>



## SCHEDULE OF THE ADMISSION EXAMS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <http://unipr.esse3.cineca.it/Home.do> in the days preceding the date of the Oral Exam.

<b>ORAL EXAM</b>	<b>DATE</b>	21 November 2023
	<b>TIME</b>	10:00 AM (Italian Time)
	<b>PLACE</b>	Aula 9 c/o Aule Nuove – Polo Gramsci Via A. Gramsci 14 43126 PARMA - ITALY
<b>ALTRE INDICAZIONI</b>	<p>The choice of the research field to be expressed in Annex A does not have a binding nature on the assignment of the research project, but has the purpose of assessing the candidates' skills during the admission exam. <u>The PhD research topic</u> will be defined with the supervisor and approved by the Academic Board.</p> <p>For foreign applicants it will be possible to carry out the oral exam in English, whereas for Italian applicants it will be possible to take it in either Italian or English.</p>	