





TRASLATIONAL MEDICAL AND SURGICAL SCIENCES	
CYCLE	XLI
COORDINATOR	Prof. Gabriele MISSALE email: <a href="mailto:gabriele.missale@unipr.it">gabriele.missale@unipr.it</a> Department of Medicine and Surgery
DURATION	3 years
STARTING DATE OF THE PHD PROGRAM	01/11/2025
POSITIONS PUT OUT TO COMPETITION	<b>12 (Modified with Rector Decree no. 1254 of July 18, 2025)</b>
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Test in PRESENCE
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission: <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> Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree <b>by 31.10.2025</b>
<b>TRAINING OBJECTIVES</b>	
<p>The PhD Program in Translational Medical and Surgical Sciences is designed as a multidisciplinary doctorate, where the common denominator of the various research activities carried out by the PhD students is the application of acquired knowledge to clinical practice. Indeed, the close connection between preclinical and clinical research will enable the transfer of discoveries and methodological skills gained through experimental studies into medical practice. This will allow PhD students to address real-world issues, ranging from diagnosis to therapy and from prevention to rehabilitation—all of which, however, relate to human pathology and patient care.</p> <p>The bidirectional exchange between laboratory research and clinical practice will feed clinical and epidemiological observations back into the lab, while simultaneously anchoring experimental research to topics originating from direct human input and validation.</p> <p>Therefore, the ultimate goal of the PhD Program in Translational Medical and Surgical Sciences is to train highly qualified researchers, providing them with the opportunities, skills, and technological resources needed to conduct high-level translational research within public or private institutions, both nationally and internationally. These include, but are not limited to, universities, research institutes, and PharmaMed industries.</p>	
<b>RESEARCH AREAS</b>	
<ol style="list-style-type: none"><li>1. Stem cells in the diagnosis and treatment of neoplasms, chronic and degenerative diseases, cardiovascular disorders, and musculoskeletal pathologies;</li><li>2. Translational medicine and immunological dysregulation of digestive, respiratory, infectious, hematological, oncological, endocrinological, nephrological, dermatological diseases and vasculites;</li><li>3. Plasticity, function, and diagnostic-therapeutic use of genomic, transcriptomic, proteomic, and metabolomic platforms in cells, organs, and tissues for prevention or management of neoplasms, infections, genetic diseases, chronic, metabolic, and degenerative disorders, obstetric-neonatal conditions, and in response to environmental factors, lifestyle, and drugs;</li><li>4. Development and "theranostic" function of advanced imaging and phenotyping platforms for prevention or management of neoplasms, infections, chronic, metabolic, and degenerative diseases, obstetric-neonatal conditions, and in response to environmental factors, lifestyle, and drugs;</li><li>5. Development and application of technologically advanced devices, including those of biological composition or origin, for measuring, supporting, or replacing the function of cells, tissues, and organs in medical and surgical diseases;</li></ol>	



6. Advanced and innovative strategies for functional recovery and rehabilitation in prevention or management of neoplasms, infections, chronic, metabolic, and degenerative diseases, obstetric-neonatal conditions, and in response to environmental factors, lifestyle, and drugs;
7. Role of governance and organization in healthcare systems and services for the prevention and treatment of diseases with major social and economic impact, including environmental and occupational diseases;
8. Role of the microbiota and microbiome in translational medicine and surgery;
9. Extraction and role of "big data" in translational medicine and surgery;
10. Role of advanced technologies, including robotics, in translational surgery;
11. Role of qualitative and quantitative imaging in the diagnosis of neoplasms, infections, and chronic-degenerative diseases.

Position with Scholarship		
N°	Funding entity	Research Topic, if any
1	Scholarship funded by University of Parma (Ministerial funds)	
1	Scholarship co-funded by Fondazione Cariparma	
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)		
* Modified with Rector Decree no. 1254 of July 18, 2025		
N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholarship partly financed with UNIVERSITY funds and co-financed by AIL PARMA ODV	Dissecting the role of PA2G4 in acute Myeloid Leukemia
1	Scholarship partly financed with UNIVERSITY funds and co-financed by Amsterdam UMC – Department Lab. Medical Oncology (LabMO)	Studies of new therapeutic approaches to overcome resistance to targeted agents in pancreatic and lung cancer
2	Scholarship funded by Department of Medicine and Surgery (funds Project no. 3592 ARALDI_2023_HUMANTECHNOPOLE_BRIDGING, CUP D93C23000820005)	<ul style="list-style-type: none"> <li>Interactome and gene regulatory networks of cholesterol biosynthesis intermediates</li> <li>Peptide amidation in GLP-1 secretion and in mechanisms of resistance to GLP-1 receptor agonists</li> </ul>
2	Scholarship funded by Department of Medicine and Surgery (funds ARALDI_2024-HORIZON-EUROPE_ERC-2024-STG Project GLP1RES G.A. no. 101164006 CUP D93C24002190006)	
1	Scholarship funded by Interdepartmental Microbiome Research Center "Microbiome Research Hub" (funds Project HE EIC Pathfinder Precision Nutrition: MENTORING: "assessing malnutrition and metabolic health in non-communicable diseases through precision Nutrition: impact in quality of life and prognosis of lung cancer patients" G.A. no. 101162297 CUP D97G24000120006) 	Evaluation of metabolic and nutritional aspects in the context of lung cancer disease and their prognostic and predictive correlation of treatment efficacy
1	Scholarship funded by EMILIA ROMAGNA REGION (- PR.FSE + 2021/2027 – DGR n. 344 del 10/03/2025) CUP D92J25000110002 	Transcriptomic trajectories of blood cells as early predictors of cardiometabolic diseases in the Barilla Offspring longitudinal cohort study



1	Scholarship partly financed by Department of Medicine and Surgery and co-financed by the Company Amgen S.r.l.	The role of exposome in cardiovascular residual risk for patients with ischemic heart diseases
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POSITION RESERVED		
1	Reserved to Holders of RESEARCH GRANT within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND “Training Future Big Data Experts for Europe (FutureData4EU)”	

ADMISSION PROCEDURES	
<b>Assessment of QUALIFICATIONS:</b> up to 45 points <b>ORAL TEST:</b> up to 75 points <b>Minimum score for ELIGIBILITY:</b> 70/120	

ORAL TEST PROGRAM		
<b>THE ORAL TEST TAKES IN PRESENCE</b> and with the possibility of carrying out the interview <b>REMOTELY</b> <u>only for candidates unable to take the test in person for valid health reasons</u> . To this end, candidates must submit <b>a motivated REQUEST</b> as per the model attached to the competition announcement)		
The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research themes of the doctoral course		
<b>Foreign Language</b> the fluency of which shall be assessed during the Oral Test	<b>ENGLISH</b>	The knowledge of the English language will be assessed orally and will consist in reading and translating a scientific text

SCHEDULE OF ADMISSION TEST		
<b>ASSESSMENT OF QUALIFICATIONS</b>		It is the candidate's responsibility to verify the outcome of the titles evaluation, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Test
<b>ORAL EXAM</b>	<b>DATE</b>	2 <sup>nd</sup> September 2025 (with possible extension to the following day)
	<b>TIME</b>	09:00 am (Italian Time)
	<b>PLACE</b>	ROOM 5 - POLO GRAMSCI Department of Medicine and Surgery Via A. Gramsci, 14 43126 PARMA - ITALY
<b>FURTHER INFORMATION</b>		<b>The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission test. <u>The PhD research topic will be assigned by the Academic Board.</u></b>



	<b>THE INTERVIEW MAY BE HELD ALSO IN ENGLISH</b>	For foreign candidates, the admission test may be held in English at the candidate's choice.
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LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	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)	
Academic Qualifications	<b>Certificates and academic transcript of records for both Bachelor’ and Master’ degrees</b> containing the following details for each degree held: (art. 3.2 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).	
Research Project	Written in Italian or in English, according to the format attached to the competition notice It will have to focus on an original research topic ( <b>unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use IT tools useful for verifying the originality of the submitted Project</b> ) <u>It does not represent a constraint with respect to the following choice of the doctoral thesis,</u> which will be assigned by the Academic Board	
LIST OF EVALUABLE QUALIFICATIONS		
(only qualifications attested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	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. The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	Up to 9 points
Graduation mark	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	Up to 5 points
Average of the exam marks (only for candidates enrolled under condition and graduating by 10/31/2025)	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	Up to 5 points
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology	Up to 2 points



<b>Research Project</b>	<p>Score assignable for the research project:</p> <ul style="list-style-type: none"> <li>○ Scientific value and originality of the proposal: max 6 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 candidate'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 on national and international journals, papers presented at conferences or symposia, book chapters etc.	<b>Up to 9 points</b>
<b>Reference Letters</b>	<p>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.</p> <p><b>The reference letters must be sent directly by the signer to the address e-mail: <a href="mailto:elisa.araldi@unipr.it">elisa.araldi@unipr.it</a></b></p> <p>The candidate, therefore, must not uploading them through the procedure of the competition online registration.</p>	<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> <li>• Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>	<b>Up to 3 points</b>
<b>EVALUATION ORAL EXAM</b>		
<b>Interview Program</b>	<b>Evaluation CRITERIA</b>	<b>POINTS</b>
<p><b>The ORAL TEST includes the presentation of the research project</b> 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</p>	<ul style="list-style-type: none"> <li>○ Ability to argument the project proposal: up to 28 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 12 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>