

<b>DOCTOR OF PHILOSOPHY (PHD) PROGRAMME IN</b> <b>SCIENCE AND TECHNOLOGIES FOR ENVIRONMENT AND HEALTH (STAS)</b> <b>Coordinator: Prof Marina Paolucci, <a href="mailto:paolucci@unisannio.it">paolucci@unisannio.it</a></b>	
<b>Administrative headquarters</b>	<b>Department of Science and Technologies</b>
<b>DURATION</b>	3 years (36 Months)

**AVAILABLE POSITIONS (5 - five)**

<b>Scholarship without financial coverage</b>	<b>N. 1</b>	<b>Topics</b> 1) Applications for the environment 2) Applications for health
<b>Places fully covered by a University of Sannio scholarship</b>	<b>N. 3</b>	<b>TOPICS</b> 1) Myosteatorsis and muscle dysfunction in a MASLD model: study of molecular mechanisms and innovative therapeutic approaches; 2) From dysbiosis to intestinal health: development of new nutraceutical approaches based on pre-, pro- and post-biotics; 3) Application of spatial data analysis to spatial transcriptomics: a journey from silico to wet. 4) Meso-Cenozoic stratigraphic-sedimentological and kinematic evolution of the chain-foredeep-foreland systems. Interaction between rifting processes and magmatism in the Tyrrhenian back-arc basin. Geoarchaeology and Geology of the Quaternary also through stratigraphic-structural correlation land-sea; 5) Study of the molecular and cellular mechanisms involved in the response of the blood-brain barrier to inflammatory stimuli; 6) Impacts of management practices on soil microbial diversity for ecosystem function conservation; 7) Organic synthesis and functionalization of small molecules for biopolymer-based nanostructured systems in innovative therapeutic and nutraceutical formulations; 8) Up-cycling of by-products of the short agri-food supply chain and the metabolic potential of microorganisms: yeasts and bioactive compounds obtained from agri-food waste as co-protagonists in bio-processes for the production of foods improved in quality and safety. 9) Bioactive molecules for food and nutraceutical applications; 10) Design, chemical modification and characterization of biobased polymers for 3D printing and advanced applications; 11) Synthetic Chimeric Receptors as a Novel Strategy for Macrophage Reprogramming;

		<p>12) Novel non-invasive therapeutic approaches for chronic inflammatory bowel dis-eases: from cells to organoids</p> <p>13) Correlation between gut, muscle, and meat quality: an innovative approach to en-hancing animal welfare;</p> <p>14) Modulation of inflammatory responses in autoimmune diseases through molecular recognition mediated by DNA/RNA aptamers;</p> <p>15) Integrated Remote Sensing monitoring and multirisk analysis for enhancing safety of valuable historic centers, infrastructures, and lifeline networks:</p> <p>16) Remote and proximal sensing of environmental parameters.</p>
Place reserved for foreign state scholarship holders	N. 1	<p><b>TOPICS</b></p> <p>17) Myosteatorsis and muscle dysfunction in a MASLD model: study of molecular mechanisms and innovative therapeutic approaches;</p> <p>18) From dysbiosis to intestinal health: development of new nutraceutical approaches based on pre-, pro- and post-biotics;</p> <p>19) Application of spatial data analysis to spatial transcriptomics: a journey from silico to wet.</p> <p>20) Meso-Cenozoic stratigraphic-sedimentological and kinematic evolution of the chain-foredeep-foreland systems. Interaction between rifting processes and mag-matism in the Tyrrhenian back-arc basin. Geoarchaeology and Geology of the Quaternary also through stratigraphic-structural correlation land-sea.;</p> <p>21) Study of the molecular and cellular mechanisms involved in the response of the blood-brain barrier to inflammatory stimuli;</p> <p>22) Impacts of management practices on soil microbial diversity for ecosystem function conservation;</p> <p>23) Organic synthesis and functionalization of small molecules for biopolymer-based nanostructured systems in innovative therapeutic and nutraceutical formulations;</p> <p>24) Up-cycling of by-products of the short agri-food supply chain and the metabolic potential of microorganisms: yeasts and bioactive compounds obtained from agri-food waste as co-protagonists in bio-processes for the production of foods im-proved in quality and safety.</p> <p>25) Bioactive molecules for food and nutraceutical applications;</p> <p>26) Design, chemical modification and characterization of biobased polymers for 3D printing and advanced applications;</p> <p>27) Synthetic Chimeric Receptors as a Novel Strategy for Macrophage Reprogram-ming;</p>

		<p>28) Novel non-invasive therapeutic approaches for chronic inflammatory bowel dis-eases: from cells to organoids</p> <p>29) Correlation between gut, muscle, and meat quality: an innovative approach to en-hancing animal welfare;</p> <p>30) Modulation of inflammatory responses in autoimmune diseases through molecular recognition mediated by DNA/RNA aptamers;</p> <p>31) Integrated Remote Sensing monitoring and multirisk analysis for enhancing safety of valuable historic centers, infrastructures, and lifeline networks:</p> <p>32) Remote and proximal sensing of environmental parameters.</p>
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### Entry requirements for the competition

All master's and specialist degrees and degrees awarded according to regulations prior to DM 509/99 and 270/2004

Evaluation of Qualifications and Oral Exam			
<b>Selection-Admissions: Policies &amp; Procedures</b>	Evaluation of academic titles (Curriculum Vitae and relevant documentation)	Up to 40 points	<p>a) Graduation grade assessable according to proportional parameters or, failing that, the weighted average grade of the exams taken (for those who obtain the degree by 31/10/2025) (up to 8 points);</p> <p>b) Thesis of Laurea Magistrale (or equivalent) in full format (or, for final year applicants only, drafting of the thesis being filed countersigned by the supervisor and with the stamp of the Department of reference) which can be evaluated in consideration of the content and congruence with the PhD Programme (up to 2 points);</p> <p>c) Research project (up to 15 points);</p> <p>d) monographs and publications in journals or series with peer review, evaluable if congruent with the PhD Programme and already published, or with a certificate, from the publisher, of acceptance and forthcoming publication; - Patents if congruent with the PhD Programme (Up to 8 points);</p> <p>e) post-graduate university specialization diploma, Master of at least one year duration issued by universities or qualified research bodies that can be evaluated if congruent with the PhD Programme (Up to 2 points);</p> <p>f) Research grants that can be evaluated if congruent with the PhD Programme, such as (Up to 5 points):</p>

			<ul style="list-style-type: none"> <li>• scholarships issued by Italian or foreign universities or by research institutes of primary and proven relevance;</li> <li>• periods of study and research abroad (including the Erasmus period) carried out at universities or qualified research institutes for a continuous period of time of not less than 3 months;</li> <li>• prizes awarded by national and international scientific societies that can be evaluated if congruent with the PhD Programme;</li> </ul>
	Oral exam (interview)	30 to 60 points	<p>The oral exam will focus on an interview concerning the academic qualifications and the research project presented; it may be carried out via "teleconference" for foreign applicants or for Italian applicants in justified cases based on adequate documentation. It is forbidden to carry out audio / video recording. It is also forbidden for anyone to broadcast the audio / video recording made with tools other than the platform. The absence of the candidate on the day and time of the oral exam will be considered as a renunciation of the competition, whatever the cause. Applicants who have obtained a grade of not less than 30/60 in the interview will pass the oral exam. Applicants would need to achieve a minimum grade of 30/60 in the interview in order to pass the oral exam.</p> <p>For the evaluation of the oral exam, without prejudice to the autonomy of the Commission for all types of positions, ordinary and reserved, the evaluation criteria are:</p> <ul style="list-style-type: none"> <li>a) clarity of presentation (up to 20 points)</li> <li>b) ability to synthesize (up to 10 points)</li> <li>c) ability to carry out part of the discussion in the foreign language chosen from those indicated in the form of each PhD Program call (Up to 10 points)</li> <li>d) ability to answer in-depth questions on the research project presented (up to 20 points).</li> </ul>
<b>Selection- Admission Tests: Schedules</b>			
	Oral Test	Oral exam dates, times and venues will be announced by a notice published on the University website at the address: <a href="https://www.unisannio.it/index.php/it/studente/studente-laureato/dottorato-di-ricerca">https://www.unisannio.it/index.php/it/studente/studente-laureato/dottorato-di-ricerca</a>	