

| PhD PROGRAM IN “PLANT AND ANIMAL SCIENCE” | | |
|---|---|----|
| Coordinator | Prof. Roberta BERNINI | |
| Department | Department of Agriculture and Forest Sciences (DAFNE) | |
| Partner institutions | None | |
| Program duration | 3 years: 1 st November 2020 - 31 st October 2023 Thesis Defence: within July 2024 | |
| Program objectives | <p>The PhD program aims to train researchers of high scientific qualification able of addressing the various aspects of research in the agricultural sciences, from planning a research project to its implementation, from the interpretation of data to the presentation of results, the writing of articles in scientific journals and, where possible, patents.</p> <p>Over the course of the three years, the PhD students develop research topics and carry out training activities with an innovative and interdisciplinary approach thanks to the different scientific skills of the members of the Academic Board in the fields of agricultural, biological and chemical sciences and the possibility of carrying out internships and periods of research and study abroad at Universities and research institutes of high scientific qualification.</p> <p>Research topics are agronomy, animal husbandry, biotechnologies, plant breeding, plant protection, soil science, applications of nanomaterials in agriculture, natural organic compounds, valorisation of agro-industrial wastes, project and development of methodologies for the synthesis of bioactive molecules, production of recombinant products of high added value from plant materials, biosensors for the environmental monitoring and the production chain, study of the role of the environmental factors on the agricultural productions, landscape planning, aspects of technological and nutritional quality of products, food and production safety, models for product, process and organizational innovation of the agro-food system.</p> | |
| Number of positions | Total positions | 11 |
| | <i>with fellowship</i> | 8 |
| | <i>reserved for employees of private companies (Industrial Ph.D)</i> | 1 |
| | <i>without fellowship</i> | 2 |
| Positions with fellowships | <p>(1) Fellowship co-funded by the Projects Department of Excellence (Law 232/216) SAFE-Med (DAFNE) and PNR NEMESI, BIOCONTROL (DAFNE). Reference: Prof. Giorgio Mariano BALESTRA. Research topic: <i>Enhancement of lignocellulosic waste for nanostrategies useful in sustainable plant protection.</i></p> <p>(2) Fellowship co-funded by the Projects Department of Excellence (Law 232/216) SAFE-Med (DAFNE) and ASSOFRUTTI S.r.l. (Caprarola, VT). Reference: Prof. Valerio CRISTOFORI. Research topic: <i>Validation of new sustainable intensification models of the hazelnut orchard.</i></p> <p>(3) Fellowship co-funded by the Projects Department of Excellence (Law 232/216) SAFE-Med (DAFNE) and BARILLA Company.</p> | |

| | |
|--|--|
| | <p>Reference: Prof. Francesco SESTILI. Research topic: <i>Production and characterization of wheat genotypes with elevated nutritional value through biotechnological approaches.</i></p> <p>(4) Fellowship co-funded by the Università of Tuscia and PRIN 2017 PROSPECT, 2017JLN833 (DEB). Reference: Prof. Roberta BERNINI/Prof Carla CARUSO. Research topic: <i>Unraveling molecular networks of tomato plants in response to biotic factors.</i></p> <p>(5) Fellowship co-funded by the Università of Tuscia and CNR-IRET. Reference: Prof. Giuseppe COLLA, Dott. Alberto BATTISTELLI. Research topic: <i>Study of physiological and biochemical control of quality, with specific focus on prebiotics synthesis and accumulation in vegetables as part of bioregenerative life support systems for space, Project MicroX2.</i></p> <p>(6) Fellowship co-funded by the Università of Tuscia and H2020 project INNOVAR (DAFNE). Reference: Prof. Roberto MANCINELLI. Research topic: <i>Next generation variety testing for improved cropping on European farmland; Carbon flux analysis in crop systems with different soil tillage and fertilization.</i></p> <p>(7) Fellowship co-funded by the Università of Tuscia and the Department of Biology and Biotechnology of Sapienza University of Rome. Reference: Prof. Daniel Valentin SAVATIN Research topic: <i>Identification of novel biotechnological strategies to increase pathogen broad resistance in model and crop plants.</i></p> <p>(8) Fellowship funded by the H2020 project ECOBREED (DAFNE). Reference: Prof. Carla CEOLONI, Prof. Mario PAGNOTTA. Research topic: <i>Increasing the efficiency and competitiveness of organic crop breeding with particular attention to the abiotic stresses' tolerances.</i></p> |
| <p>Positions for employees of private companies (Industrial Ph.D)</p> | <p>(1) Reserved for employees of private companies (Industrial Ph.D) FBSM NANOTECHNOLOGY (Frankfurt, Germany) to carry out research activity in collaboration with the DAFNE. Reference: Prof. Francesco ROSSINI. Research topic: <i>Development of fertilizers with high environmental sustainability.</i></p> |
| <p>Positions without fellowships</p> | <p>(1) Without fellowship to carry out research activity mainly at POLIFLOR SOCIETÀ AGRICOLA S.S. (Faenza, RA) in collaboration with the DAFNE. Reference: Prof. Giuseppe Colla/Dott. Gianluca Burchi. Research topic: <i>Sustainable methodologies for the construction of vertical gardens, green roofs and other architectural green solutions.</i></p> <p>(2) Without fellowship to carry out research activity at DAFNE on the Project PRIMA PLANT-B. Reference: Prof. Giuseppe Colla/Prof. Pier Paolo Danieli. Research topic: <i>Protein/mineral nutrition in Apis mellifera L. and emelioration of keeping conditions.</i></p> |
| <p>Admission requirements</p> | <p>Admission is open to candidates of any nationality and age who have one of the following requirements by the deadline of the call for</p> |

| | |
|---|---|
| | <p>application:</p> <ul style="list-style-type: none"> ▪ Italian degree “Laurea Vecchio Ordinamento” ▪ Italian degree “Laurea Specialistica” or “Magistrale” ▪ International academic qualification (degree) awarded in a foreign University or in the context of inter-university cooperation and mobility agreements. <p>Admission is also open to students will obtain their degree within 31 October 2020.</p> |
| <p>Evaluation of candidates (Maximum score: 80/80)</p> | <p>The candidates are evaluated by their qualifications and an exam. The exam consists in an interview. For candidates living abroad, the interview will be carried out by videoconference in English language. The maximum score assigned to each candidate is 80/80.</p> |
| <p>Evaluation of the qualifications (Maximum score: 15/80)</p> | <p>On the basis of the University Regulations for Ph.D. programs (Art.10), the following qualifications are evaluated:</p> <ul style="list-style-type: none"> ▪ Degree thesis accompanied by an abstract in English; ▪ University career (passed exams and graduation marks); ▪ Publications; ▪ Participation in research projects; ▪ Professional experience and other qualifications held by the candidate in the <i>curriculum vitae et studiorum</i>, including any letters of introduction from university professors; ▪ Research project proposed. <p>The maximum score is 15/80. The scores assigned to the candidates will be published on the University website address www.unitus.it > <i>Didattica</i> > <i>Offerta post lauream</i> > <i>Dottorati di Ricerca</i>.</p> |
| <p>Evaluation of the oral interview (Maximum score: 65/80)</p> | <p>The interview is aimed at ascertaining the candidates' preparation and aptitudes for scientific research and includes the assessment of knowledge of the English language. The interview is considered passed with a minimum score of 40/65. The maximum score is 65/80.</p> |
| <p>Topics of the interview</p> | <p>The main topic of the interview is the research project proposed by each candidate, attached to the application for admission to the call for application. The project, described at most in 5 pages, can be written in Italian or English; it must be inherent to the objectives of the Ph.D program and may not be related to the research topics covered by the available positions; in any case, it does not constitute a constraint on the subsequent choice of the research activity to be developed in the three-year period. The interview includes the assessment of knowledge of the English language by reading and translating some paragraphs of a scientific text. The scores attributed to the candidates for the interview will be published on the University website address www.unitus.it > <i>Didattica</i> > <i>Offerta post lauream</i> > <i>Dottorati di Ricerca</i>.</p> |
| <p>Timetable and interview location</p> | <p>The interviews will take place on 22nd and 23rd September 2020 at 10.00 am. The evaluation of qualifications of the candidates will be carried out in the previous days. The scores assigned will be published on the University website address www.unitus.it > <i>Didattica</i> > <i>Offerta post lauream</i> > <i>Dottorati di Ricerca</i>.</p> |

**Contacts for
information**

Prof. Roberta Bernini

E-mail: dottorato.spva@unitus.it; roberta.bernini@unitus.it