Finanziato dall'Unione europea
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UNIVERSITÀ DEGLI STUDI FIRENZE
Da un secolo, oltre.

DOCTORAL PROGRAMME
IN
AGRICULTURAL AND ENVIRONMENTAL SCIENCES

Director prof. Carlo Viti

XL cycle – academic year 2024/2025

TECHNOLOGICAL AREA	
ADMINISTRATIVE OFFICE	Department of Agri-food, Environment and Forestry Sciences and Technologies
WEB	www.dottoratoscienzeagrarieambientali.unifi.it
	POSITIONS AVAILABLE: 8 Positions with Scholarship: 8 Position without Scholarship: *not available*
RANKING LIST FOR STANDARD POSITIONS SCHOLARSHIPS: 6	University of Florence
RANKING LISTS FOR POSITIONS WITH SPECIFIC RESEARCH TOPICS SCHOLARSHIPS AVAILABLE: 2	**1** - Department of Agriculture, Food, Environment and Forestry (DAGRI) Funded by **HORIZON EUROPE** (Cluster 5 - Climate, Energy and Mobility) funded by the research project "Sustainable jet fuels from CO2 by micro-algal cell factories in a zero-waste approach - ALFAFUELS" – CUP B53C23006810006 **Thematic:** "CO2 biofixation with selected microalgae for biofuel production in a zero-waste approach" The object is the development of a novel Sustainable Aviation Fuels (SAF) production technology through CO_2 biofixation by selected microalgae able to produce volatile precursors. In particular, the activity will focus on cultivation of wild type and modified strains to optimize volatile compounds and biomass production, and evaluate photosynthetic efficiency and CO_2 capture. The data will be used for the development of a photobioreactor in which the best culture conditions will be applied for a techno-economic analysis. In a biorefinery approach, valorization of cell components not used as biofuels will be addressed. **1**- CNR - Istituto per la protezione sostenibile delle piante (IPSP) Funded by HORIZON EUROPE "Forest Surveillance with artificial and digital technologies - (FORSAID)" **Thematic:** "Phytosanitary surveillance of forest diseases" This PhD project is part of the European project FORSAID whose overall goal is to develop a comprehensive combination of innovative digital technologies aimed at detecting regulated forest pests at an early stage, surveying their occurrence in the territory, and providing essential information for the adoption of phytosanitary measures to limit their spread and impacts. A careful biosurveillance is essential for reducing the threat deriving from the spread of regulated pests and pathogens.
STUDY/RESEARCH PERIODS ABROAD	3 months

<table>
<tr><td>DOCUMENTS REQUIRED FOR THE ADMISSION
(under penalty of exclusion)</td><td>

Copy of the Identification Document
Self-declaration for qualifications obtained in Italy (laurea triennale, specialistica o magistrale o ciclo unico) with a list of all exams taken and their marks, title of the thesis and graduation mark
(download the form here, make sure you fill in all the fields)
Qualifications obtained abroad (Bachelor's and Master Degrees or combined cycle Degree) with a list of all exams taken and their marks, title of the thesis and graduation mark.

The same documentation except for the final mark must be submitted by those who will graduate within the 31/10/2024
</td></tr>
<tr><td>DOCUMENTS REQUIRED FOR THE EVALUATION</td><td>
MANDATORY

Curriculum vitae (european format)
Research Project

OPTIONAL

Publications
Any other scientific qualification document

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<tr><td>RESEARCH PROJECT</td><td>Research project has to be prepared in English in no more than 12.000 characters including spacing, and structured in introduction, state of the art, objectives, materials and methods with temporal distribution of the phases, expected results. For XL cycle, several priorities of interest have been selected. The project must relate, and should make specific reference, to one of them listed in the section below: "Thematics".
The research project should be attached to the application form and it should be made as the project pattern uploaded into the following departmental webpage (section "dottorato di ricerca"):
http://www.dottoratoscienzeagrarieambientali.unifi.it
The research project should be focused on a possible research activity, which the applicant will be going to execute during the three-year doctoral program.</td></tr>
<tr><td>INTERVIEW MODE</td><td>Remotely (Videocall)

The interview can be conducted in Italian or in English language; if it is conducted in Italian, English skills will be tested during interview.</td></tr>
<tr><td>EVALUATION MARKS</td><td>
<table>
<tr><th>Parameter</th><th>minimum score</th><th>maximum score</th></tr>
<tr><td>Curriculum vitae, scientific qualification documents,</td><td>10/120</td><td>15/120</td></tr>
<tr><td>Research Project redaction</td><td>30/120</td><td>40/120</td></tr>
<tr><td colspan="3">Applicants who obtain a mark of at least 40/120 according to the minimum score for each parameter will be admitted to the interview</td></tr>
<tr><td>Interview: discussion of the research project and any other qualification document</td><td>40/120</td><td>65/120</td></tr>
<tr><td colspan="3">Eligibility is achieved with a minimum score of 80/120</td></tr>
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<tr><td>THEMATICS</td><td>

Impact of cultivation practices on the production of psychoactive substances in ornamental plants

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	● Impact of microplastics in fire-affected forest soils ● Sustainable management techniques of olive farming ● Improving environmental efficiency of dairy cattle germplasm ● Bioactive compounds from pruning wastes: circular solutions for greener nurseries ● Design of agroeco-voltaic systems in public and private contexts of circular economy

EXAMINATION SCHEDULE		
	DATE	**TIME**
INTERVIEW	July 12th-13th, 2024	09:30 a.m.
The list of candidates admitted to the interview and the final ranking will be published at the following web page: https://www.unifi.it/p12593		