Competition code: CDR/02_25

Departmental Faculty/Research Unit of affiliation	Science and Technology for Sustainable Development and One Health
Place of activity	Campus Bio-Medical University of Rome Via Alvaro del Portillo, 21 - Rome
Scientific Disciplinary Group	05/BIOS-02 - Plant Physiology
Scientific Area	BIOS-02/A - Plant physiology
Profile of the researcher to be recruited	Expertise in plant molecular biology with a focus on the response of plants to environmental stimuli of different kinds, such as abiotic stresses and light conditions. Expertise in genomics and transcriptomics, with a focus on functional data interpretation. Experience in international universities and research centres possibly in more than one institution and proven ability to acquire research funds. The candidate must have carried out a research period abroad during the PhD of at least three months.
Project title	Studying the molecular mechanisms regulating the response of plants to soils with high salt concentration .
Description of the research project	The project focuses on studying the molecular mechanisms that regulate the response of plants to soils with high salt concentration. The excessive accumulation of salts in the soil compromises the growth of crops of agricultural interest, reducing their productivity and negatively affecting biodiversity. Rice, an essential food for most of the world's population, is particularly sensitive to salt stress. Italy, among the main rice producers in Europe, has developed, through breeding programmes, commercial varieties capable of balancing productivity and resistance to abiotic stress. A screening of some of these varieties allowed the identification of microRNAs, small regulatory RNAs of gene expression, as molecular markers of adaptation mechanisms to high salt concentrations. In particular, miR530 and miR167h are differentially regulated under saline conditions and control the expression of proteins involved in plant responses to stress. This project therefore aims to functionally characterise these miRNAs and their targets through genetic and molecular biology approaches. The expected results will contribute to the identification of new molecular pathways involved in the salt response, expanding knowledge on the interactions between plants and their environment. Furthermore, the data obtained may be applied to breeding programmes for the genetic improvement of crops of national agri-food interest.

Scientific Supervisor	Prof. Laura De Gara
Maximum number of publications	/
Language knowledge and skills	Knowledge of English language level B2
Date, time and place of interview	**7 May 2025, 3:00 p.m.** Remote candidates on **Microsoft** platform
Funding body	Ministry of University and Research (MUR)
Funding programme/call	PNRR - Mission 4 'Education and Research' Component 2 'From Research to Enterprise' - Investment 1.2 'Funding of projects by young researchers Decree for the recruitment of international post-doctoral researchers
CUP	C83C25000480006

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