

PLANT PRODUCTION SCIENCES

Director Prof.ssa Roberta Bernini

Annex A

Principal investigator	Stefania Astolfi
Action	GREEN
Scientific area	AGR/13
The PhD course will last	3 years
Research Topic	“Exploring durum wheat genotypes to minimize drought stress impact on grain yield and nutritional quality”
Summary of the research topic	Drought is considered as the most important environmental stress that reduces crop productivity and will represent a major challenge for European agriculture due to climate change. The objective of this project is to optimize crop efficiency in water and nutrient uptake to improve the sustainability of Mediterranean agriculture while minimizing environmental impacts in terms of water and nutrient use efficiency (WUE and NUE).
Period in the private sector (months)	6
Research period abroad (months)	0
Language of the interview	English
Target (Research outcomes to be achieved during the PhD period)	<ul style="list-style-type: none"> - At least 1 scientific publication in a national or international journal - At least 1 participation in a national or international conference



Principal investigator	Umberto Bernabucci, Pier Paolo Danieli
Action	GREEN
Scientific area	AGR/18
The PhD course will last	3 years
Research Topic	“Study of sustainable solutions for beekeeping management in Central Italy”
Summary of the research topic	Climate changes are having important and not easily predictable repercussions on the beekeeping sector due to altered seasonal rhythms, states of under-nutrition and biotic and abiotic adversities. The objective of this project is to study and develop solutions to cope with nutritional deficiencies of bee colonies and the development of indicators for the selection of bees with high resistance/resilience to adverse environmental conditions.
Period in the private sector (months)	6
Research period abroad (months)	0
Language of the interview	English
Target (Research outcomes to be achieved during the PhD period)	<ul style="list-style-type: none">- At least 1 scientific publication in a national or international journal- At least 1 participation in a national or international conference



Principal investigator	Roberta Bernini
Action	GREEN
Scientific area	CHIM/06
The PhD course will last	3 years
Research Topic	“Design and development of sustainable polymeric and biopolymeric materials for innovative industrial applications”
Summary of the research topic	The production and use of polymeric materials deriving from the petrochemical sector for industrial and agro-industrial applications represents one of the main cases of environmental pollution. The project proposes to realize new eco-sustainable active polymers starting from the waste products of some production chains for the packaging of products to be used in the food and non-food sectors.
Period in the private sector (months)	12
Research period abroad (months)	0
Language of the interview	English
Target (Research outcomes to be achieved during the PhD period)	<ul style="list-style-type: none">- At least 1 scientific publication in a national or international journal- At least 1 participation in a national or international conference



Principal investigator	Giuseppe Colla
Action	GREEN
Scientific area	AGR/04
The PhD course will last	3 years
Research Topic	“Innovative biostimulants for improving nutrient use efficiency and resistance to abiotic stress in vegetable crops”
Summary of the research topic	The project aims to promote a reduction of the impacts of climate change on horticultural production through the use of innovative biostimulant pipelines able to increase the resistance of crops to water stresses increasingly frequent especially in the Mediterranean basin. The project also wants to contribute to promoting sustainable development through the recovery of bioactive molecules from biomass waste.
Period in the private sector (months)	12
Research period abroad (months)	0
Language of the interview	English
Target (Research outcomes to be achieved during the PhD period)	<ul style="list-style-type: none">- At least 1 scientific publication in a national or international journal- At least 1 participation in a national or international conference



Principal investigator	Francesco Sestili
Action	Innovation
Scientific area	AGR/07
The PhD course will last	3 years
Research Topic	“Development of a high throughout plant phenotyping system for innovating durum wheat breeding in the Mediterranean”
Summary of the research topic	The project aims to develop a digital system based on the use of crop growth simulation models and remote sensing techniques to make the process of selection and improvement of Italian durum wheat more efficient and rational.
Period in the private sector (months)	6
Research period abroad (months)	6
Language of the interview	English
Target (Research outcomes to be achieved during the PhD period)	<ul style="list-style-type: none">- At least 1 scientific publication in a national or international journal- At least 1 participation in a national or international conference



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