Form (ENG):	AGR/13 − Agriculture Chemistry		Year: 2016
Representative:	Serenella Nardi	Full professor	serenella.nardi@unipd.it
	Mario Malagoli	Associate professor	mario.malagoli@unipd.it
	Antonio Masi	Associate professor	antonio.masi@unipd.it
	Rossella Ghisi	Associate professor	rossella.ghisi@unipd.it
	Giuseppe Concheri	Associate professor	giuseppe.concheri@unipd.it
	Silvia Quaggiotti	Researcher	silvia.quaggiotti@unipd.it
	Paolo Carletti	Researcher	paolo.carletti@unipd.it
	Piergiorgio Stevanato	Researcher	stevanato@unipd.it

N.	Research: main topics and strategic initiatives	Notes
01	Genetic control of root apparatus and nutrient uptake in cultivated plants: identification of root morphophysiological traits, candidate genes and molecular markers for improving nutrient acquisition efficiency (Keywords: root development, plant nutrition)	Stevanato
02	Optimization of plant physiology in relation to the reduction of chemical inputs and environmental sustainability of crops (Keywords: Physiology of plants, organic farming)	Malagoli
03	Antioxidants and plant response to environment. Proteomics in agricultural and food science. Keywords: proteomics, mass spectrometry, glutathione, sulfur, antioxidants.	Masi
04	The interaction of plants with organic xenobiotics (antibiotics in particular): accumulation in model plants, phytotoxicity, biochemical and physiological mechanisms of response, processing in plants and soil. Keywords: phytoremediation, oxidative stress, detoxification (Keywords: micropollutants)	Ghisi
05	Root plasticity in response to environment: biological, physiological and molecular aspects involved in nutrient perception by root apex and in the regulation of root development in maize seedlings (Keywords: root, transition zone, nitrate, auxin, strigolactones, nitric oxide, cytoskeleton)	Quaggiotti
06	Innovative techniques for biological nitrogen removal from liquid digestate (Keyword: ANAMMOX process). New methods for the assessment of soil fertility (Keywords: Fertimetro)	Concheri
07	Research of strategies for the control of environmental pollution: Use of humic substances and biostimulants for the reduction of agronomic inputs and evaluation of the ancient and agrarian phosphorus forms in soils. keyword: humic substances, biostimulants, phosphorus, soil.	Nardi, Carletti

Laboratory: Laboratory of Soil Chemistry, Biochemistry and Plant Physiology

Species: corn, barley, Arabidopsis, poplar, sugar beet, microtom tomate

Technologies/Metodologies: biochemistry and plant physiology methods, genomic, transcriptomic and proteomic analysis, histology, microscopy, bioinformatics, elemental analysis, soil analysis

Main ERC fields and subfields: LS9 (LS9_4); LS3 (LS3_10); LS9 (LS9_7)

Notes: