

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name **Antonella Canini**

WORK EXPERIENCE

FROM DECEMBER 20TH 2004, FULL PROFESSOR IN BOTANY SSD BIO/01, DEPARTMENT OF BIOLOGY UNIVERSITY OF ROME "TOR VERGATA"

FROM 2005, She has been Director of the Honey Research Center and Director of the Botanical Garden of the University of Rome "Tor Vergata".

FROM July 2012 to October 2018 she was Director of the Department of Biology of University of Rome "Tor Vergata";

FROM 2014 to 2019 She was the Rector's Deputy for the Territory, Environment and Eco-sustainability.

She was the University delegate for relations with the MAE for Expo 2015.

FROM January 15th 2021, She is Vice President of Società Botanica Italiana.

FROM novembre 2021, She is again Director of the Department of Biology of the University of Rome "Tor Vergata";

FROM 2021 she has been appointed by the Minister of Ecological Transition as a member of the Public Green Committee.

From 2021 she is member of CdA of "FLORA ITALIANA" Foundation

From march 2023 she is Pro-Rector for environment, sustainability and energetic transition

From January 15th 2024 She is President of Società Botanica Italiana

EDUCATION AND TRAINING

PhD in Cellular and Molecular Biology at University of Rome Tor Vergata, 1991

Specialization in Applied Biotechnology, 1994

Graduation in Biological Science with honor at University of Rome Tor Vergata, 1987

**PERSONAL SKILLS AND
COMPETENCES**

Keywords/research interests: bioactive compounds; plant biodiversity and plant conservation, aquaponic plants colture, antioxydants, agrobiodiversity, soil salinity, microRNA in plants,

The field of scientific activity concerns: assembly and use of biosensors in plant tissues; extraction and localization of enzymes in cyanobacteria and plant tissues; characterization and localization of plant-derived allergens; gas chromatography techniques for the determination of nitrogenase activity in cyanobacteria;

transmission and scanning electron microscopy and in particular spectroscopic localization of elements (ESI and EELS) in plant tissues. She is responsible for a research group that deals with the identification and extraction of bioactive molecules in plants by means of high liquid pressure chromatography and mass spectrometry techniques, determination of antioxidant properties and their effect on carcinogenic and non-cancerous cell lines. In the last decade, his activity has been directed towards the use of genetic-molecular techniques (DNA barcoding, microsatellite profile) for the taxonomic recognition of plant species, population studies and the certification of products of agri-food chains such as grapevine and olive trees. These methodologies have been applied in the studies of Archaeobotany and Forensic Botany that have allowed her to participate in various projects in collaboration with anthropologists, forensic medical doctors and genetists. She has carried out a series of studies on the characterization of honey plants of Lazio, Abruzzo and of the African flora; identification of the botanical and nutraceutical characteristics of Italian and other European honeys. It has developed a series of protocols for the safety certification of bee products with particular reference to the verification of pollutants of chemical origin (pesticides, antibiotics, neonicotinoids). She has activated various training courses and analysis services for honey and other bee products aimed at operators in the beekeeping sector through the structuring of a qualified university center for bee products (Honey Research Center). In the last years she has coordinated activities concerning nanobiotechnologies as vectors of plant molecules in animal systems and the role of plant-based microRNAs present in food products as regulators of human gene expression. It has also activated research lines aimed at the conservation of germplasm, biodiversity recovery using in vitro culture systems and environmental decontamination processes using species with a high capacity to accumulate heavy metals and chemical pollutants.

Based su Scopus citation overview, she has the following metrics overview: 132 publications, 29 h-index and 2281 total citations.

MOTHER TONGUE

ITALIAN

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Excellent	Excellent	Excellent	Excellent	Excellent
French	Excellent	Excellent	Excellent	Excellent	Excellent
Spanish	Good	Good	Good	Good	Good

TEACHING ACTIVITIES

Botany for L Biological Sciences, Plant micropropagation for LM Biotechnology;
Plant Food for L Biotechnology, Medicinal Plans for Pharmacy;
She is in the Doctorate Board of PhD Evolutionary Biology and Ecology

GRANT SUPPORTS

- "ASTERIA" - sustainable agriculture: bio- and nano-technologies applied to quality horticultural productions in aquaponic, funded by Regione Lazio (Lazio Innova) as "Progetti di Gruppi di Ricerca 2020" .
- She has coordinated the POR-FESR 2014-2020 AEF4.- Aquaponic easy farm Grant, funded by Regione Lazio. This represent an initiative in the field of innovative agriculture based on the use of space and energy, in a highly sustainable way, in order to to produce foodstuffs and services with a very low ecological impact and of high quality. Part of the project's developments were associated with the search for species to be cultivated / reared that would make the production

system more efficient, in terms of resource exploitation and environmental and economic sustainability. The project moved on the basis of the criteria of the Circular Economy.

- PSR call. 2007-2013 measure 4.1.1 124 - "Cooperation for the development of new products, processes and technologies, in the agricultural, food and forestry sectors". The "Our herbs" project envisaged the recovery and conservation of aromatic herbs and spices from the Castelli Romani for their use in the development of new food products.
- PIF Project - Integrated Supply Chain Design, cod. RL058, Measure 124, title "Conservation of the native vines of Frosinone", funded by the Lazio Region);• importance of the plant diet in the evolution of man (Project 85-2017-15143, title "Genomics and diet: evolution and objectives of the GEDEON nutritional assessment", funded by the Lazio Region - Lazio Region call for projects of research groups).
- She has scientific coordinator of the Life project LIFE09 NAT/IT/000118 "RI.CO.PR.I." awarded among the best life projects for the two-year period 2016/2017. The RI.CO.PR.I. has as its main objective the recovery and conservation of priority habitats related to arid grasslands present in almost all EU member states, is among the richest communities in plant species in Europe and contains a large number of rare and endangered species.

She was Principal Investigator of various projects concerning the study and improvement of the quality of bee products (Reg. CE 1234/2007 Improvement of production and marketing of beekeeping products financed by the Lazio Region; MIPAAF; EU Reg. 1308/2013 - Improvement of the production and marketing of apiculture products 2016/2017 financed by the Lazio Region).

She obtained various Grants by MATTMM and ICE. She has participated to PRIN projects in the years: 2010/2011, 2007 and 2001.

She is Principal Investigator of the Project "Città della Conoscenza e dell'Innovazione", a complex and futuring project approved with Memorandum of Understanding by MIT, MIUR, Presidenza del Consiglio and "Tor Vergata" University, that aims to reconvert the Ex Città dello Sport of Calatrava in to an International Research Center promoting research and didactic activities on green, biodiversity, various biotechnology fields interacting with stakeholders; the new center increased the employment of young researchers.

For this project she has obtained in the 2020 the Innovation Business Award from ANGI (National Association of Young Innovators).

OTHER SKILLS

She is referees for various scientific journals with Impact factors: *Planta*, *Plant Sci.*, *Plant Cell Physiol.*, *Scientific Reports*, *Plants*, *Food*, *Plos One*, ecc

She is Referee for National and International Granted Agencies

PUBLICATIONS

Based su Scopus citation overview, she as the following metrics overview: 152 publications, 32 h-index and 3018 total citations.

List of most recent publication are following:

1. Braglia R, Costa P, Di Marco G, D'Agostino A, Redi EL, Scuderi F, Gismondi A, Canini A (2022). Phytochemicals and quality level of food plants grown in an aquaponics system. JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, vol. 102, p. 844 -850, ISSN: 0022-5142, doi: DOI 10.1002/jsfa.11420 -
2. De Rossi S, Di Marco G, Bruno L, Gismondi A, Canini A (2021). Investigating the drought and salinity effect on the redox components of sulla coronaria (L.) medik.. ANTIOXIDANTS, vol. 10, 1048, ISSN: 2076-3921, doi: 10.3390/antiox10071048 -
3. Nanni V, Di Marco G, Sacchetti G, Canini A, Gismondi A (2020). Oregano phytocomplex induces programmed cell death in melanoma lines via mitochondria and DNA damage. FOODS, 1486, ISSN: 2304-8158, doi: 10.3390/foods9101486 -
4. Novelli S, Gismondi A, Di Marco G, Canuti L, Nanni V, Canini A (2019). Plant defense factors involved in Olea europaea resistance against Xylella fastidiosa infection. JOURNAL OF PLANT RESEARCH, vol. 132, p. 439-455, ISSN: 0918-9440, doi: 10.1007/s10265-019-01108-8 -
5. Zanella L, Gismondi A, Di Marco G, Braglia R, Scuderi F, Redi EL, Galgani A, Canini A (2019). Induction of Antioxidant Metabolites in Moringa oleifera Callus by Abiotic Stresses. JOURNAL OF NATURAL PRODUCTS, vol. 82, ISSN: 0163-3864, doi: 10.1021/acs.jnatprod.8b00801 -
6. Gismondi A, De Rossi S, Canuti L, Novelli S, Di Marco G, Fattorini L, Canini A (2018). From Robinia pseudoacacia L. nectar to Acacia monofloral honey: biochemical changes and variation of biological properties. JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE, ISSN: 1097-0010 -
7. Nanni V, Canuti L, Gismondi A, Canini A (2018). Hydroalcoholic extract of Spartium junceum L. flowers inhibits growth and melanogenesis in B16-F10 cells by inducing senescence. PHYTOMEDICINE, ISSN: 0944-7113 -
8. Gismondi A, Di Marco G, Canini A (2017). Detection of plant microRNAs in honey. PLOS ONE, vol. 12, ISSN: 1932-6203, doi: e0172981 -
9. Gismondi A, Di Marco G, Canuti L, Canini A (2017). Antiradical activity of phenolic metabolites extracted from grapes of white and red Vitis vinifera L. cultivars. VITIS, vol. 56, p. 19-26, ISSN: 0042-7500 -
10. Gismondi A, Nanni V, Reina G, Orlanducci S, Terranova ML, Canini A (2016). Nanodiamonds coupled with 5,7-dimethoxycoumarin, a plant bioactive metabolite, interfere with the mitotic process in B16F10 cells altering the actin organization. INTERNATIONAL JOURNAL OF NANOMEDICINE, vol. 11, p. 557-574, ISSN: 1178-2013, doi: 10.2147/IJN.S96614 -
11. Gismondi A, Reina G, Orlanducci S, Mizzone F, Gay S, Terranova ML, Canini A (2015). Nanodiamonds coupled with plant bioactive metabolites: A nanotech approach for cancer therapy. BIOMATERIALS, vol. 38, p. 22-35, ISSN: 0142-9612, doi: 10.1016/j.biomaterials.2014.10.057 -
12. Impei S, Gismondi A, Canuti L, Canini A (2015). Metabolic and biological profile of autochthonous Vitis vinifera L. ecotypes . FOOD & FUNCTION, vol. 6, p. 1526-1538, ISSN: 2042-6496, doi: 10.1039/c5fo00110b -
13. Di Marco, G, GISMONDI, ANGELO, CANUTI, LORENA, Scimeca, M, VOLPE, ANTONIO, CANINI, ANTONELLA (2014). Tetracycline accumulates in Iberis sempervirens L. through apoplatic transport inducing oxidative stress and growth inhibition. PLANT BIOLOGY, vol. 16, p. 792-800, ISSN: 1435-8603, doi: 10.1111/plb.12102 -
14. GISMONDI, ANGELO, Canuti, L, Grispo, M, CANINI, ANTONELLA (2014). Biochemical Composition and Antioxidant Properties of Lavandula angustifolia Miller Essential Oil are Shielded by Propolis Against UV Radiations. PHOTOCHEMISTRY AND PHOTOBIOLOGY, vol. 90, p. 702-708, ISSN: 0031-8655, doi: 10.1111/php.12229 -
15. GISMONDI, ANGELO, Fanali, F, Labarga Martinez, J, Caiola Grilli, M, CANINI, ANTONELLA (2013). Crocus sativus L. genomics and different DNA barcode applications. PLANT SYSTEMATICS AND EVOLUTION, ISSN: 0378-2697, doi:

- 10.1007/s00606-013-0841-7 -
16. GISMONDI, ANGELO, CANINI, ANTONELLA (2012). Microsatellite analysis of Latial *Olea europaea* L. cultivars. *PLANT BIOSYSTEMS*, vol. 147, p. 686-691, ISSN: 1126-3504, doi: 10.1080/11263504.2012.751066 -
17. Alesiani D, Canini A, D'Abrosca B, Dellagrecia M, Fiorentino A, Mastellone C, Monaco P, Pacifico S (2010). Antioxidant and antiproliferative activities of phytochemicals from Quince (*Cydonia vulgaris*) peels. *FOOD CHEMISTRY*, vol. 118, p. 199-207, ISSN: 0308-8146, doi: doi:10.1016/j.foodchem.2009.04.098 -
18. GRILLI CAIOLA M, LEONARDI D, CANINI A (2010). Seed structure in *Crocus sativus* L. x, *C. cartwrightianus* Herb., *C. thomasi* Ten. and *C. hadriaticus* Herb. at SEM. *PLANT SYSTEMATICS AND EVOLUTION*, ISSN: 0378-2697, doi: 10.1007/s00606-009-0261-x -
19. PICHICHERO E, CANUTI L, CANINI A (2009). Characterization of the phenolic and flavonoid fractions and of the antioxidant power of Italian honey of different botanical origin. *JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE*, vol. 89, p. 609-616, ISSN: 0022-5142 -
20. PERAZZINI R, LEONARDI D, RUGGERI S, ALESIANI D, D'ARCANGELO G, CANINI A (2008). Characterization of *Phaseolus vulgaris* L. Landraces Cultivated in Central Italy. *PLANT FOODS FOR HUMAN NUTRITION*, ISSN: 0921-9668, doi: 10.1007/s11130-008-0095-7 -

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Rome, December 1st 2023

