

Curriculum vitae et studiorum Antonella Pane

Family name and first name: Pane Antonella

Nationality: Italian

Date of birth: 21/12/1962

Current address: Department of Agriculture Food and Environment (Di3A), University of Catania, V. S. Sofia, 100 Italy, 95123 Catania; tel.; +39 095 7147362; cell. 3498185738.

<http://www.di3a.unict.it/docenti/antonella.pane>

ORCID: 0000-002-8457-1788; Scopus Author ID: 6701476566

Scopus: N.77 articoli; N.1.084 citazioni; h-index =16

EDUCATION AND PROFESSIONAL CAREER

2005 to date Associate Professor of Plant Pathology/ SSD AGR 12 - 07/D1 - PATOLOGIA VEGETALE E ENTOMOLOGIA and professor for the Bachelor's Degree Course in Land and Landscape Planning and Protection.

1995 – 2004: Researcher in Plant pathology/SSD AGR12 Agricultural Faculty of University of Catania

1992- 1993 - MURST fellowship, Department of Life Sciences and the Queens Medical Centre, University of Nottingham (UK)

1991-1992 - Fellowship funded by the Ministry of Health of the Sicilian Region - Institute of Plant Pathology, University of Catania

1987-1991 - Collaborator at Institute of Plant Pathology, Agricultural Faculty of University of Catania

1987 - Degree in Agricultural Science at the University of Catania 110/110 cum laude and IRFIS prize for the thesis.

TEACHING AND TUTORSHIP

Institutions of Microbiology; Elements of Plant Pathology; Mycology; Environmental Plant Pathology. Forest Pathology; Pathology of Ornamental and Forest Plants; Plant Pathology; Environmental Plant Pathology; Plant physiopathology (Cdl in Biotechnology-L2, plant biotechnology curriculum). Seminars on monographic topics for PhD students. Tutor and Co-tutor activities for degree and doctoral thesis.

Teaching in IFTS courses: 1990 - E.C.A.P. (Ente Confederale Addestramento professionale di Catania), "Expert in biological and integrated pest management"; 1996 -

I.SVI.R. (Istituto di Ricerca e Formazione rurale di Catania), "Programmer of fruit and vegetable production specialised in integrated pest management".

2003 - Teaching in 1st level Master: "Master in Biotechnology for the sustainable defence of crops and agro-food production.

2004 - 2015 - Member of the Teaching Board of the PhD in "Eco-compatible phytosanitary management in agro-forestry and urban environments" - University of Palermo.

2016 - 2019 Member of the Teaching Board of the International PhD in "Agricultural, Food and Environmental Science", University of Catania. Supervisor of a PhD scholarship funded by MIUR - PON RI 2014-2020 European Social Fund, Action I.1 "Innovative Doctorates with Industrial Characterisation".

From 2022 to date -Teaching in the framework of the Orientation Project - OUI, anywhere from here PNRR - MISSION 4 "Education and research" COMPONENT 1 "Strengthening the supply of education services: from nursery schools to universities" INVESTMENT 1.6 - "Active orientation in the school-university transition LABORATORY - Pathophysiology and aetiology of fungal diseases of agricultural, ornamental and forestry plants: morphological and molecular characterization of populations of phytopathogenic fungal species.

NATIONAL AND INTERNATIONAL PROJECTS

- Scientific leader
- 2004 - 2005 - Research project financed with University funds - 'Development of a molecular method for the diagnosis of *Phytophthora palmivora*'.
- 2003-2005 - PRIN - 'Diseases caused by *Phytophthora* species: aetiology, molecular diagnosis, epidemiology and new means of defence' as part of which he organised the theoretical-practical course 'Isolation and identification of *Phytophthora* species'.
- 2004-2005 - Interregional Programme "Research and applicative experimentation, transfer of innovations to supply chain operators" - Project 6B - Floriculture in the Region of Sicily. Research title: 'Use of repressive soils to control root rot caused by *Phytophthora* and other soil fungi'. The final results were presented at the conference "Il florovivaismo in Sicilia: problematiche e prospettive" for which she took an active part in the Technical-Scientific Committee.
- Vice leader PRIN 2008 "Emerging diseases caused by soil-borne pathogens: molecular monitoring of nurseries of ornamental plants and control strategies".

- 2011 - 2014 - P.O. F.E.S.R. 2007/2013 – funded by Regione siciliana, “SAMAGRUMI- Sensori Ambientali per il miglioramento della Qualità delle Produzioni Agrumicole”
- 2010-2011 - Regional Department of Agricultural and Food Resources - Regional Department of State Forests of the Sicilian Region, Service 7° Phytosanitary Forestry. Executive project: 'Studies and surveys on the presence and spread of biotic diseases of forest interest and control strategies”
- 2005-2010 – Research project financed with University funds “Development and validation of diagnostic methods for studying the ecology and epidemiology of *Phytophthora* species potentially dangerous to forest and agricultural ecosystems”.

Member of Research Unit and/or Research Group

PRIN 2004 - “Monitoring and characterisation by genetic markers of fungal populations associated with the collapse of cucurbits for the development of integrated defence strategies (IPM)”.

PRIN 2005- “*Phytophthora* species: genetic variability and population dynamics in agricultural and forest ecosystems'.

PRIN 2006 - "Differentially expressed genes in the model plant system sweet orange on bitter orange in response to biotic stresses (*Citrus tristeza virus* and *Phytophthora citrophthora*) and effects of xenobiotic and symbiont treatments.”

2011-2013 - Italy-Sweden-Vietnam Trilateral Project, Initiation Grant STINT;"Tree Diseases caused by species of *Phytophthora* that threaten forests and orchards on different continents".

2014-2015 - FIR: “Sustainable strategies for the disinfection of soil and substrates from telluric pathogens”.

2016 – Project Italia - Vietnam: “Quality certification of tropical and subtropical fruit for export to Europe: guidelines for the production of fruit free of toxic pesticide residues and invasive pathogens and insects”.

2016-2018 – University research plan: 'Characterisation of emerging phytopathogens and control strategies'.

2018-2019 - Progetto Italy-Iran - Programma di mobilità “PIETRO DELLA VALLE” "Pomegranate and pistache diseases and selection of ecotypes resistant to fungal diseases in Iran".

2020/2022 - MEDIT-ECO - Piano Incentivi per la Ricerca di Ateneo Linea di intervento 2:
- “Survey of phytopathological problems in the main Sicilian production contexts and eco-sustainable defence strategies”.

2020 – 2023. PON “RICERCA E INNOVAZIONE” 2014 – 2020, Azione II – Obiettivo Specifico 1b - “Miglioramento delle produzioni agroalimentari mediterranee in condizioni di carenza di risorse idriche – WATER4AGRIFOOD.

2019- Progetto PRIMA Section 2 – “Smart and innovative packaging, post-harvest rot management and shipping of organic citrus fruit” (BiOrangePack). (36 months. <http://biorangepack.eu/>), 6 nations and 14 partners. Coordinator: Prof.ssa S.O. Cacciola

2021-2023 – PROMETEO - Italia- Tunisia: “Un village transfrontalier: pour protéger les cultures arboricoles méditerranéennes en partageant les connaissances” Coordinatore: Prof.ssa S.O. Cacciola.

2021-2023- ENI CBC MED Programme C_A.2.1_0069 - WEF - CAP: “The Technology Transfer and Capitalization of Water Energy Food NEXUS. Scientific responsible: Prof.ssa S.O. Cacciola.

2019-2021 Project Erasmus +- International credit mobility KA107. Winner of Announcement 2019-2020 2nd semester 'Staff outgoing mobility for teaching'.

2023-2025, Scientific Task Leader of project ERASMUS-EDU-2023-EMJM-DESIGN "Mediterranean Forest Health in a Global Climate Change Scenario" (FORCLIMED).

From 2009 to date - Member of the international research group of the COST Action IUFRO Working Party 7.02.09 “*Phytophthora diseases of Forest trees*”.

From 2018 to date - Diagnosis and expertise on plant samples and those concerning the necessary expert support, within the scope of the objectives set out in Leg. 214/2005. Scientific responsible for an agreement with the Regional Phytosanitary Service 4 and the Fight against Counterfeiting (SFR) of the Regional Department of Agriculture, Rural Development and Mediterranean Fisheries, Regional Department of Agriculture

2018-2021 - Supervisor of a PhD scholarship financed by MIUR - National Operational Programme Research and Innovation 2014-2020 (CCI 2014IT16M2OP005), European Social Fund, Action I.1 "Innovative doctorates with industrial characterisation" Project title: "Development of sustainable management strategies of the main plant diseases caused by fungal pathogens in Mediterranean agro-ecosystems, through the combination of innovative diagnostic methodologies with the use of antagonistic microorganisms and environmentally friendly antifungal active compounds".

Scientific leader of a Collaboration Agreement with the CREA- OFA in Rende (CS) to carry out research activities on the study of the aetiology of emerging olive diseases.

2019 - Member of the Working Group of the Erasmus+ Programme contribution to the University application for the funding of mobility to and from non-EU partners - International credit mobility (KA107) - Winner of the 2019-2020 Announcement II° semester "Outgoing staff mobility for teaching".

2023-2025 - Scientific Task Leader in the ERASMUS-EDU-2023-EMJM-DESIGN project "Mediterranean Forest Health in a Global Climate Change Scenario" (FORCLIMED).

SCIENTIFIC COLLABORATION

University of Berkeley, USA (Prof. M. Garbelotto); The James Hutton Institute (formerly Scottish Research Crop Institute), Scotland (Dr D.E.L. Cooke); Phytophthora Research Centre, Mendel University, 613 00 Brno, Czech Republic (Dr. T. Jung); North Carolina State University – North Carolina, USA (Prof. J. B. Ristaino); Plant Protection Institute, Centre for Agricultural Research, Hungarian Academy of Sciences, Hungary (Dr. Jozsef Bakonyi); Regione Sicilia, Servizio 9 - innovazione, ricerca, divulgazione, vivaismo forestale e difesa dei boschi dalle avversità (Dr. A. Sidoti); Istituto Regionale per la Floricoltura, Sanremo (dott.ssa. P. Martini)

REVIEWER ACTIVITIES

Reviewer of scientific articles for international journals such as: Plant Disease, Plant Pathology, Journal of Plant Pathology and Phytan-International Journal of Experimental Botany. Member of the Reviewer Board of journal Pathogens and Plant.

SCIENTIFIC MEMBERSHIPS- American Phytopathological Society; Italian Society of Plant Pathology (SIPaV); Italian Mycological Union

RESEARCH INTERESTS

The research activity is documented by more than 120 papers published in proceedings of national and international congresses and in national and international indexed journals and concerns various aspects of the physiopathology and aetiology of diseases of fruit, horticultural, ornamental and forestry plants caused by fungi and oomycetes.

Overview of the main lines of research: Plant Pathology dealing with different aspects of the etiology and physiopathology of fungal and oomycetes diseases of agricultural, ornamental and forest plants. (a) identification and morphological and biological

characterization of *Phytophthora* species as agents of root rot of agricultural, ornamental and forestry plants; (b) identification and classification of phytopathogenic fungi and oomycetes by polyacrylamide gel electrophoresis of mycelial proteins (c) study of the variability and factors of aggression of the causal agent of citrus dry rot and physiological changes in infected citrus plants (d) development of molecular diagnostic methods for the identification of species of phytopathogenic fungi and oomycetes; (e) studies on the etiology of new or little-known diseases of agricultural, ornamental and forestry plants and reporting of exotic pathogens; (f) study of the diversity of *Phytophthora* populations in natural, forestry and agricultural ecosystems and development of innovative diagnostic methods for the detection of *Phytophthora* species in plant tissues and in environmental samples (soil and water) (g) Post-harvest fruit disease management; development of innovative solutions for environmentally sustainable post-harvest disease management and logistics in citrus fruit.

INSTITUTIONAL FUNCTIONS

Component of:

- Departmental Committee advising the Director of the Department of Plant Science and Technology [(DiSTeF) today Di3A] - 2003-2006.
- Orientation Committee for the Degree Course in Agricultural Science and Technology. 2004 -2010.
- Didactic Committee of the Degree Course in Agricultural Science and Technology of the Faculty of Agriculture, University of Catania. 2006 -2012.
- Educational tutor. A.A. 2018/2019.
- Committee of Educational laboratories. 2019 -2022
- Member of the Committee "Gruppo di Gestione di Assicurazione Qualità (GGAQ)" of the course L21– Corso di Laurea in “Pianificazione e tutela del territorio e del paesaggio” (L21). From 2019 to 2022.
- Commissione biblioteca del Dipartimento di Agricoltura, Alimentazione e Ambiente. From 2021 to date.
- Departmental Joint Commission. 2022-2026
- Laboratory Manager of Patologia vegetale molecolare. From 2005 to date.
-

Organising activities

2000 - Member of the Organising Committee of the 5th Congress of the European Foundation for Plant Pathology- EFPP held in Taormina from 18 to 22 May 2000.

2004 to 2010 - Annual organisation of the Salone dello Studente and promotion of orientation activities at secondary schools in eastern Sicily.

11-12 November 2005 - Member of the Technical-Scientific Committee of the Conference "Floriculture in Sicily: problems and prospects" organised in collaboration with the Ministry of Agriculture and Forestry and the Department of Agriculture and Forestry of the Sicilian Region, as part of the presentation of the final results of the Interregional Programme "Research and applicative experimentation, transfer of innovations to the supply chain operators" - Project 6B - Floriculture,

2007 - Curator of photographic documentation of symptoms of various diseases. Some slides were selected for the cover of the journal 'Plant Disease' of the American Phytopathological Society.

21 February- 4 March 2005 - Coordinator of a theoretical-practical course "Isolation and identification of Phytophthora soil species", as part of the PRIN 2003-2005 project "Diseases caused by Phytophthora soil species: aetiology, molecular diagnosis, epidemiology and new means of defence"

17-18 May 2018 - Organizing Committee member of the Workshop "Rapid Diagnostic Tools for Phytophthora within the framework of the U.S. FULBRIGHT Project Lecturers and Research Scholars to Italy - A.Y. 2017-18. University of Catania 17 -18 May 2018.

27 September 2019 -Participated at the European Researchers' Night - "Sharper (HARing Researchers' Passion for Enhanced Roadmaps) European Researchers' Night project" - organizing in collaboration with colleague Santa Olga Cacciola a stand on the theme: "Plant Chemistry in Herbal Medicine and Cooking" under the patronage of SIPaV to celebrate the International Year of Plant Health (IYPH) established by the United Nations General Assembly and FAO. Palazzo Minoriti, Catania, 27 September 2019

Languages spoken

- Italian (mother tongue)
- English, excellent knowledge of written and spoken language

Catania, 18/03/2024

