

PORRETTA Daniele

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PRESENT POSITION

Associate professor in Ecology, Department of Environmental Biology, Sapienza University.

PAST POSITIONS

- 2015-2017: Researcher (ricercatore a tempo determinato art. 24 c.3-b L. 240/10). Department of Environmental Biology, Sapienza University.
- 2013-2014: Post-doctoral research fellow (Assegno di Ricerca L. 449/1997) Sapienza, University of Rome.
- 2011-2013: Researcher (ricercatore a tempo determinato art. 24 c.3-a L. 240/10), Department of Ecological and Biological Sciences, Tuscia University.
- 2007-2011: Post-doctoral research fellow (Assegno di Ricerca L. 449/1997) Department of Genetic and Molecular Biology, Sapienza, University of Rome.

EDUCATION

- 2006 PhD: in Ecology and Biological Resources Management.
Thesis: Planning control strategies of the mosquito *Ochlerotatus caspius* in Northern Italy through a molecular-genetic approach. Tuscia University of Viterbo. Supervisor: prof. Sandra Urbanelli
- 2000: MSc Biology (109/110).
Thesis: Use of allozymes and cpDNA-RFLP to study genetic structure, speciation and evolution of orchids belonging to the *Dactylorhiza* genus. 'La Sapienza' University of Rome. Supervisor: prof. Luciano Bullini.

INSTITUTIONAL RESPONSIBILITIES

- 2019-ongoing: President of the MSc Course in Sciences and Technologies Applied to Cultural Heritage Conservation.
- 2018-ongoing: Academic Coordinator for the International Mobility of Students, Sapienza University of Rome.

TEACHING EXPERIENCE

- 2020-ongoing Ecology (9 CFU); Bachelor Program: Natural Sciences, Sapienza University
- 2020-ongoing Applied biotechnology and evolution (3 CFU); Master Program: Genomic, Industrial and Environmental Biotechnologies, Sapienza University
- 2018-ongoing Applied Entomology (3 CFU); Master Program: Ecobiology, Sapienza University

- 2018-2019 Ecology (6 CFU); Bachelor Program: Agro-industrial Biotechnology, Sapienza University
- 2016-2019 Molecular Ecology (3 CFU); Master Program: Genomic, Industrial and Environmental Biotechnologies, Sapienza University
- 2011-2013 Applied Ecology, (9 CFU), Bachelor Program: Environmental Sciences, Tuscia University
- 2019-2020 Scientific writings, PhD School, Tuscia University.
- 2019-ongoing: Member of PhD committee in Ecology and Sustainable Management of the Environmental Resources. Tuscia University.

PROFESSIONAL SERVICES

- 2020-ongoing Topic Editor of the Insects (Public Library of Science), peer review Open Access Journal by MDPI
- 2019: Scientific evaluator for research grants, Regione Puglia, Italy.
- Reviewer of scientific papers for about 25 academic journals in the fields of Ecology, Evolution and Pest Management.

RESEARCH ACTIVITY

I am interested in understanding evolutionary processes that lead to biological diversity at population and species levels. Topics of interest are origin and spread of adaptive polymorphisms, reproductive character displacement and speciation by reinforcement, introgressive hybridization. I address these topics by combining genetic with ecological, morphological, and behavioral data. In addition, by using insect species as a study system, including vectors of human diseases, I am applying evolutionary principles in developing pest control technologies.

JOB-RELATED SKILLS

- over 20 years of experience in ecology and evolution research using experimental approaches
- teaching and mentoring skills (teaching for Bachelor, Master, and Ph.D. students)
- organizational skills gained as coordinator of Masters (2019-present), and Academic Coordinator for the International Mobility of Students at the Faculty of Mathematical Physics and Natural Sciences, Sapienza University of Rome
- team-leading skills gained as coordinator of national and international education, research, and outreach projects

GRANTS

- 2021: Project PON FESR 2014-2020. From ecology to safeguarding agricultural production: development of a biological control system based on inter-specific competition against the small fruit fly *Drosophila suzukii*. Scientific referent.
- 2021: Project PON FESR 2014-2020. Development of a multiple biological control approach against the invasive species *Bagrada hilaris* (Burmeister) to protect caper crops. Scientific referent.
- 2020 Origin, spread and evolutionary benefits of insecticide resistance: a longitudinal study for controlling the vector *Culex pipiens*. Grantor Sapienza University (2020, prot. RM120172A00E125B 10000 euro) role: PI.
- 2019 Analysis of eco-evolutionary dynamics of insecticide resistance. Grantor Sapienza University (2019, prot. RM11916B47129D55, 15000 euro) role: PI.
- 2017-ongoing HYBRIND. Global changes, hybridization, and the tyranny of the golden mean. Grantor MIUR (PRIN, Anno 2017 - prot. 017KLZ3MA, 202000 euro) role: researcher
- 2017 Inhibition of cellular defence mechanisms in the malaric vector *Anopheles stephensi*: an environment friendly control strategy. Grantor: Sapienza University (prot. RM11715C63F9355F, 15000 euro) role: researcher.
- 2016 Transcriptomic analysis to study defence against insecticides in the malaric vector *Anopheles stephensi*. Grantor: Sapienza University (prot. C9CFDE3B, 11941 euro) role: researcher.
- 2013 Development of a new control strategy to control *Anopheles* mosquitoes by inhibition of ABC-transporters. Grantor: Sapienza University (prot. C26A135HNM, 7500 euro) role: researcher.
- 2010-2011 Inhibition of multidrug-efflux-pumps as new strategy to control ticks and tick-borne diseases. Grantor, MIUR (PRIN, Anno 2010-2011 - prot. 2010PJJ4W3_003, 142000 euro) role: researcher.

PUBLICATIONS AND CITATION INDEXES

- 45 papers on international journals (Scopus)
- Total Impact Factor*(average IF/paper): 151.52 (3.37)
- h-index: 19;
- Total citations: 937 (Scopus)

*considering the publication year

DISSEMINATION AND OUTREACHES ACTIVITIES

- 2020 Erasmus+ Call: 2020 KA2 - Cooperation for Innovation and the Exchange of Good Practices Strategic Partnerships for Higher Education. Project title: EDICULA, Educational

Digital Innovative Cultural heritage related Learning Activities. Grantor: EU. (Project Code: 2020 1EL01KA203 079108, 100.178,00 euro) role: co-proponent Sapienza partner

- 2018 Outreach project, title: “Places of Evolution”. Grantor: European Society of Evolutionary Biology (1500 euro) role: proponent
- 2013 scientific essay. Title: The caterpillar from the golden eggs: From pesticides to GMOs, the false promises of the agrochemical multinationals. Author, D. Porretta (Edited by Stampa Alternativa-Nuovi Equilibri, Viterbo, Italia). ISBN: 978-88-6222-336-2.
- 2011 scientific essay “Principles of Scientific Writing” Authors D. Canestrelli and D. Porretta (Edited by CIC Edizioni Internazionali, Roma, Italia). ISBN: 978-88-7141-933-6.

NATIONAL AND INTERNATIONAL ACKNOWLEDGMENTS

- 2021 Top author (based on volume of articles submitted and proportion of submissions accepted over the last 5 years) for the BMC
- 2016 The following paper has been selected as Cover Article by the journal Trends in Ecology and Evolution: Canestrelli D., Porretta D., Lowe W., Bisconti R., Carere C. & G. Nascetti, 2016. The tangled evolutionary legacies of range expansion and hybridization. Trends Ecol Evol 31: 677-688.
- 2015 Italian national qualification for Associate professor, Research area: Ecology.
- 2009 “Anna Maria Catalano” Foundation prize for the best Phd thesis (subject: Conservation of nature, quality of the environment and sustainable development of the agro-forestry-pastoral system).
- 2007 Member of the working group on “An evaluation of the prospects for incorporating SIT into control programmes for *Aedes* mosquitoes” International Agency for Energy Atomic (IAEA) Headquarters, Vienna.

SELECTED COLLABORATIONS

- Agricultural University of Athens, Athens, Greece, Department of Crop Science, Pesticide Science Lab (Prof. John Vontas)
- Cyprus University of Technology (Cyprus), Department of Environmental Science and Technology (Prof. Marlen I. Vasquez)
- University of Montana, Division of Biological Sciences, Missoula, USA (Prof. Winsor H. Lowe)
- Agriculture and Environment Centre “Giorgio Nicoli” (CAA s.r.l., Crevalcore, Italy (Dott. Romeo Bellini)
- Biotechnology and Biological Control Agency (BBCA onlus, Rome, Italy) (Dott. Massimo Cristofaro)
- Department of Ecological and biological Sciences, Tuscia University, Viterbo, Italy (Prof. Daniele Canestrelli)
- Department of Medical Veterinary, Aldo Moro University, Bari, Italy (Prof. Domenico Otranto)
- Department of Biosciences, University of Milan, Milan, Italy (Prof. Claudio Bandi)