PERSONAL INFORMATION

Amalia Barone

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Department of Agricultural Sciences
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Enterprise	University	EPR
☐ Management Level	☒ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

From 02-2020 to now	**Coordinator of the PhD School in Food Science at the Department of Agricultural Sciences, University of Naples Federico II.**
From 09-2018 to now	**Full Professor of Plant Genetics (sector E7/01 – Plant Genetics) at the Department of Agricultural Sciences, University of Naples Federico II.**
From 2005 to 2018	**Associate Professor of Plant Genetics (sector E7/01 – Plant Genetics) at the Department of Agricultural Sciences, University of Naples Federico II.**
From 2002 to 2005	**Researcher of Plant Genetics (sector E7/01 – Plant Genetics) at the Department of Biotechnology Sciences, University of Naples Federico II.**
From 1994 to 2001	**Position as level III researcher at CNR - Research Institute for Vegetable and Ornamental Plant Breeding, Portici, Naples.**

EDUCATION AND TRAINING

From 1992 to 1993	**Fellowship of the C.N.R. Project RAISA working on "The use of RFLP markers to characterize diploid Solanum clones which produce 2n pollen, at the Center for Vegetable Breeding, CNR, Portici (Naples)**
From 1990 to 1991	**Fellowship of National Academy of Lincei "Valeria Vincenzo Landi", working on "The use of RFLP markers to select interspecific hybrids in potato", at the Center for Vegetable Breeding, CNR, Portici (Naples)**
From 1989 to 1990	**Fellowship from the CNR as visiting scientist at the Max-Planck-Institut für Züchtungsforschung, Koln, (FRG), working on " Use of molecular markers to map resistance genes in potato"**
From 1987 to 1988	**Fellowship from the International Institute of Tropical Agriculture (I.I.T.A.) at the University of Naples, Faculty of Agricultural Sciences working on "Cytogenetics and breeding of cowpea"**

PERSONAL SKILLS

Mother tongue(s) ITALIAN

Other language(s) ENGLISH (FIRST CERTIFICATE)

Job-related skills Amalia Barone main research interest is the exploitation of genomic tools for investigating the variability of genetic resources and for applying them to plant breeding traditional and innovative strategies. Her fundamental research has focussed in the last years on the improvement of fruit quality and the enhancement of tolerance to abiotic stresses in tomato. Her research activity is addressed to the investigation of genomes and transcriptomes of wild species or other germplasm sources to detect the allelic variants determining the desirable phenotypes. The combination of high-throughput genotyping platforms with a deep morpho-physiological multi-traits evaluation is the breeding approach she is currently using to identify key-genes involved in the response to tolerance to abiotic stresses. More recently, the development of the genome editing techniques has prompted her to start using the CRISPR-Cas 9 in her research to understand the role of candidate genes potentially involved in the fruit quality.

Digital skills Good knowledge of Web Server, Solanaceae database server, and of the Microsoft Office software.

ADDITIONAL INFORMATION

Publications

1) Tomato Genome Consortium. - 2012 - The tomato genome sequence provides insights into fleshy fruit evolution. Nature 485: 635-641
2) Ruggieri V., Francese G., Sacco A., D'Alessandro A., Rigano M.M., Parisi M., Milone M., Cardi T., Mennella G., **Barone A**. - 2014 - An association mapping approach to identify favorable alleles for tomato fruit quality breeding. BMC Plant Biology 14: 337
3) Sacco A., Ruggieri V., Parisi M., Festa G., Rigano M.M., Picarella M.E., Mazzuccato A., **Barone A**. - 2015 - Exploring a Tomato Landraces Collection for Fruit-related Traits by the Aid of a High-Throughput Genomic Platform. PLOS ONE. 10 (9)
4) Calafiore R., Ruggieri V., Raiola A., Rigano M.M., Sacco A., Hassan M.I., Frusciante L., **Barone A. -** 2016 - Exploiting genomic resources to identify candidate genes underlying antioxidant content in tomato fruit. Front. Plant Sci. 7: 397
5) Rigano,M.M., Lionetti V., Raiola A., Bellincampi D., **Barone A.** 2018 Pectic enzymes as potential enhancers of ascorbic acid production through the D-galacturonate pathway in Solanaceae. Plant Science 266:55
6) Scarano A., Olivieri F., Gerardi C., Liso M., Chiesa M., Chieppa M., Frusciante L., **Barone A**., Santino A., Rigano M.M. 2020 Selection of tomato landraces with high fruit yield and nutritional quality under elevated temperatures. Journal of the Science of Food and Agriculture 100: 2791.
7) Olivieri F., Calafiore R., Francesca S., Schettini C., Chiaiese P., Rigano M.M., **Barone A**. 2020 High-throughput genotyping of resilient tomato landraces to detect candidate genes involved in the response to high temperatures. Genes 11(6): 626
8) Gonzalo M.J., Najera I., Baixauli C., Gil D., Montoro T., Soriano V., Olivieri F., Rigano M.M., Ganeva D., Grozeva-Tileva S., Pevicharova G., **Barone A.**, Granell A., Monforte A.J. 2021 Identification of tomato accessions as source of new genes for improving heat tolerance: from controlled experiments to field. BMC Plant Biology 21: 345
9) Cappetta E., Andolfo G., Guadagno A., Di Matteo A., **Barone A.,** Frusciante L., Ercolano M.M. 2021Tomato genomic prediction for good performance under high-temperature and identification of loci involved in thermotolerance response Hort Res 2021 8(1): 212
10) Graci S., Ruggieri V., Francesca S., Rigano M.M., **Barone A**. 2023 Genomic Insights into the Origin of a Thermotolerant Tomato and Identification of Candidate Genes for Heat Stress. Genes 14: 535.

Projects

Plant, animal and microbial genetic resources and adaptation to climatic changes, Spoke 1 of the National Research Centre for Agricultural Technologies (Agritech), Scientific coordinator for UNINA.

A holistic multi-actor approach towards the design of new tomato varieties and management practices to improve yield and quality in the face of climate change-TomGEM, EU-H2020-SFS-2015-2, PI for UNINA and WP5 leader (2016-2020).

Enhancing the tomato agro-chain through the use of integrated omics platforms. Project GenoPOMpro funded by MiUR, Scientific coordinator (2012-2015)

Designing of molecular markers for association mapping strategies to study the accumulation of nutritional metabolite in tomato fruit. Project ESPLORA funded by MiPAF, PI for UNINA (2010-2013)

Structural and functional genomics of Solanaceae species: sequencing of genomic regions and identification of genes involved in the response to biotic stress and improvement of nutritional quality. Project AGRONANOTEH funded by MiPAF, PI for UNINA (2004-2011).