

Anca Macovei - Curriculum Vitae

Born in Copsa-Mica (Romania), 17 January 1982. Degree in Biology at the 'Babes-Bolyai' University in Cluj-Napoca (Romania) in 2004. Master Degree in Plant Genetic Engineering at the 'Babes-Bolyai' University in Cluj-Napoca (Romania) in 2005. PhD Degree in Genetics and Molecular Biology at the University of Pavia in 2011.

Current position: Assistant Professor at the Plant Biotechnology Laboratory, Department of Biology and Biotechnology 'L. Spallanzani', University of Pavia, Italy

Scientific activity

2005-2007. *Research Fellowship Program*: Department of Plant Breeding and Genetics, University of Agricultural Sciences and Veterinary Medicine (USAMV), Cluj-Napoca, Romania. Project: Genetic determination of qualitative and quantitative traits in potato hybrids. *Socrates-Erasmus Scholarship* in Plant Molecular Genetics, Faculty of Life Sciences, University of Copenhagen, Copenhagen, Denmark. Project: Genetic mapping of wheat 2BL chromosome using SSR markers

2008-2010. *PhD Fellowship*, Plant Biotechnology Laboratory, Department of Biology and Biotechnology 'L. Spallanzani', University of Pavia, Italy. Project: Identification and molecular characterization of novel genes modulated by oxidative stress in *Medicago truncatula* Gaertn. *Three months Exchange Program* within the Plant Cell Biotechnology Laboratory, Instituto de Tecnologia Química e Biológica (ITQB-Universidade Nova de Lisboa), Oeiras, Portugal. Project: Trehalose metabolism in *Medicago truncatula*: role in osmoprotection

2011. *Post-Doctor Fellowship*, Plant Biotechnology Laboratory, Department of Biology and Biotechnology 'L. Spallanzani', University of Pavia, Italy. Project: Conservation, characterization and variability induction in *Rosa* spp. for improving hybridization protocols.

2012-2013. *Post-Doctor Fellowship*, Plant Molecular Biology Group, International Center for Genetics and Biotechnology (ICGEB), New Delhi, India. Projects: MicroRNAs targeting helicases from rice: validation and response to abiotic stress; Low-dose rate gamma radiation as a tool for the study of DNA damage and repair mechanisms in rice: role of transcription factors and microRNAs.

2013-2015. *Post-Doctor Fellowship*, Genetic Transformation Laboratory, International Rice Research Institute (IRRI), Los Baños, Philippines. Project: Development of cutting edge rice transformation platform for complex traits: multigene transformation system and genome editing using TAL Effector Nucleases (TALENs).

2016. *Visiting Researcher* at University of Pavia, Italy. Scholarship for research activity: Plant Biotechnology Lab, Department of Biology and Biotechnology "Lazzaro Spallanzani" - Università degli Studi di Pavia.

Coauthor Of 40 publications on peer-review journals, 5 book chapters and 50 communication to national and international congresses.

Research grants

2012. *MicroRNAs targeting helicases from rice: validation and response to abiotic stress*. Financed by ICGEB, Trieste (Italia) and performed at the ICGEB, New Delhi (India)-Plant Molecular Biology Group (Dr. N Tuteja).

2012-2013. *Low-dose rate gamma radiation as a tool for the study of DNA damage and repair mechanisms in rice: role of transcription factors and microRNAs*. Financed by ICGEB, Trieste (Italia) and performed at the ICGEB, New Delhi (India)-Plant Molecular Biology Group (Dr. N Tuteja).

Main Research Topics

Role of DNA repair in the plant response to abiotic stress. Molecular profile of seed quality. DNA repair mechanisms induced by ionizing radiations (IR) in plant cells: basic and applied (*in vitro* breeding) aspects. MicroRNAs in the context of abiotic stress response. Genome editing and its applications in plants. Development of plant cell-based assays for genotoxicity studies.

Teaching activity

Since 2016. Teaching Assistant (Cultore della Materia) – Molecular Techniques for the Conservation of Biodiversity; LM Molecular Biology and Genetics 2015/2016. Laboratory Assistant (1 CFU) Biomolecular techniques applied in plants (6 CFU-BIO/04) 2009/2010 e 2010/2011. Laboratory Assistant (1 CFU) Molecular Techniques for the Conservation of Biodiversity 2009/2010. Laboratory Assistant (2 CFU) Plant Physiology (4 CFU-BIO/04). Assistant supervisor for Bachelor and Master Degree Students (Biology, Biotechnology) at the University of Pavia and University of the Philippines Los Banos (UPLB).