

Prof. Rosario Muleo
Curriculum Vitae

Degrees: Doctor graduated in Agricultural Sciences, with full marks, University of Pisa, 1983.

Ph. D graduated in Horticulture, curriculum "Propagation", University of Pisa, 1989.

Positions: 1/1/1991-31/10/1998 Assistant Professor (Full researcher), Woody Fruit Crop section of the Department of Cultivation and Defence of Woody Species, at the University of Pisa.

1/11/1998-29/12/2017 Associate Professor, Department of Plant Production of Agricultural Faculty, at the University of Tuscia.

30/12/2017-present Full Professor, Dept. of Agricultural and Forestry Science, University of Tuscia.

Teaching: General Arboriculture. Cultivation system for Fruit quality. Biotechnology of woody fruit crop. Vegetal food production and sustainability.

Coordination and management: 2004-2009 Director of MSc of Agricultural Biotechnology - 2014-2020 Director of MSc of Agricultural and Environmental Sciences.

International Activity

A total of 2 years and half spent abroad: Michigan State University (Michigan, USA; 15 months); Cornell University (New York, USA; 1 month); Horticultural Research International (Littlehampton, UK; 10 months); Spanish National Research Council -CSIC- (Sevilla, Spanish; 2 months).

Project evaluation on behalf of government agencies in Germany (2)

Performance indices

H-index Scopus: 21; (January, 2021).

H-index Google Scholar: 27 (January, 2021).

Patents

Muleo R (2015). TUSCIA RED, APPLE WITH RED FLESH. 20150763, Università della Tuscia

Colizzi V, Cirilli M, Galgani A, Del Gallo di Roccagiovine F, Kenzo M, Minutolo Antonella, Montesano C, Muleo R, Pirrò S, Potestà M (2016). NUTRACEUTICAL PLANT DERIVED MICRORNA ELEMENTS FOR TREATMENT OF CANCER. 16020075.4

Muleo R, Loreti F (2011). Tuscia, mutante somaclonale della cultivar Hayward di Actinidia deliciosa (A. Chev.) C. F. Liang & A. R. Ferguson, resistente alla shelf life. 2011/2380 A. Deliciosa "Tuscia", Vivai Piante Battistini - Società Agricola S.S.

The research activity concerned: plant propagation by in vitro technology and by cutting, induction of morphogenesis and embryogenesis from zygotic and somatic tissues, genetic improvement of woody plants and horticultural plants through biotechnology methods (gene transformation and somaclonal variation) to induce abiotic stress tolerance and modifications of growth habit of woody plants, identification of molecular markers in woody and tomato plants regenerated on high osmotic and saline media to scan plant polymorphism, photobiological studies and the role of light quality and photoreceptors in regulating the development of fruit trees; the study on gene regulation and epigenetic of changing phase transition from juvenile to adult in olive and peach; the identification of genes and mechanisms of endogenous and exogenous regulation of flower induction and development, fruit development and the study of self-incompatibility systems in olive trees and in species of Prunus; the study of biodiversity and identification of neutral and functional markers in olive trees (with particular attention to the development of SNPs and 3 or 4 bases SSRs); the study of gene and physiological regulation of the synthesis and accumulation of secondary metabolites in fruits (apple, olive drupe, grape berry, pomagranate) and the influence of environmental factors. The research activity is documented by more the 84 publications, issued on foreign journals, and by many book chapter and as editor of scientific books. He is author of a total of 291 publications. Countless

are his participations in international conferences as both invited speaker and convener. His research activity has led to the development of a somaclone of *Actinidia deliciosa* (cv Hayward) resistant to long shelf life, of a rootstock of *Prunus* (Alligator) resistant to anoxic conditions, of the red-fleshed apple 'Tuscia' genotype and the identification of functional olive miRNA able to cross-kingdom interaction with human oncogenes in active role in anti-tumoral response, all subject to a ECC patents. Research activities of prof. Rosario Muleo also concern: the sequencing of the genome of the olive tree for which he was the project leader of the Italian National Project (OLEA); the development of a reliable and cost-effective assays with adequate sensitivity to detect the DNA methylation profile in plants for epigenetic analysis of the regulative regions controlling the gene expression. He is a depositary, in public data banks, as the author or co-author of a significant amount of genes of fruit tree species.

He was and is scientific responsible, he has participated and participates in various research projects of European, national and regional interest related to abiotic stress and development of woody plants. As part of the research and study activity, he was a visitor researcher for two years at the Proff laboratories. K. J. Sink and J. Flore of the Horticulture Department of Michigan State University (1987-1988); at the laboratory of Dr. B. Thomas of the Molecular Biology Department - Horticulture Research International-, Littlehampton (1992-1993); at the laboratory of Dr. A. Troncoso of the Institute de Recursos Naturales y Agrobiologia - C.S.I.C. -, Seville (1997); at the laboratory of Prof. B. Thomas of Warwick HRI, University of Warwick, Wellesbourne (2007). From 1994 until 2009 he collaborated with the Department of Animal Biology and Genetics, University of Florence.

Prof. Rosario Muleo è member of national and international Scientific Society:

- Accademico Ordinario della Accademia Nazionale dell'Olivio e dell'Olio di Spoleto,
- Accademico aggregato dell'Accademia dei Georgofili,
- Società Italiana di Genetica Agraria,
- Società di Ortoflorofruitticoltura Italiana.
- American Association for the Advancement of Science

He is referee for many Journals: *Functional Plant Biology*, *Scientia Horticulturae*, *Euphytica*, *In Vitro Cell Development Biology*, *Journal of America Society for Horticultural Science*, *Scientia Horticulturae*, *The PLant Journal* and many others