Silvia Mazzuca CV

Current position
Associate professor in Plant Biology,
Plant Cell Physiology lab,
Department of Ecology, Ponte Bucci 6b
University of Calabria, 87036 Rende , Italy
http://polaris.unical.it/index.html

Research Interests
-Plant proteome dynamics in leaf tissues under stress conditions and in the acclimation processes to low light in Mediterranean marine plants (*Posidonia oceanica, Cymodocea nodosa, Zostera nolti*)
-Translational proteomics: Protein pattern in fruits during ripening and following pathogen attacks in the Mediterranean crop species lemon and olive
-Development and application of sensitive technologies of mass spectrometry to plant proteomes
- Gel based proteomics by means of mono- and two-dimensional electrophoreses, mass spectrometry and bioinformatics

Education and academic position
1989- Degree in Biology, Università della Calabria, Rende, Italy
1990-C.N.R. Research award at the School of Pure and Applied Biology, University of Wales, UK
1994- Permanent positions as researcher at the University of Calabria, Rende, Italy
2002 - present -associate professor in plant biology
2009-present - Leader of Plant Proteomic team, University of Calabria

Membership
Management Committee of COST Action ES0609
International Plant Proteomic Organization (IPPO), Distinguish member
Italian Proteomic Association (ItPa), Plant proteomics
Società Botanica Italiana (SBI)
Biologia Vegetale

Editorial activity
Associated Editor of the Journal of Integrated-OMICS. A methodological Journal -JIOMICS, since July 6th,2010.
Editor in Chef J.L. Capelo
Guest Associate Editor at Frontiers on Plant Proteomics journal (Editors Wolf Frommer and Uwe Sonnewald)
Research Topic Editor at Frontiers in Plant Proteomics
(http://www.frontiersin.org/Plant_Proteomics/researchtopics/Proteomic_and_Genomic_Analysis/686)

Reviewer at the international Journals:
J. of Experimental Marine Biology and Ecology (JEMBE); Journal of Proteomics; Journal of Integrated-OMICS; Plos-One; Plant Physiology and Biochemistry; Plant Science ; Frontiers in Plant Proteomics; Journal of Environmental Management; Plant Biosystems; Rapid Communications in Mass Spectrometry; Chemosphere

Selected publications (for complete list of publication see at http://polaris.unical.it/index.html)

Procaccini G. , Beer S. , Björk M. , Olsen J. , Mazzuca S. , Santos R. , " Seagrass ecophysiology meets ecological genomics: Are we ready?". *Marine Biology*, 2012, 1-6.

Serra I. A. , Nicastro S. , Mazzuca S. , Natali L. , Cavallini A. , Innocenti A. M. , " Response to salt stress in seagrasses: PIP1;1 aquaporin antibody localization in". *Aquatic Botany*, 2011, (http://www.sciencedirect.com/science/article/pii/S0304377011000878)

Cristoni S. , Mazzuca S. , *Computational and Systems Biology - Molecular and Cellular Experimental Systems*. Ning-sun ed. , Cap. 2, " Bioinformatics Applied to Proteomics", : InTech - Open Access Publisher. 2011. 25-50.

Serra I. A. , Mazzuca S. , *Seagrass: Ecology, Uses and Threats*.. Cap. 2, " *Posidonia oceanica*: from ecological status to genetic and proteomic resources", : Nova Science Publishers, New York, USA. 2010. 71-116.

Pignataro V. , Canton C. , Spadafora A. , Mazzuca S. , " Proteome from lemon fruit flavedo reveals that this tissue is producing high amount of the Cit s1 germin-like isoforms". *Journal of Agricultural and Food Chemistry*, 2010, Vol. 58, n. 12, 7239-7244.

Finiguerra A. , Spadafora A. , Filadoro D. , Mazzuca S. , " Surface-activated chemical ionization time-of-flight mass spectrometry and labeling-free approach: two powerful tools for the analysis of complex plant functional proteome profiles". *Rapid*

Communications in Mass Spectrometry, 2010, Vol. 24, 1155-1160.

Mazzuca S. , Spadafora A. , Filadoro D. , Vannini C. , Marsoni M. , Cozza R. , Bracale M. , Pangaro T. , Innocenti A. M. , " Seagrass light acclimation: 2-DE protein analysis in *Posidonia* leaves grown in chronic low light conditions". *Journal Experimental Marine Biology and Ecology*, 2009, Vol. 374, 113-122.

Pignataro V. , Spadafora A. , Filadoro D. , Mazzuca S. , " Proteins extraction and characterization from lemon flavedo". Proceedings of "XXXIII CIOSTA CIGR V Conference 2009 - IUFRO", Reggio Calabria, 17-19 JUNE, 2009, Giammetta G and Zimbalatti G:Reggio Calabria, 2009, Vol. 1, pp. 271-274.

Mazzei R. , Giorno L. , Piacentini E. , Mazzuca S. , Drioli E. , " Kinetic study of a biocatalytic membrane reactor containing immobilized beta-glucosidase for the hydrolysis of oleuropein". *Journal of Membrane Science*, 2009, Vol. 339, 215-223.

Spadafora A. , Filadoro D. , Mazzuca S. , Bracale M. , Marsoni M. , Innocenti A. M. , " 2-DE polypeptide mapping of Posidonia oceanica leaves, a molecular tool for marine environment studies". *Plant Biosystems*, 2008, Vol. 142, n. 02, pp. 213-218.

Spadafora A. , Mazzuca S. , Chiappetta F. F. , Parise A. , Perri E. , Innocenti A. M. , " Oleuropein-specific-b-glucosidase marks early response of olive fruit (*Olea europaea*) to mimed insect attack". *Agricultural Sciences in China*, 2008, Vol. 7, n. 6, pp. 703-712.

Pignataro V. , Mazzuca S. , Innocenti A. M. , " Proteins characterization in lemon fruit (*Citrus limon*, L. Burm.f. var. Femminello, Rocca Imperiale)". In "ISHS Biotechfruit 2008", Julius Kühn-institut ed. , JKI:Berlin, 2008, Vol. 416 2008, 94-96

Mazzuca S. " The proteomic approach in *Posidonia oceanica* populations: which protein biomarkers for light stress acclimation?" in "Proceedings of the 3rd Mediterranean Symposium on Marine Vegetation", C. Pergent-Martini, S. El Asmi, C. Le Ravallec:Tunis, 2007, 104-109.

Serra I. A. , Procaccini G. , Intrieri M. C. , Migliaccio M. , Mazzuca S. , Innocenti A. M. , " Comparison of ISSR and SSR markers for the analysis of genetic diversity in *Posidonia oceanica* (L.) Delile". *Marines Ecology Progress Series*, 2007, Vol. 338, pp. 71-79.

Serra I. A. , Mazzuca S. , Intrieri M. C. , Migliaccio M. , Procaccini G. , Innocenti A. M. , " Comparative analysis of genetic diversity in *Posidonia oceanica* (L.) Delile". *Biologia Marina Mediterranea*, 2006, Vol. 13, n. 4, 92-96.

Mazzuca S. , Giorno L. , Spadafora A. , Mazzei R. , Drioli E. , " Immunolocalization of b-glucosidase immobilized within polysulphone capillary membrane and evaluation of its activity in situ". *Journal of Membrane Science*, 2006, Vol. 285(1-2), 152-158.

Innocenti A. M. , Serra I. A. , Procaccini G. , Intrieri M. C. , Migliaccio M. , Mazzuca S. , " Comparative analysis of genetic diversity in *Posidonia oceanica* (L.) Delile using ISSR and SRR markers". *Biologia Marina Mediterranea*, 2006, Vol. 13, n. 4, 92-96.

Mazzuca S. , Spadafora A. , Innocenti A. M. , "Cell and tissue localization of b-glucosidase during the ripening of olive fruit (Olea europea) by in situ activity assay". *Plant Science*, 2006, Vol. 171, n. 1,726-733.

Bitonti MB , Mazzuca S , Ting T , Innocenti A M. Magnetic field affects meristem activity and cell differentiation in *Zea mays* roots, Plant Biosystems 2006, vo. 140, n. 1,87-93

Mazzei R., L. Giorno, A. Spadafora, S. Mazzuca, E. Drioli. Improvement of β-glucosidase Activity of *Olea europaea* Fruit Extracts Processed by Membrane Technology Korean Membrane Journal, 2006, Vol. 8(1), 58-66

Cozza R. , Chiappetta A. A. C. , Mazzuca S. , Petrarulo M. , Rende S. F. , Salimonti A. , Spadafora A. , Bitonti M. B. A. , Innocenti A. M. , " Approccio multifattoriale per la valutazione dello stato di conservazione delle praterie di *Posidonia oceanica*". *Informatore Botanico Italiano*, 2005, Vol. 37, n. 1, 706-707.

Wang W. , Scali M. , Vignani R. , Spadafora A. , Sensi E. , Mazzuca S. , Cresti M. , "Protein extraction for two-dimensional electrophoresis from olive leaf, a plant tissue containing high levels of interfering compounds". *Electrophoresis*, 2003, Vol. 24, 2369-2375.

Uccella N. , Mazzuca S. , " ß-Glucosidase releasing of phytoalexin derivatives from seco-biophenols as defence mechanism against pathogenic elicitors in olive drupes.". *Acta Horticolturae*, 2002, Vol. 586, pp. 529-531.

Mazzuca S. , Bitonti M. B. A. , Innocenti A. M. , Francis D. , " Inactivation of DNA replication origins by the cell cycle regulator, trigonelline, in root meristems of *Lactuca sativa*". *Planta*, 2000, Vol. 211, pp. 127-132.