

ANTONIO MASI

Curriculum Vitae



PERSONAL INFORMATION

Name	MASI, ANTONIO
Telephone	++39-049-827.2932 (work); ++39-335-1012.390 (mobile)
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E-mail	antonio.masi@unipd.it
web	http://www.dafnae.unipd.it
Nationality	Italian
Date of birth	[02, 04, 1964]
Gender	male

PROFESSIONAL EXPERIENCE

- Dates
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Research activity and themes
 - Main activities and responsibilities
- 1998-TO DATE**
University of Padua, DAFNAE (Department of Agronomy, Food, Natural resources, Animals and Environment), College of Agriculture
Research in Agricultural Biotechnology
From 2015: **Associate Professor**
1998-2015: Research scientist / lecturer / Assistant Professor
Food, Agriculture, and Biotechnology; Environment (including Climate Change); Plant health and crop protection; High-throughput research; Pressure on environment and climate; Food quality and safety; Life sciences, genomics and biotechnology for health; Fundamental knowledge and basic tools for functional genomics; Plant Proteomics.
- Research Project leader / Group leader / Coordination activity.** Carry out investigations in plant physiology and biochemistry, with emphasis on abiotic stress conditions and pollutants (e.g. ultraviolet radiation, heavy metals) and plant adaptation to the environment; plant biotechnology and molecular biology; plant gene expression and proteomics; functional genomics studies with use of GMOs.
- Teaching:** *Plant Physiology and Biochemistry* (undergraduate degree course in “Agricultural Biotechnology”); *Plant Biology* (undergraduate degree courses in “Agricultural Science and Technology”, “Viticulture and Enology”, “Land and Landscape Restoration and Enhancement”); *Plant Natural Products* (graduate degree course in “Food Biotechnology”); *Analytical Methods for Food Quality and Safety* (undergraduate degree course in “Biotechnology”)

EDUCATION AND TRAINING

- Date, qualification, organisation and main subjects
 - Date, qualification, organisation and main subjects
- 1995:** Ph.D. in Photobiology, University of Padova; dissertation title: “Biological effects of ultraviolet-B radiation in plants”.
- 1992:** *Laurea* (master-level degree) in Agricultural Sciences, College of Agriculture at the University of Padova. Studies in Agricultural Sciences, including Agronomy, Botany, Soil Science, Dairy sciences, Food Science, Biochemistry and Biotechnology, Agricultural Politics and Economics.

AWARDS & FELLOWSHIPS

2010 (APRIL THROUGH JUNE): VISITING PROFESSOR AT TRIBHUVAN UNIVERSITY IN KATHMANDU AND POKHARA, NEPAL, FOR STUDIES ON THE EFFECTS OF CLIMATE CHANGE IN MEDICINAL PLANTS OF HIMALAYAN NEPAL, WITHIN THE EUROPEAN PROGRAMME “SUTROFOR” – SUSTAINABLE TROPICAL FORESTRY.

2004 (APRIL-DECEMBER, FULBRIGHT FELLOWSHIP): FULBRIGHT SENIOR SCHOLAR, DEPARTMENT OF PLANT BIOLOGY, CORNELL UNIVERSITY, ITHACA, NY, USA

1994-1995 (ONE YEAR FELLOWSHIP FROM UC BERKELEY, EDUCATION ABROAD PROGRAM): DEPARTMENT OF PLANT BIOLOGY, UNIVERSITY OF CALIFORNIA AT BERKELEY, CALIFORNIA, USA

1989-1990 (SIX MONTHS FELLOWSHIP FROM “ALDO GINI” FOUNDATION): PLANT PHYSIOLOGY INSTITUTE, UNIVERSITY OF BERN, SWITZERLAND

MOTHER TONGUE OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

ITALIAN

ENGLISH

EXCELLENT

EXCELLENT

EXCELLENT

ADDITIONAL INFORMATION

1993-1999: MEMBER OF THE “CONSULTA DEL CENTRO DI CALCOLO” (BOARD OF THE COMPUTING CENTRE), UNIVERSITY OF PADUA

1993-2012: MEMBER OF SCIENTIFIC BOARD OF C.R.I.B.I. – INTERDEPARTMENTAL RESEARCH CENTER FOR INNOVATIVE BIOTECHNOLOGY, UNIVERSITY OF PADUA

2002-2009: MEMBER OF THE DOCTORAL SCHOOL IN CROP PRODUCTION, CURRICULUM: AGROBIOTECHNOLOGY; **FROM 2009:** MEMBER OF THE DOCTORAL SCHOOL IN ANIMAL AND FOOD SCIENCE

SEPT 2006, BRUXELLES: ASSISTING THE EUROPEAN COMMISSION TO EVALUATE PROPOSALS FOR THE CONSERVATION, CHARACTERISATION, COLLECTION AND UTILISATION OF GENETIC RESOURCES IN AGRICULTURE.

2007-2012: FULBRIGHT COMMISSION: EVALUATING APPLICATIONS IN THE FIELD OF AGRICULTURAL SCIENCES (FULBRIGHT-BEST, BUSINESS EXCHANGE AND STUDENT TRAINING; RESEARCH SCHOLARS; VISITING STUDENT RESEARCHER)

2016: ASSISTING THE EUROPEAN COMMISSION (ERA) TO EVALUATE PROPOSALS UNDER THE H2020 WORK PROGRAMME.

2016: ORGANISER OF THE INTERNATIONAL SUMMER SCHOOL: "ENVIRONMENT AND BIODIVERSITY MANAGEMENT IN NEPAL HIMALAYAS", 25 JULY-12 AUGUST 2016 KATHMANDU (NEPAL)

HE HAS ALSO ASSISTED THE SERBIAN MINISTRY OF RESEARCH, AND THE ROMANIAN MINISTRY OF RESEARCH IN EVALUATING RESEARCH PROJECT PROPOSALS.

ANTONIO MASI

PUBLICATIONS IN PEER-REVIEWED INTERNATIONAL JOURNALS

- NMR Ashwin et al. (2017). Comparative secretome analysis of *Colletotrichum falcatum* identifies a cerato-platanin protein (EPL1) as a potential pathogen-associated molecular pattern (PAMP) inducing systemic resistance in sugarcane. *Journal of Proteomics* (accepted, in press).
- Sajad Majeed Zargar, Reetika Mahajan, Muslima Nazir, Preeti Nagar, Sun Tae Kim, Vandna Rai, **Antonio Masi**, Syed Mudasir Ahmad, Riaz Ahmad Shah, Nazir Ahmad Ganai, Ganesh K. Agrawal, i, Randeep Rakwal (2017). Common bean proteomics: Present status and future strategies. *Journal of Proteomics* (in press). DOI:10.1016/j.jprot.2017.03.019.
- N. M. R. Ashwin, Leonard Barnabas, A. Ramesh Sundar, P. Malathi, R. Viswanathan, **A. Masi**, Ganesh Kumar Agrawal, Randeep Rakwal (2017). Advances in proteomic technologies and their scope of application in understanding plant-pathogen interactions. *Journal of Plant Biochemistry and Biotechnology*, pp. 1-16. DOI: 10.1007/s13562-017-0402-1
- Giaretta S, Prasad D, Forieri I, Vamerali T, Trentin AR, Wirtz M, Hell R, **Masi A** (2017). Apoplastic gamma-glutamyl transferase activity encoded by GGT1 and GGT2 is important for vegetative and generative development. *Plant Physiology and Biochemistry*, 115:44-56. DOI:10.1016/j.plaphy.2017.03.007
- Leonard Barnabas, N.M.R. Ashwin, K. Kaverinathan, A.R. Trentin, M. Pivato, A. R. Sundar, P. Malathi, R. Viswanathan, P. Carletti, G. Arrigoni, **A. Masi**, G.K. Agrawal, R. Rakwal (2017). In vitro secretomic analysis identifies putative pathogenicity-related proteins of *Sporisorium scitamineum* – The sugarcane smut fungus. *Fungal Biology*, 121:199–211. DOI:10.1016/j.funbio.2016.11.004
- Barnabas EL, Ashwin N, Kaverinathan K, Trentin AR, Pivato M, Sundar AR, Malathi P, Viswanathan R, Rosana OB, Neethukrishna K, Carletti P, Arrigoni G, **Masi A**, Agrawal GK, Rakwal R. (2016) Proteomic analysis of a compatible interaction between sugarcane and *Sporisorium scitamineum*. *Proteomics*, 16:1111–1122, DOI 10.1002/pmic.201500245
- **Masi A.**, Trentin A.R., Arrigoni G. (2016). Leaf apoplastic proteome composition in UV-B treated *Arabidopsis thaliana* mutants impaired in extracellular glutathione degradation. *Data in Brief*, 6:368–377. doi: 10.1016/j.dib.2015.12.005
- Sturaro A., De Marchi M., **Masi A.**, Cassandro M. (2015). Quantification of whey proteins by reversed phase-HPLC and effectiveness of mid-infrared spectroscopy for their rapid prediction in sweet whey. *Journal of Dairy Science*, 99:68–76 doi:10.3168/jds.2014-9077
- Trevisan S., Manoli A., Ravazzolo L., Botton A., Pivato M., **MASI A.**, Quaggiotti S. (2015). Nitrate sensing by the maize root apex transition zone: a merged transcriptomic and proteomic survey. *J Exp Bot*. DOI:10.1093/jxb/erv165
- Zermiani M., Zonin E., Nonis A., Begheldo M., Ceccato L., Vezzaro A., Baldan B., Trentin A.R., **Masi A.**, Pegoraro M., Fadanelli L., Teale W., Palme K., Quintieri L., Ruperti B. (2015). Ethylene negatively regulates transcript abundance of ROP-GAP rheostat-encoding genes and affects apoplastic reactive oxygen species homeostasis in epicarps of cold stored apple fruits. *Journal of Experimental Botany* doi:10.1093/jxb/erv422
- **MASI A.** (2015) Masi A., Trentin A.R., Agrawal G.K., Rakwal R. Gamma-glutamyl cycle in plants: a bridge connecting the environment to the plant cell? *Front. Plant Sci.*, 6:252. doi: 10.3389/fpls.2015.00252
- Trentin A.R., Pivato M., Mehdi S.M.M., Barnabas L.E., Giaretta S., Fabrega-Prats M., Prasad D., Arrigoni G., **MASI A.** (2015) Proteome readjustments in the apoplastic space of *Arabidopsis thaliana* ggt1 mutant leaves exposed to UV-B radiation. *Front. Plant Sci.* doi: 10.3389/fpls.2015.00128
- Pennacchio F., **MASI A.**, Pompella A. (2014). Glutathione levels modulation as a strategy in host-parasite interactions – insights for biology of cancer. *Frontiers in Pharmacology*, 5:180. doi: 10.3389/fphar.2014.00180
- Pivato M., Fabrega-Prats M., **MASI A.** (2014). Low-molecular-weight thiols in plants: Functional and analytical implications. *ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS*, 560:83-99. doi: 10.1016/j.abb.2014.07.018
- A. Ahou, D. Martignago, O. Alabdallah, R. Tavazza, P. Stano, A. Macone, M. Pivato, **A. MASI**, J. L. Rambla, F. Vera-Sirera, R. Angelini, R. Federico, P. Tavladoraki (2014). A plant spermine oxidase/dehydrogenase regulated by the proteasome and polyamines. *JOURNAL OF EXPERIMENTAL BOTANY*, ISSN: 0022-0957, doi: 10.1093/jxb/eru016
- M. Schiavon, S. dall'Acqua, A. Mietto, E. A. H. Pilon-Smits, P. Sambo, **A. MASI**, M. Malagoli (2013). Selenium Fertilization Alters the Chemical Composition and Antioxidant Constituents of Tomato (*Solanum lycopersicon* L.). *JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY*, ISSN: 0021-8561, doi: 10.1021/jf4031822
- Arrigoni G, Tolin S, Moscatiello R, **MASI A**, Navazio L, Squartini A (2013). Calcium-dependent regulation of genes for plant nodulation in *Rhizobium leguminosarum* detected by iTRAQ quantitative proteomic analysis. *JOURNAL OF PROTEOME RESEARCH*, vol. 12, p. 5323-5330, ISSN: 1535-3893, doi: 10.1021/pr400656g
- Tolin S., Arrigoni G., Trentin A.R., Veljovic-Jovanovic S., Pivato M., Zechman B., **MASI A.** (2013). Biochemical and quantitative proteomics investigations in *Arabidopsis ggt1* mutant leaves reveal a role for the gamma-glutamyl cycle in plant's adaptation to environment. *PROTEOMICS*, p. n/a, ISSN: 1615-9853, doi: 10.1002/pmic.201200479
- Tolin S., Arrigoni G., Moscatiello R., **MASI A.**, Navazio L., Sablok G., Squartini A.

- (2013). Quantitative analysis of the naringenin-inducible proteome in *Rhizobium leguminosarum* by isobaric tagging and mass spectrometry. *PROTEOMICS*, ISSN: 1615-9853, doi: 10.1002/pmic.201200472
- Kour J., Homagai P.L., Cagnin M., **MASI A.**, Pokhrel M.R., Ghimire K.N. (2013). Adsorption of Cd (II), Cu (II), and Zn (II) from Aqueous Solution onto Nitrogen-Functionalized *Desmostachya bipinnata*. *e-Journal of Chemistry*, Article ID 649142, doi: 10.1155/2013/649142
 - Pasini G., Curioni A., Vegro M., Pagani M., **MASI A.**, Schievano E., Antico A. (2012). Extraction and Mass Spectrometry identification of the major peach allergen Pru p 1. *J Sci Food Agric* 92: 570–576.
 - Tolin S., Pasini G, Curioni A, Arrigoni G, **MASI A.**, Mainente F and Simonato B. (2012). Mass spectrometry detection of egg proteins in red wines treated with egg white. *Food Control* 23:87-94
 - Destro T., Prasad D., Martignago D., Lliso Bernet I., Trentin A., Renu I.K., Ferretti M. and **MASI A.** (2011). Compensatory expression and substrate inducibility of γ -glutamyl transferase GGT2 isoform in *Arabidopsis thaliana*. *Journal of Experimental Botany*, 62:805-814
 - Ferretti M., Destro T., Tosatto S.C.E., La Rocca N., Rascio N. and **MASI A.** (2009). Gamma-glutamyl transferase in the cell wall participates in extracellular glutathione salvage from the root apoplast. *New Phytologist*, 181: 115–126.
 - Prasad D., Vidyarthi A.S., Ferretti M., **MASI A.** (2009). Colorimetric screening of recombinant RNAi vectors without using PCR. *New Biotechnology*, vol. 25, ISSN: 1871-6784.
 - Carletti P., **MASI A.**, Spolaore B., Polverino De Laureto P., De Zorzi M., Turetta L., Ferretti M., Nardi S. (2008). Protein Expression Changes in Maize Roots in Response to Humic Substances. *Journal of Chemical Ecology*, 34:804-818.
 - Giacomelli L., **MASI A.**, Ripoll D.R., Lee M.J. and K.J. van Wijk (2007). *Arabidopsis thaliana* deficient in two chloroplast ascorbate peroxidases shows accelerated light-induced necrosis when levels of cellular ascorbate are low. *Plant Molecular Biology*, 65:627-644.
 - **MASI A.**, T. Destro, L. Turetta, S. Varotto, G. Caporale and M. Ferretti (2007) Localization of gamma-glutamyl transferase activity and protein in *Zea mays* organs and tissues. *Journal of Plant Physiology*, 164:1527-1535.
 - CARLETTI P., **MASI A.**, WONISCH A., GRILL D, TAUSZ M., FERRETTI M. (2003). Changes in antioxidant and pigment pool dimensions in UV-B irradiated maize seedlings. *ENVIRONMENTAL AND EXPERIMENTAL BOTANY*, vol. 50, p. 149-157, ISSN: 0098-8472, doi: 10.1016/S0098-8472(03)00020-0
 - PIZZEGHELLO D., FERRETTI M., **MASI A.**, NARDI S. (2003). Water-soluble phenolic acids in soil under silver fir forests . *FRESENIUS ENVIRONMENTAL BULLETIN*, vol. 12(7), p. 984-988, ISSN: 1018-4619
 - **MASI A.**, GHISI R., FERRETTI M. (2002). Measuring low-molecular-weight thiols by detecting the fluorescence of their SBD-derivatives: application to studies of diurnal and UV-B induced changes in *Zea mays* L. *JOURNAL OF PLANT PHYSIOLOGY*, vol. 159, p. 499-507, ISSN: 0176-1617
 - GHISI R., TRENTIN A., **MASI A.**, FERRETTI M. (2002). Carbon and nitrogen metabolism in barley plants exposed to UV-B radiation. *PHYSIOLOGIA PLANTARUM*, vol. 116, p. 200-205, ISSN: 0031-9317, doi: 10.1034/j.1399-3054.2002.1160209.x
 - GHISI R, FERRETTI M, LA ROCCA N, **MASI A**, PASSERA C (1999). Enzymes of ammonia assimilation, photosynthesis and respiration in alfalfa leaves of different ages . *BIOLOGIA PLANTARUM*, vol. 42, p. 371-378, ISSN: 0006-3134
 - **MASI A.**, MELIS A. (1997). Morphological and molecular changes in the unicellular green alga *Dunaliella salina* grown under supplemental UV-B radiation: cell characteristics and photosystem-II damage and repair properties. *BIOCHIMICA ET BIOPHYSICA ACTA*, vol. 1321, p. 183-193, ISSN: 0006-3002, doi: 10.1016/S0005-2728(97)00054-6