Curriculum Vitae

Name: **Flavia Guzzo**

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e.mail: flavia.guzzo@univr.it
-Date and place of birth: 17 marzo 1965, Conegliano (TV)

Education

-1994: PhD in Evolutionary Biology (University of Padova)
-1990: Laurea (corresponding to a master degree) in Biological Sciences (University of Padova)

Job positions

-2014, November: permanent position as associate professor at the University of Verona, Biotechnology Department
-1997, May: permanent position as researcher at the University of Verona, Biotechnology Department
-1994-1997: post doctoral position at the Wageningen Agricultural University, Department of Molecular Biology, The Netherlands

Research activities

The past research activity of F.G. was mainly focused on the control of plant development and differentiation, also from the cellular point of view and with a special emphasis on the biochemical cell differentiation, and on the biological role of the secondary metabolites.
The actual research activity of F.G. is mainly focused on the biology of the secondary metabolites in the plant cells, plant organs and whole plants. In support of these activities in the last ten years F.G. developed an untargeted metabolomics pipeline mainly based on HCPLC-MS, which now is the standard approach of her research group.

Within this frame, the more recent research lines of F.G. include:
-the biological role of secondary metabolites accumulated in *in vitro* cultured plant cells and *in planta* after biotic and abiotic stressing treatments;
-metabolomics of *Vitis vinifera* grape berries to understand biological and technological processes such as ripening and post harvest withering, the response to their environments or "terroir", and as results of different rootstock-shoot consortia;
-the molecular control of fruit ripening;
-fruit metabolomics, also in relations to the various environments;
-the biological role/s of the fruit alkaloids tryptamine and serotonin.

As applicative outcome of her research, F.G. is also interested in the biological activities of plant secondary metabolites in humans.

F.G. is co-author of 60 publications in international journals, 29 of which have been published in the last 5 years. Her h-index is 18 (Scopus), the total n. of citation is 1429 (Scopus, June 25th 2018).

Pubblications in the last five years

*=equal contribution
**= co-corresponding authors

-Sota Hirano, Michele Bovi, Alessandro Romeo, **Flavia Guzzo**, Cristiano Chiamulera, Massimiliano Perduca (2018) *Ketamine nano-delivery based on poly-lactic-co-glycolic acid (PLGA) nanoparticles.* Appl Nanosci. https://doi.org/10.1007/s13204-018-0765-1

- Maria De Benedictis, Cecilia Brunetti, Elizabeth K. Brauer, Andrea Andreucci, Sorina C. Popescu, Mauro Commisso, **Flavia Guzzo**, Adriano Sofo, Monica Ruffini Castiglione, Olena K. Vatamaniuk and Luigi Sanità di Toppi (2018) *The Arabidopsis thaliana Knockout Mutant for Phytochelatin Synthase1 (cad1-3) Is Defective in Callose Deposition, Bacterial Pathogen Defense and Auxin Content, But Shows an Increased Stem Lignification*. Frontiers in Plant Science, vol. 9 art. 00019

- Massimiliano Corso, M. Sol Schvartzman, **Flavia Guzzo**, Florence Souard, Eugeniusz Malkowski, Marc Hanikenne and Nathalie Verbruggen (2018). *Contrasting cadmium resistance strategies in two metallicolous populations of Arabidopsis halleri*. New Phytologist 218: 283–297

- Zeno Varanini, Stefano Cesco, Nicola Tomasi, Roberto Pinton, **Flavia Guzzo**, Anita Zamboni, Brigitte Schloter-Hai, Michael Schloter, Laura Giagnoni, Mariarita Arenella, Paolo Nannipieri, Giancarlo Renella (2018) *Nitrate induction and physiological responses of two maize line differing in nitrogen use efficiency: effects on N availability, microbial diversity and enzyme activity in the rhizosphere.* Plant and soil, 422:331–347

- Nicola Busatto, Brian Farneti, Mauro Commisso, Martino Bianconi, Barbara Iadarola, Elisa Zago, Benedetto Ruperti, Francesco Spinelli, Angelo Zanella, Riccardo Velasco, Alberto Ferrarini, Giulia Chitarrini, Urska Vrhovsek, Massimo Delledonne, **Flavia Guzzo**, Guglielmo Costa and Fabrizio Costa (2018) *Apple fruit superficial scald resistance mediated by ethylene inhibition is associated with diverse metabolic processes*. The Plant Journal 93, 270–285

-Stefano Negri, Arianna Lovato, Filippo Boscaini , Elisa Salvetti , Sandra Torriani , Mauro Commisso, Roberta Danzi , Maurizio Ugliano, Annalisa Polverari , Giovanni B. Tornielli and **Flavia Guzzo** (2017) The Induction of Noble Rot (Botrytis cinerea) *Infection during Postharvest Withering Changes the Metabolome of Grapevine Berries (Vitis vinifera L., cv. Garganega).* Frontiers in Plant Science, vol. 8 art. 1002

- Amanda M. Vondras, Mauro Commisso, **Flavia Guzzo** and Laurent G. Deluc (2017) *Metabolite Profiling Reveals Developmental Inequalities in Pinot Noir Berry Tissues Late in Ripening.* Frontiers in Plant Science, vol. 8 art. 1008

-Mauro Commisso, Andrea Anesi, Silvia Dal Santo and **Flavia Guzzo** (2017). *Performance comparison of electrospray ionization and atmospheric pressure chemical ionization in untargeted and targeted liquid chromatography/mass spectrometry based metabolomics analysis of grapeberry metabolites*. Rapid Commun. Mass Spectrom. 31: 292–300

- Chiara Santi, Barbara Molesini, **Flavia Guzzo**, Youry Pii , Nicola Vitulo and Tiziana Pandolfini (2017) *Genome-Wide Transcriptional Changes and Lipid Profile Modifications Induced by Medicago truncatula N5 Overexpression at an Early Stage of the Symbiotic Interaction with Sinorhizobium meliloti*. Genes, 8, 396; doi:10.3390/genes8120396

- Mauro Commisso, Martino Bianconi, Flavia Di Carlo, Stefania Poletti, Alessandra Bulgarini, Francesca Munari, Stefano Negri, Matteo Stocchero, Stefania Ceoldo, Linda Avesani, Michael Assfalg, Gianni Zoccatelli, **Flavia Guzzo** (2017) *Multi-approach metabolomics analysis and artificial simplified phytocomplexes reveal cultivar-dependent synergy between polyphenols and ascorbic acid in fruits of the sweet cherry (Prunus avium L.).* PLOSone https://doi.org/10.1371/journal.pone.0180889

- Zenoni Sara, Fasoli Marianna, **Guzzo Flavia**, Dal Santo Silvia, Amato Alessandra, Anesi Andrea, Commisso Mauro, Herderich Markus, Ceoldo Stefania, Avesani Linda, Pezzotti Mario, Tornielli Giovanni Battista (2016). *Disclosing the molecular basis of the postharvest life of berry in different grapevine genotypes.* PLANT PHYSIOLOGY, p. 1-19, ISSN: 0032-0889, doi: 10.1104/pp.16.00865

Dal Santo Silvia, Commisso Mauro, D'Incà Erica, Anesi Andrea, Stocchero Matteo, Zenoni Sara, Ceoldo Stefania, Tornielli Giovanni B, Pezzotti Mario, **Guzzo Flavia** (2016). *The Terroir Concept Interpreted through Grape Berry Metabolomics and Transcriptomics*. JOURNAL OF VISUALIZED EXPERIMENTS, p. 1-16, ISSN: 1940-087X, doi: 10.3791/54410

-Habran Aude, Commisso Mauro, Helwi Pierre, Hilbert Ghislaine, Negri Stefano, Ollat Nathalie, Gomès Eric, van Leeuwen Cornelis, **Guzzo Flavia****, Delrot Serge** (2016). *Roostocks/Scion/Nitrogen Interactions Affect Secondary Metabolism in the Grape Berry.* FRONTIERS IN PLANT SCIENCE, vol. 7, p. 1134-1144, ISSN: 1664-462X, doi: 10.3389/fpls.2016.01134

-Commisso Mauro, Toffali Ketti, Strazzer Pamela, Stocchero Matteo, Ceoldo Stefania, Baldan Barbara, Levi Marisa, **Guzzo Flavia** (2016). *Impact of Phenylpropanoid Compounds on Heat Stress Tolerance in Carrot Cell Cultures*. FRONTIERS IN PLANT SCIENCE, vol. 7, p. 1439-1455, ISSN: 1664-462X, doi: 10.3389/fpls.2016.01439

-Dal Santo Silvia, Fasoli Marianna, Negri Stefano, D'Incà Erica, Vicenzi Nazareno, **Guzzo Flavia**, Tornielli Giovanni Battista, Pezzotti Mario, Zenoni Sara (2016). *Plasticity of the Berry Ripening Program in a White Grape Variety*. FRONTIERS IN PLANT SCIENCE, vol. 7, p. 1-17, ISSN: 1664-462X, doi: 10.3389/fpls.2016.00970

-Andrea Anesi, Matteo Stocchero, Silvia Dal Santo, Mauro Commisso, Sara Zenoni, Stefania Ceoldo, Giovanni Battista Tornielli, Tracey E. Siebert, Markus Herderich, Mario Pezzotti and

Flavia Guzzo (2015) *Towards a scientific interpretation of the terroir concept: plasticity of the grape berry metabolome*. BMC Plant Biology 15:191-207

-Mariana Amato, Marisa C. Caruso, **Flavia Guzzo**, Fernanda Galgano, Mauro Commisso, Rocco Bochicchio, Rosanna Labella, Fabio Favati (2015) *Nutritional quality of seeds and leaf metabolites of Chia (Salvia hispanica L.) from Southern Italy*. European food research and technology, 241 (5):615-625

-Maria Pia Argentieri, Marisa Levi, **Flavia Guzzo** and Pinarosa Avato (2015) *Phytochemical analysis of Passiflora loefgrenii Vitta, a rich source of luteolin-derived flavonoids with antioxidant properties*. Journal of Pharmacy and Pharmacology, 67:1603-1612

-Anna Manara, Giovanni DalCorso, **Flavia Guzzo**, Antonella Furini (2015*) Loss of the Atypical Kinases ABC1K7 and ABC1K8 Changes the Lipid Composition of the Chloroplast Membrane.* Plant and Cell Physiology, 56(6): 1193–1204

-Erika Cavallini, José Tomás Matus, Laura Finezzo, Sara Zenoni, Rodrigo Loyola, **Flavia Guzzo**, Rudolf Schlechter, Agnès Ageorges, Patricio Arce-Johnson, Giovanni Battista Tornielli (2015) *The phenylpropanoid pathway is controlled at different branches by a set of R2R3-MYB C2 repressors in grapevine.* Plant Physiology, 167: 1448–1470

-Elisa Zampieri*, **Flavia Guzzo***, Mauro Commisso, Antonietta Mello, Paola Bonfante, Raffaella Balestrini (2014) *Gene expression and metabolite changes during Tuber magnatum fruiting body storage.* Curr Genet. 60:285–294

-Erika Cavallini, Sara Zenoni, Laura Finezzo, **Flavia Guzzo**, Anita Zamboni, Linda Avesani and Giovanni Battista Tornielli (2014). *Functional Diversification of Grapevine MYB5a and MYB5b in the Control of Flavonoid Biosynthesis in a Petunia Anthocyanin Regulatory Mutant.* PLANT and CELL PHYSIOLOGY 55(3): 517–534

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-Alessandro Lovisetto*, **Flavia Guzzo***, Alice Tadiello, Enrico Confortin, Anna Pavanello, Alessandro Botton, Giorgio Casadoro (2013). *Characterization of a bZIP Gene Highly Expressed During Ripening of the Peach Fruit.* Plant Physiology and Biochemistry, 70: 462:470

-Ketti Toffali, Stefania Ceoldo, Matteo Stocchero, Marisa Levi, **Flavia Guzzo** (2013) *Carrot specific features of the phenylpropanoid pathway identified by feeding cultured cells with defined intermediates*. Plant Science 209: 81-92.

-Silvia Dal Santo, Giovanni Battista Tornielli, Sara Zenoni, Marianna Fasoli, Lorenzo Farina, Andrea Anesi, **Flavia Guzzo**, Massimo Delledonne, Mario Pezzotti (2013*) The plasticity of the grapevine berry transcriptome*. Genome Biology 2013, 14:R54

-Alessandro Lovisetto*, **Flavia Guzzo***, Nicola Busatto and Giorgio Casadoro (2013). *Gymnosperm B-sister genes may be involved in ovule/seed development and, in some species, in the growth of fleshy fruit-like structures*. Annals of Botany, 112: 535–544

-Barizza Elisabetta, **Guzzo Flavia**, Fanton Paolo, Lucchini Giorgio, Sacchi G. Attilio, Lo Schiavo Fiorella, and Nascimbene Juri (2013) *Nutritional Profile and Productivity of Bilberry (Vaccinium myrtillus L.) in Different Habitats of a Protected Area of the Eastern Italian Alps.* Journal of Food Science, 78 (5): 673-678

-Mauro Commisso, Pamela Strazzer, Ketti Toffali, Matteo Stocchero, **Flavia Guzzo** (2013) *Untargeted metabolomics: an emerging approach to determine the composition of herbal products.* Computational and Structural Biotechnology Journal, Volume No: 4, Issue: 5, January 2013, e201301007.