

Valentina Picchi

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Education

2002: Master Degree in Agricultural Sciences and Technologies, University of Pisa, vote 110/110 *cum laude*.

2006: PhD in Sciences of Sustainable Crop Production, University of Pisa, Faculty of Agriculture.

Professional experience

2012-present: Permanent Researcher at CREA-IT, Milan

2009-2012: Research Grants at Council for Agricultural Research and Economics (CREA)

2007-2009: Research Grants at the National Research Council

Scientific activity

From 2002 she started working on the physiology and biochemistry of plants (at the Department of Tree Science, Entomology and Plant Pathology "G. Scaramuzzi, University of Pisa), particularly regarding the responses of plant to abiotic and biotic stress. The activity continued at the National Research Council of Milan (CNR-IVV and CNR-IBBA), with studies on the physiological, biochemical and molecular aspects related to plant biotic and abiotic stress (particularly on wheat and tomato). In 2009 she started working at CREA-IT (ex-CRA-IAA) on the physico-chemical and biochemical characterization of agro-food products, particularly focusing on the characterization of chemical compounds (sugars, organic acids), phytochemicals (bioactive compounds, e.g., polyphenols, ascorbic acid, thiols, carotenoids) antioxidant enzymes, and antioxidant potential of plant extracts (DPPH, superoxide anion, hydroxyl radical).

During the last ten years her main activities were devoted to the characterization of the metabolic and sensorial profile of both fresh and processed agro-food products along the supply-chain, with particular regard to the analysis of nutritional compounds through advanced analytical techniques (LC, Electron Paramagnetic Resonance, Spectrophotometer) and non-destructive methodologies (chlorophyll fluorescence, NIR). In addition, she studied the metabolic profile variations of vegetables in relation to agronomic, genotypic, environmental (e.g., drought and ozone stress) factors, for the identification of resistant genotypes, more suitable for new and more sustainable cultivation systems.

She was responsible for Master Degree Theses and tutor of Post-Doc students at CREA-IT.

She collaborated in various international and national projects. In the last years, she was actively involved in two international projects: FAVORDENONDE, Drying Juice and Jams of organic fruit and vegetables: what happens to desired and non-desired compounds? (EU, Core Organic Plus); BRESOV, Breeding for Resilient, Efficient and Sustainable Organic Vegetable production" (H2020). As national projects, she actively worked for BIOMASS HUB, Biometano per una società sostenibile: sviluppo di un Laboratorio Italiano di Circular Economy dal biometano, granted by Regione Lombardia; INNOVALUPPOLO, Innovazioni sostenibili per la luppolicoltura, granted by MIPAAFT; AGRIDIGIT, granted by MIPAAFT, Tecnologie digitali integrate per il rafforzamento sostenibile di produzioni e trasformazioni agroalimentari.

Grants and Responsibilities in Projects and Research Activities

2019: Scientific Responsible for the Research agreement between CREA-IT and Altroconsumo Edizioni srl, "Determination of nutritional compounds in different edible parts of fruits and vegetables";

2016-2018: Scientific Responsible of the operating Unit in the research project "NA-NOTOX – Chitosan nanoparticles to deliver antioxidants in wheat, to avoid biotic and abiotic stress and to improve the quantity and quality of grains" (granted by Italian Ministry of Agriculture Grant, D.M. MIPAAF n. 5000, 04/03/2015);

2015: Scientific Responsible for the Research agreement between CREA-IAA and Altroconsumo Edizioni srl, "Assessment of the nutritional value of fruits and vegetables after different extraction techniques for the production of juices";

2015: Scientific Responsible for the Research agreement between CREA-IAA and Altroconsumo Edizioni srl, "Analysis of the nutritional quality of fruits and vegetables produced with organic and conventional agricultural system";

2014: Scientific Responsible for the research project "Seasonal Leaf Chemistry and Water Content Analysis (SeLeCh)", Invitation to tender n° JRC/IPR/2014/H.7/0014/NC of the European Commission, Joint Research Centre, Institute for Environment and Sustainability, contract number 390632 (granted by European Commission).

Scientific Publications

She participated and presented her work to national and international conferences. She has 34 international peer-reviewed publications and more than 40 conference proceedings; *h*-index: 14.