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## Extraction and evaluation of nutraceutical molecules in wastes of fruits and vegetables

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Fruit and vegetable wastes not only have no commercial value, but also require expensive operations of removal and disposal, representing a significant cost for the manufacturers of plant products. However, this material may represent an important resource of commercially worth phyto-molecules endowed with various nutraceutical properties. In the present work, the possibility of using fruit and vegetable waste materials as a source of bioactive compounds was explored and verified. Several nutraceutical compounds, like sulphoraphane, ursolic acid, phloridzin and other flavonoids of high economic interest,

were extracted and quantified from various waste plant materials deriving from the production phase ("first-gamma products") or discarded during the preparation of fresh ready-to-cook or ready-to-eat packaged products ("fourth-gamma products"). Obtained results showed that, despite the precarious and uncontrolled conditions which plant wastes products are subjected, the levels of the examined bioactive compounds are present in relevant amount, also in the parts of the plant that are discarded during the preparation of the ready-to-eat/cook products.

### Biography

Buonocore D graduated in Biological Sciences in academic year 2006/2007 obtaining her Master Degree of Science in Molecular Biology and Genetics, ex-Department of Genetics and Microbiology "A. Buzzati Traverso", University of Pavia. From the 2008s to 2012s, she received a Research Grant at the University of Pavia where in 2010 she obtained the II level University Master in Regulatory Affairs "G. Benzi" and in 2011, she obtained II level University Master in Human Nutrition. In academic year 2014-2015 she obtained her PhD degree in Biomedicine Sciences, University of Pavia. She is working with a Post Doc Grant position within the Department of Biology and Biotechnology "Lazzaro Spallanzani", University of Pavia. She has 30 scientific publications in international journals and 5 contributions in books. She is a referee for indexed/peer reviewed international journals. She has been Assistant Supervisor for over 40 University theses in Biological Sciences, in Physical Activity and Sport Sciences, in Pharmacy and Chemistry and Biotechnology Drug Sciences at the University of Pavia.

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