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• EDUCATION

- 2012 PhD in Applied Biology
Faculty of Biology/ Department of Biology, University of Naples Federico II/ Naples, Italy
PhD Supervisor: Prof. Sergio Esposito
- 2008 Master's Degree in Biology 110/110, cum laude
Faculty of Biology/ Department of Biology, University of Naples Federico II/ Naples, Italy

• CURRENT POSITION

Researcher, Institute of Biomolecular Chemistry (ICB)- CNR / Pozzuoli, Italy

• PREVIOUS POSITIONS

2016 – 2017 Postdoctoral fellow in the field of “Development of green technologies for production of BIOchemicals and their use in preparation and industrial application of POLImeric materials from agricultural biomasses cultivated in a sustainable way in Campania region – BIOPOLIS”. Institute of Institute of Biosciences and BioResources (IBBR) – CNR, Portici, Naples, Italy.

2015 – 2016 Scholarship in the field of “Produzione di dolcificanti ipocalorici da piante mediterranee”. Institute of Institute of Biosciences and BioResources (IBBR) – CNR, Portici, Naples, Italy.

2013 – 2015 Postdoctoral fellow in the field of “Integrated agro-industrial chains with high energy efficiency for the development of eco-compatible processes of energy and biochemicals production from renewable sources and for the land valorization – ENERBIOCHEM”. Institute of Institute of Biosciences and BioResources (IBBR) – CNR, Portici, Naples, Italy.

2008 –2012 PhD student scholarship. Department of Biology, University of Naples Federico II/ Naples, Italy

• REPRESENTATIVE PUBLICATIONS:

1_Cardi M, Chibani K, **Castiglia D**, Cafasso D, Pizzo E, Rouhier N, Jacquot J-P, Esposito S. (2013) *Overexpression, purification and enzymatic characterization of a recombinant plastidial glucose-6-phosphate dehydrogenase from barley (Hordeum vulgare cv. Nure) roots*. Plant Physiology and Biochemistry. 73: 266-273. DOI: 10.1016/j.plaphy.2013.10.008. Epub 2013 Oct 17.

2_Cardi M*, **Castiglia D***, Ferrara M*, Guerriero G*, Chiurazzi M, Esposito S. (2015) *The effects of salt stress cause a diversion of basal metabolism in barley roots: possible different roles for glucose-6-phosphate dehydrogenase isoforms*. *: joint first authors. Plant Physiology and Biochemistry. 86: 44-54 DOI: 10.1016/j.plaphy.2014.11.001

3_Basile A, Sorbo S, Cardi M, Lentini M, **Castiglia D**, Cianciullo P, Conte B, Loppi S, Esposito S. (2015). *Effects of heavy metals pollution on ultrastructure and HSP70 induction, in Lemna minor L. exposed along Sarno River (Italy)*. Ecotoxicology and Environmental Safety. 114: 93-101 DOI: 10.1016/j.ecoenv.2015.01.009

4_ **Castiglia D**, Cardi M, Landi S, Cafasso D, Esposito S. (2015) *Expression and characterization of a cytosolic glucose 6 phosphate dehydrogenase isoform from barley (Hordeum vulgare) roots*. Protein Expression and Purification. 112: 8-14. doi: 10.1016/j.pep.2015.03.016.

5_ **Castiglia D**, Sannino L, Marcolongo L, Ionata E, Tamburino R, De Stradis A, Cobucci-Ponzano B, Moracci M, La Cara F, Scotti N. (2016) *High-level expression of thermostable cellulolytic enzymes in tobacco transplastomic plants and their use in hydrolysis of an industrially pretreated Arundo donax L. biomass*. *Biotechnology for Biofuels*, 9(1), 154.

6_ Cardi M, Zaffagnini M, De Lillo A, **Castiglia D**, Chibani K, Gualberto JM, Rouhier N, Jacquot J-P, Esposito S. (2016). *Distinct roles of cysteine residues in redox regulation and NADPH inhibition*. *Plant Science* 252 257-266.

7_ **Castiglia D**, Leone S, Tamburino R, Sannino L, Fonderico J, Melchiorre C, Carpentieri A, Grillo S, Picone D, Scotti N (2018) High-level production of single chain monellin mutants with enhanced sweetness and stability in tobacco chloroplasts. *Planta* 248, 465–476

8_ Castiglia D, Landi S, Esposito S. (2021) *Advanced Applications for Protein and Compounds from Microalgae*. *Plants (Basel)* 10(8):1686

- GenBank databases:

1_ Cafasso D, Cardi M, Castiglia D, Esposito S. *Hordeum vulgare* (variety Nure), cytosolic Glucose 6-phosphate dehydrogenase (cyt-G6PDH), cDNA. Accession # FJ790424. (Submitted 11-MAR-2009 - Open Access 10-MAR-2010) EMBL/GenBank/DBJ databases