



## Elisa Maricchiolo

### EDUCATION AND TRAINING

- [ 17/10/2022 – 30/03/2023 ] **Internship for the project: "ANR Cleanse: Cell elimination in seeds: mechanisms and functions".**  
*INRAe Université Paris-Saclay, AgroParisTech, Institut Jean-Pierre Bourgin (IJPB)*  
City: Versailles  
Country: France
- [ 25/04/2022 – 30/05/2022 ] **Traineeship in SoleLab for the project: "ERAD-mediated maturation of the regulatory protein of plant meristematic cells CLAVATA 3 emerged during evolution from algae to higher plants."**  
*University of Verona*  
City: Verona  
Country: Italy
- [ 28/09/2021 ] **24CFU Training course Certificate**  
*University of Urbino Carlo Bo*  
City: Urbino  
Country: Italy
- [ 31/12/2021 – Current ] **Expert in subject: Plant Physiology (BIO/04)**  
*University of Urbino Carlo Bo*  
City: Urbino  
Country: Italy
- [ 02/11/2020 – 31/01/2024 ] **PhD Student in Biomolecular and Health Sciences for the topic "Genetic manipulation of plants for bioactive molecules production"**  
*University of Urbino Carlo Bo*  
City: Urbino  
Country: Italy
- [ 29/10/2020 ] **Master's Degree in Agriculture and Environmental Biotechnology (110/110 L)**  
*University of Perugia*  
City: Perugia  
Country: Italy
- [ 01/02/2020 – 01/03/2020 ] **Traineeship**  
*CNR- Biosciences and Bioresources Institute*  
City: Perugia  
Country: Italy

[ 10/09/2019 ] **Certificate English Language level B2**

*CLA-University of Perugia*

City: Perugia

Country: Italy

[ 16/10/2018 ] **Bachelor's Degree in Biotechnology**

*University of Perugia*

City: Perugia

Country: Italy

[ 06/2018 ] **Traineeship for the project "Evaluation of nitrogen concentration effect on wheat kernels"**

*University of Perugia*

City: Perugia

Country: Italy

[ 06/2015 ] **Graduation**

*Scientific High school "Ettore Majorana"*

City: Orvieto

Country: Italy

## LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

**English**

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## PUBLICATIONS

[ 2023 ] **A biotechnological approach for the production of new protein bioplastics**

Reference: De Marchis F, Vanzolini T, Maricchiolo E, Bellucci M, Menotta M, Di Mambro T, Aluigi A., & Pompa A

Biotechnology Journal, Accepted

[ 2023 ]

**Towards microalga-based superfoods: heterologous expression of zeolin in Chlamydomonas reinhardtii.**

Reference: Perozeni F, Pivato M, Angelini M, Maricchiolo E, Pompa A and Ballottari M

Frontiers in Plant Science; 14:1184064

[ 2022 ] **Unconventional Pathways of Protein Secretion: Mammals vs. Plants.**

Reference: Maricchiolo E, Panfilì E, Pompa A, De Marchis F, Bellucci M and Pallotta MT

Frontiers in Cell and Developmental Biology; 10:895853

[ 2021 ]

**Human indoleamine 2,3-dioxygenase 1 (IDO1) Expressed in Plant Cells Induces Kynurenine Production.**

Reference: Bellucci M, Andrea Pompa A, De Marcos Lousa C, Panfili E, Orecchini E, Maricchiolo E.&Pallotta MT

International Journal of Molecular Sciences; 22(10) 5102

[ 2021 ]

**Bioconversion of Callus- Produced Precursors to Silymarin Derivatives in Silybum marianum Leaves for the Production of Bioactive Compounds.**

Reference: Gad D, El-Shora H, Fraternali D, Maricchiolo E, Pompa A, Dietz KJ

International Journal of Molecular Sciences; 22(4) 2149

**DRIVING LICENCE**

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Cars: B

**CONFERENCES AND SEMINARS**

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[ 18/09/2023 - 20/09/2023 ] **23rd Meeting of the European Network for Plant Endomembrane Research**  
Konstanz (DE)

Oral communication entitled "The story of ERAD-mediated maturation of the secretory protein CLAVATA3: a process evolved from algae to higher plants for meristems regulation".

[ 13/09/2023 - 15/09/2023 ] **3°Symposium, Evita Urbino (IT)**

Poster "Nanovesicles from plant cells as a new challenge in drug delivery".

[ 30/06/2023 ] **2°PhD student Day Urbino**

Scientific annual report for PhD students

[ 21/06/2023 - 23/06/2023 ]

**Annual meeting of the groups of Cellular and Molecular Biology and Biotechnology and Differentiation**

Ancona (IT)

Oral communication entitled "ERAD-mediated maturation of the regulatory protein of plant meristematic cells CLAVATA 3 emerged during evolution from algae to higher plants".

[ 15/07/2022 ] **1° PhD student Day Urbino (IT)**

Scientific annual report for PhD students

[ 16/09/2021 ] **LXIV Annual congress of Agricultural Genetic society (Online) (IT)**

Oral communication "Production of bioactive molecule for human health in plants cells, three case studies".

[ 01/06/2021 ] **International Congress PBE- Plant Biology Europe (Online) (IT)**

poster "ERAD-mediated maturation of the regulatory protein of plant meristematic cells Clavata 3 emerged after evolution from algae to higher plants."

## HONOURS AND AWARDS

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[ 12/05/2022 ] **Winner of a scholarship for activities in Biotechnology training** Awarding institution: CIB (Congresso Interuniversitario Biotecnologie)

[ 20/09/2021 ]

**Winner of a scholarship for participation to LXIV Annual congress of Agricultural Genetic Society**

Awarding institution: CIB (Congresso Interuniversitario Biotecnologie)

[ 09/01/2024 ]

**Winner of "Seed Grant" national research grant for young researchers of the Italian society of plant biology (SIBV)**

Awarding institution: SIBV

## TUTOR ACTIVITY

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[ 02/11/2020 - Current ] **Laboratory activities at the Master's Degree courses**

Practical activities planning for student in Molecular, Health and Nutrition Biology LM-6 and Medical Biotechnologies for Diagnostics and Therapy LM-9.

[ 02/10/2020 - Current ] **Co-tutor for Thesis entitled:**

**"Use of plant stem cells for the production of antioxidant molecules"** (2021) Alessia Cignotti, Master's Degree in Molecular, Health and Nutrition Biology LM-6, University of Urbino Carlo Bo

**"Expression of the indoleamine 2,3-dioxygenase 1 (IDO1) gene in tobacco plant cells for the production of bioactive kynurenins"** (2021) Francesco Palma, Master's Degree in Molecular, Health and Nutritional Biology LM-6, University of Studies by Urbino Carlo Bo

**"Vegetable bioreactors for the production of a protein-based biopolymer"** (2021) Riccardo Carnaroli, Master's Degree in Molecular, Health and Nutrition Biology LM-6, University of Urbino Carlo Bo

**"Pest resistant plants obtained through plant genetic editing, a strategy to increase agricultural yield"** (2021) Diego Manoni, Bachelor of Science in Biological Sciences L-13, University of Urbino Carlo Bo

**"Study of the mechanism of maturation of the clavata 3 regulatory protein of plant meristematic cells"** (2022) Francesca Coccioli, Master's Degree in Molecular, Health and Nutrition Biology LM-6, University of Urbino Carlo Bo.

**"Production of pentacyclic triterpenic acids in corn cultures deriving from the pulp of two different apple varieties"** (2022) Davide Salvatore Nicitra, Master's Degree in Molecular, Health and Nutrition Biology LM-6, University of Urbino Carlo Bo.

**"Genetic engineering from carrot cells for the production of astaxanthin", a powerful antioxidant"** (2022) Arianna Bertuccioli, Master's Degree in Molecular, Health and Nutritional Biology LM-6, University of Urbino Carlo Bo.

**"Plant exosomal nanoparticles and their therapeutic properties"** (2022) Sabrina Silvestri, Bachelor's Degree in Biological Sciences L-13, University of Urbino Carlo Bo.

"Study and design for protein plant-based biopolymer" (2023) Pasquale Creanza, Master's Degree in Molecular, Health and Nutritional Biology LM-6, University of Urbino Carlo Bo.

## SKILLS

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### Personal skills

Good skills in relationships during workshops, processing information and summarizing skills. Creative and interpretative skills and good ability on working alone and on group. Positive and proactive attitude towards new activities and problem solving. Good communication skills gained thanks to my working experience and workshop during university and internships.

### Practical skills

Extraction of DNA and proteins

Spectrophotometer and Nanodrop usage

PCR techniques

Gateway Cloning

SDS-Page

Western-Blot

Bacterial cultures

Microalgae culture and multiple growth systems

Genetic transformation of tissues and plants through *Agrobacterium tumefaciens*

Transient transformation of plant cells

Plant micropropagation

Callus induction

Protoplast isolation

*Arabidopsis thaliana* culture

Physiological assays on *Arabidopsis thaliana*

Optical and Epifluorescence microscopes

Confocal microscope Leica SP8/SP5

Processing images by Fiji Program

Good level of use of the Office package

Good level of use of digital presentation programs

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