

# MALACARNE DAVIDE

*Motivated and curious PhD student in Life Sciences and Biotechnology, particularly interested in fermentation processes aimed at the production of specialized metabolites such as enzymes and antibiotics.*



## PROFESSIONAL EXPERIENCE

### PhD student Biotechnology and life science

11/2023 – current position | University of Insubria

PhD project: «From gene to product and back: exploring the biosynthetic potential of filamentous actinomycetes»

### Fellowship for research activities

03/2023 – 9/2023 | University of Insubria

Study of fermentation processes for the production of specialized filamentous actinomycetes metabolites

### Internship

03/2022 – 02/2023 | Microbial Biotechnology Laboratory, University of Insubria in collaboration with Mogu Srl

Isolation, production and characterization of chitin deacetylases from different filamentous actinomycetes. Industrial application of these enzymes in order to optimize chitin/chitosan- containing bio-based materials, more specifically mycelium-based leather-like ones

### Thesis tutoring

One Bachelor's student «Studio della produzione di carotenoidi in *Actinomadura lepetitiana*»

### Teaching activities

Academic year 2022/2023 | University of Insubria

- Support for tutoring activities for the lab practices of the teaching course "Cellular and microbial biotechnologies – module of Microbial Biotechnology" for the bachelor's degree course in Biotechnology
- Support for the lab practices of the teaching course "Pharmaceutical biotechnology" for the master's degree course in Biotechnology for the Biobased and Health Industry
- Support for the lab practices of the teaching course "Biotechnological processes" for the Bachelor's degree course in Biotechnology

### Waiter

05/2020 – 08/2020 | Delicatessa of Corvi Barbara e C. snc

### Internship

06/2019 – 09/2019 | Lamberti S.P.A.

Biodegradability test, According to the OECD 301D method [OECD Guideline for testing of chemicals No 301D]; held at the Marine Ecotoxicology laboratory

## EDUCATIONAL HISTORY

### Mobility period

02/09/2024 – 20/12/2024 | Zurich University of Applied Sciences (ZHAW)

Exploring functionalized extracellular vesicles as novel nanocarriers for glycopeptide antibiotic delivery across mammalian cell membranes, in collaboration with Prof. Steffi Lehmann. This research aims to develop cutting-edge therapeutic strategies for treating intracellular bacterial infections.

### Master's degree in Molecular and Industrial Biotechnology

09/2020 – 02/2023 | University of Insubria

Graduated on 23/02/2023 with 110/110 cum laude

Discovery, production and application of chitin deacetylases for the improvement of fungal biomaterials

## DETAILS

[dmalacarne@uninsubria.it](mailto:dmalacarne@uninsubria.it)

## LANGUAGES

Italian: Native speaker  
English: B2 level

## TECHNICAL SKILLS

Good mastery of microbiological, biochemical and molecular biology techniques. Skilled at working on Gram-positive bacteria and yeast cultivation, in liquid and solid culture; fermentation techniques in flask and lab-scale bioreactor for the production of specialized metabolites and bioactive proteins of biotechnological interest. In silico analysis of nucleotidic/aminoacidic sequences (Clustal, BLAST); Microsoft Office Suite (Word, PowerPoint, Excel etc.) and iOs office (Pages, Keynote, Numbers)

## PERSONAL SKILLS

- Precise, rigorous and methodical person
- Proactive and problem-solving attitudes
- Quick study and result-driven worker
- Teamwork oriented

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## Erasmus project

09/2021 – 02/2022 | Ghent University, Belgium

- Mobility in higher education
- European Commission project for study opportunities in European countries
- Learning opportunities in an international environment
- Use of English and improvement of language skills
- Personal growth

## Bachelor's degree in Biotechnology

09/2016 – 03/2020 | University of Insubria

Graduated on 25/03/2020 with 103/110

Study of the effect of different microbial inocula on the biodegradation of chemical compounds

## High school diploma

2011 – 2016 | ISIS Cipriano Facchinetti, Castellanza (VA), Italy

Chemistry, materials and biotechnology

Evaluation 78/100

## ATTENDED CONFERENCES AND MEETINGS

### Cortona Procarioti 2024

27/06/2024 – 29/06/2024 | Cortona, Tuscany (Italy)

### FEBS Congress

02/07/2024 | Milan, Lombardy (Italy)

### ISBA Congress

15/06/2025 – 19/06/2025 | Egmond aan Zee, The Netherlands

### COMPOUND DISCOVERER MEETING

9/12/2025 – 11/12/2025 | Bremen, Germany

## PUBLICATIONS AND POSTERS

Malacarne D., Bartolone L., Caruso E., Gazzola S., Terzaghi E., Marinelli F. and Berini F. «Unraveling *Actinomadura lepetitiana*'s color palette: a study on carotenoid production in filamentous actinomycetes». Poster presented and oral flashtalk at Cortona Procarioti 2024, Cortona (IT) | 27-29<sup>th</sup> June 2024

Bartolone L., Malacarne D., Berini F., Frasson D., Pothier Joël F., Sievers M., Marinelli F. «Unravelling the biosynthetic potential of *Actinomadura lepetitiana*». Poster presented at 10th John Innes/Rudjer Boskovic Summer School in Applied Molecular Microbiology, Dubrovnik (HR) | 7-15<sup>th</sup> September 2024

Malacarne D., Bartolone L., Caruso E., Gazzola S., Marinelli F., Berini F. «Unravelling the biosynthetic potential of *Actinomadura lepetitiana*: an uncharted microbial source for novel pigments». Poster presented at 20th International Symposium on the Biology of Actinomycetes, Egmond aan Zee (NL) | 15-19<sup>th</sup> June 2025