Letizia **Bartolone**

Curriculum Vitae et Studiorum

PERSONAL INFORMATION

Nationality	Italian
Birth place	Gallarate (VA)
Birth date	20th August 1997
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EDUCATION AND DEGREES AWARDED

September 2019 – 25/02/2022	**Master's Degree in Molecular and Industrial Biotechnology** (class LM-08) at *the University of Insubria, Varese* Score: 110/110 cum laude Experimental thesis entitled "Investigation on specialized metabolites production in "rare" actinomycetes"
September 2016 – 20/09/2019	**Bachelor's Degree in Biotechnology – Health Curriculum** (classe L-2) at *University of Insubria, Varese* Votazione: 107/110 Experimental thesis entitled "Study of the heterologous expression of the biosynthetic cluster for glycopeptide A40926"
2011 – 2016	**Scientific High School Diploma** at *Liceo Scientifico Leonardo da Vinci, Gallarate (VA)* Score: 87/100

WORK ESPERIENCE

November 2022 - Ongoing

PhD student in **Life Sciences and Biotechnology** with a research project entitled "Investigation on the biosynthesis of antimicrobial specialized metabolites in "rare" actinomycetes", carried out at the Laboratory of Microbial Biotechnology, *University of Insubria, Varese*, led by Prof. Flavia Marinelli.

May 2022 – October 2022

Holder of the **scholarship for research activities** entitled "Study of the production of specialized metabolites in so-called "rare" filamentous actinomycetes", lasting six months, assigned through a public competition for comparison of titles.

The activity was carried out at the Laboratory of Microbial Biotechnology, *University of Insubria, Varese*, led by Prof. Flavia Marinelli.

March 2021 - March 2022

Internship at Microbial Biotechnology Laboratory, *Università degli studi dell'Insubria, Varese*

Involvement in two research projects aimed at the study and optimization of the production of two molecules with antimicrobial, produced by two distinct so-called rare actinomycetes:

solid and liquid growths of bacterial cultures, fermentation of so-called "rare" actinomycetes in Erlenmeyer flask and lab-scale bioreactor, isolation from culture broth and purification of antibiotics with adsorbent resins and affinity chromatography, resulting in HPLC analysis and microbiological assays. Application of genetic engineering techniques for the manipulation of microorganisms under study, such as genomic DNA extraction, PCR, gene cloning and intergeneric conjugation.

March 2019 - June 2019

Internship at Microbial Biotechnology Laboratory, *Università degli studi dell'Insubria, Varese*

Involvement in a research project aimed at studying heterologous gene cluster expression coding for the antibiotic A40926:

application of culture techniques of so-called rare actinomycetes and streptomycetes, isolation and purification of the antibiotic and consequent analysis by microbiological assays and HPLC.

MAIN TEACHING ACTIVITIES

The teaching activities reported here were conducted at the University of Insubria, Varese.

Academic year 2022/2023:

- **Support** for the exercises of the course "Cellular and microbial biotechnologies – microbial biotechnology module" (SSD CHIM/11) for the three-year degree courses in Biotechnology and Biological Sciences
- **Support** for the exercises of the course " Pharmaceutical biotechnology" (SSD CHIM/11) for the master's degree course in Biotechnology for the Biobased and Health Industry
- **Co-tutor** of a bachelor degree student (thesis title “Studio della produzione dell’antibiotico GE23077 in *Actinomadura lepetitiana”*)

Academic year 2021/2022:

- **Holder of a grant for didactic-integrative tutoring activities** for the exercises of the course "Cellular and microbial biotechnologies – microbial biotechnology module" (SSD CHIM/11, 48 hours of laboratory activities) for the three-year degree course in Biotechnology
- **Support** for the exercises of the course " Pharmaceutical biotechnology" (SSD CHIM/11) for the master's degree course in Biotechnology for the Biobased and Health Industry

Academic year 2020/2021:

- **Support** for the exercises of the course "General Microbiology" (SSD BIO / 19) for the three-year degree courses in Biotechnology and Biological Sciences

TECHNICAL SKILLS AND COMPETENCES

The main technical skills acquired are:

- **Microbiology:** growth of Gram-positive bacteria (so-called rare actinomycetes, streptomycetes, *Bacillus* spp., *Staphylococcus* spp.) and Gram-negative bacteria (*Escherichia coli*) in liquid and solid culture; fermentation techniques in Erlenmeyer flask and lab-scale bioreactor for the production of metabolites of biotechnological interest, using homologous and heterologous hosts (streptomycetes); isolation of actinomycetes from environmental samples; determination of MIC and MBC, microbiological assays.
- **Molecular biology:** extraction and manipulation of genomic DNA (from so-called rare streptomycetes and actinomycetes) and plasmids; genetic manipulation of actinomycetes and *E. coli* (intergeneric conjugation, cloning of homologous and heterologous genes).
- **Biochemistry and analytical chemistry**: determination of metabolite production by HPLC; purification of antibiotics by FPLC (affinity chromatography); extraction and purification of antibiotics from culture broth by adsorbent resins; spectrophotometric analysis.
- **Computer science**: in silico analysis of nucleotide/amino acid sequences (Clustal, BLAST, antiSMASH, InterPro, Geneious); HPLC analysis software; Microsoft Office package (Word, PowerPoint, Excel etc.) and iOs office (Pages, Keynote, Numbers); photo editing software (Adobe Photoshop, Adobe Lightroom); software for graphic processing (Biorender); basic web design (HTML, CSS).

LINGUISTIC SKILLS

Italian **Native speaker**

	COMPREHENSION		SPEAKING		WRITING
	Listening	Reading	Communication	Oral Production	
English	B2	B2	B2	B2	B2

Levels: A1/A2: Basic Knowledge - B1/B2: Intermediate Knowledge - C1/C2: Advanced Knowledge
Common European Cadre of Reference for Languages

ACADEMIC MERITS

Membership and positions of trust in scientific and scholarly societies:

- **SIMGBM** (Società Italiana di Microbiologia Generale e Biotecnologie Microbiche) **Membership –** Junior associate 2022-2024

SCIENTIFIC PUBLICATIONS

Poster "**Investigating RNA-polymerase-inhibitor GE2307 antibiotic production by *Actinomadura lepetitiana***" Berini F., Frasson D., Pothier Joël F., Bartolone L., Pigni F., Zanga A., De Rosa D., Sievers M., Marinelli F. 13th Wädenswil Day of Life Sciences – ZHAW University, Wadenswil (CH) (June 9th, 2022)

PARTECIPATION TO SCIENTIFIC MEETINGS

Participation to the meeting **Cortona Procarioti 2022** (June 23-25th, 2022) Cortona (AR, Italy).

Varese, 12/01/2023