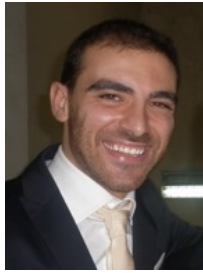


PERSONAL INFORMATION



Antonio Mondini

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antonio.mondini@icloud.com antonio.mondini@ibiol.ro

Sex Male | Date of birth 05/04/1986 | Nationality Italian

WORK EXPERIENCE

2016 - Present

PhD program in MicroArctic Innovative Training Network supported by a grant from the European Commission's Marie Skłodowska Curie Actions program under project number 675546 (2016 – 2019). School of Advanced Studies of the Romanian Academy (SCOSAAR)

Institute of Biology Bucharest, Department of Microbiology
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Email: biologie@ibiol.ro

Glacier metatranscriptomic, thermal response and cold-adaptation mechanisms of pyrimidine biosynthesis in psychrophilic microorganisms

Identify cold-adaptation mechanisms of DNA synthesis in psychrophilic bacteria by cloning and characterization of key enzymes of pyrimidine biosynthesis
Thermostability, activity, regulation, protein interactions, molecular modelling and X-ray crystallography of individual and interacting enzymes

EDUCATION AND TRAINING

2012 - 2015

Master Degree in Molecular Diagnostic

University of Naples "Federico II", Naples, Italy

Relator: Professor Maria de Falco

Correlator: Dr. Donatella de Pascale

Thesis Project: "Antarctic marine environment as a source of novel antimicrobial compounds"

Final Marks 110/110 cum Laude

2014 - 2016

Training

National Research Council, Institute of Protein Biochemistry
Via Pietro Castellino, 111, 80131, Naples, Italy

Under supervision of researcher Donatella de Pascale and PhD Pietro Tedesco

- Liquid Chromatography techniques (UPLC, HPLC, LC-MS)
- Bacterial isolation from sediments
- Bacterial growth
- Bacterial Transformation
- Bioactive compounds extraction and fractionation from bacterial culture

PERSONAL SKILLS

Mother tongue

Italian

Other language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Communication skills

Good communication skills gained through my work experiences in different foreign countries. I'm open mind, flexible, able to adapt to different cultural environments and with the capability to work in team

Organisational / managerial skills

During my University, CNR and PhD training activities:

- Leadership
- Essential work planning
- Time management skill
- Ability to coordinate jobs in a working group

Technical skills and competence

Biochemistry techniques: Enzyme-linked immunosorbent assay (ELISA). Ionic and hydrophobic exchange chromatography using analytic and preparative columns. UPLC (Water) with Empower 3 software, HPLC with Chromeleon software, gel filtration chromatography FPLC, SPE fractionation. Knowledge of Mass spectrometry (LC-MS). Inclusion techniques, Immunohistochemical techniques, tissue analysis and staining. Enzymatic assays and Kinetic assessment.

Molecular biology techniques: Bacterial transformation, characterization and expression of proteins. Proteins separation through SDS-PAGE electrophoresis, gel comassie staining, Western Blot technique with x-ray slabs acquisition or VersaDoc Biorad Imaging System with QuantityOne software. Spectrophotometric assessment using BioDrop Duo (BIODROP) and automatic systems as POLARstar Omega Plate Readers (BMG LABTECH) with related MARS Data Analysis Software (BMG-LABTECH). Fluorometric quantitation (Qubit). DNA and RNA extraction, cDNA synthesis, oligonucleotide design, PCR, real-time PCR, agarose gel electrophoresis. Next Gen Sequencing Illumina library preparation. Liquid inhibition essay as Minimal Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC).

Microbiology techniques: Screening and isolation of microorganisms from extreme environmental samples, in particular psychrophilic and halophilic bacteria. Expertise in aerobic and anaerobic bacteria cultivation and growth media formulation (O.S.M.A.C.), bacteria growth conditions and bacterial screening on the MicroDish Culture chip (MDCC). Secondary metabolites production, extraction and purification from several biological systems.

Experienced in experimental planning.

Computer skills

Microsoft Office (Word, Excel, PowerPoint) and MAC-OS - current usage of various software for protein and DNA data analysis.

Driving licence

A - B

Certifications

- How to develop new chromatographic methods and implement HPLC analytical technique. Phenomenex: 14 November 2018
- Liquid chromatography-Mass Spectrometry: From sample preparation, HPLC/UHPLC to MS. Phenomenex: 13 November 2018
- Amplicon based analysis of microbial population held in Copenhagen, Denmark, 6-11 June 2017
- Further skills in microbial ecology at University of Akureyri, Iceland, 3-9 April 2017
- Health and safety Training program at UNIS, Svalbard; 20-27 November 2016

 ADDITIONAL INFORMATION

Publications

Cold adaptation mechanisms of aspartate transcarbamoylase from *Glaciibacter superstes*, an Arctic psychrophilic bacterium. Mondini A, Necula-Petrareanu G, Paun V, Iancu L and Purcarea C (2019) ROM. J. BIOL. – PLANT BIOL., Volume 64, Nos. 1–2, P. 19–30

Total RNA Protocol (extraction, quantification and Illumina library preparation) Mondini A, Schcostag MD, Ellegard-Jensen L, Bang-Andreasen T, Anwar MZ, Purcarea C and Jacobsen CS (2019) dx.doi.org/10.17504/protocols.io.457gy9n

High-throughput sequencing of fungal communities across the perennial ice block of Scărișoara Ice Cave. Mondini A, Donhauser J, Itcus C, Marin C, Persoiu A, Lavin P, Frey B and Purcarea C. Annals of Glaciology (2019) doi: 10.1017/aog.2019.6

Aspartate transcarbamoylase obtained from a psychrophilic bacterium (*Rugamonas sp.*) isolated from an Antarctic lake. Păun VI, Necula-Petrăreanu G, Mondini A and Purcărea C. Publisher: Ars Docendi ISBN: 978-606-998-044-6

Cold-active proteins from psychrophilic microorganisms. The novel results of the Institute of Biology Bucharest into fields of ecology, microbiology and citobiology (www.ibiol.ro/biblioteca). Mondini A and Purcarea C (2018). Publisher: Ars Docendi ISBN: 978-606-998-044-6

Antarctic marine environment as a source of novel antimicrobial compounds.

Mondini A, Palma Esposito F, Tortorella E, Tedesco P, Aurilio M, De Martino N, Festa C, Monti MC, D'auria MV and De Pascale D. Biologia Marina Mediterranea; Genoa Vol. 23, Iss. 1, (2016): 306-307

Conferences

Oral communication:

Invited speaker at Aarhus university, Department of environmental science

Glacier metatranscriptomic, thermal response and cold-adaptation mechanisms of pyrimidine biosynthesis in psychrophilic bacteria. 27 March 2019

8th International conference on Polar and Alpine Microbiology, University of Waikato, Hamilton, New Zealand. 4–8 February, 2019. Flash talk: Effect of environmental heat-shock stress on glacier microbiome. Mondini A, Anwar MZ, Jacobsen CS, Larose C and Purcarea C.

International Symposium on Cryosphere and Biosphere, Kyoto, Japan. 14–19 March, 2018. Mondini A and Purcarea C. Thermal response of pyrimidine nucleotide genes expression in the psychrophilic bacterium *Glaciibacter superstes*.

5th Edition of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, Brasov, Romania. 23–25 May, 2018. Molecular Adaptations to Low Temperatures of Cold-Active Microbial Catalysts Necula-Petrareanu G, Mondini A, Lavin P, Vasilescu A. and Purcarea C.

Bioinformatic Prospectives in Romania, Cluj-Napoca, Romania; 24th November 2017. Microbial diversity by 16S rRNA Illumina sequencing and Shotgun.

Invited speaker at Swiss Federal Research Institute WSL Birmensdorf Zurich. 8 May 2017. **Microbial heat shock response experiment. qPCR analysis, RNA and DNA extraction from soil/ice, statistical analyses.**

Invited speaker at the University of Agronomic Sciences in Bucharest, Romania; 25 April 2017. Cold adaptation mechanisms in psychrophilic microorganisms

47th Congress of the Italian Society of Marine Biology Torino; June 13–17, 2016.

Mondini A, Palma Esposito F, Tortorella E, Tedesco P, Aurilio M, De Martino N, Festa C, Monti MC, D'auria MV and De Pascale D. Antarctic marine environment as a source of novel antimicrobial compounds.

Poster presentations:

8th International conference on Polar and Alpine Microbiology, University of Waikato, Hamilton, New Zealand. 4-8 February, 2019. Flash talk: Effect of environmental heat-shock stress on glacier microbiome. **Mondini A**, Anwar MZ, Jacobsen CS, Larose C and Purcarea C.

Polar 2018 SCAR/IASC Open Science Conference & Open COMNAP Session, Davos, Switzerland; 19-23 June, 2018. **Mondini A**, Anwar MZ, Jacobsen CS, Larose C and Purcarea C. Heat shock response of glacier microbiome.

Polar 2018 SCAR/IASC Open Science Conference & Open COMNAP Session, Davos, Switzerland; 19-23 June, 2018. Cave ice chronosequence of total and active bacteria based on 16S rRNA gene Illumina sequencing. Paun VI, Itcus C, Persoiu A, Hillebrand-Voilescu A, **Mondini A**, Badaluta C, Dorador C and Purcarea C.

7th International Conference on Polar and Alpine Microbiology, Nuuk, Greenland; 8-12 September 2017. **Mondini A** and Purcarea C. Glacier metatranscriptomic, thermal response and cold-adaptation mechanisms of pyrimidine biosynthesis in psychrophilic bacteria.

Euromarine Meeting. Exploitation and Legal Aspects on Marine Genetic and Chemical Resources. Institute of Protein Biochemistry, CNR, Via P. Castellino, 111 Naples; April 4-5, 2016. Palma Esposito F, Ingham CJ, Tasdemir D, Tedesco P, Corral Villa P, Tortorella E, **Mondini A** and De Pascale D. Evaluation of antimicrobial potential of the Antarctic bacterium *Aequorivita* sp. isolated by the MicroDish Culture Chip.

GEOMAR-Biotech Mini Symposium. Challenges and Opportunities in Marine Biotechnology Research and Development in Europe. Kiel, Germany; 17-18 December 2015. Palma Esposito F, Ingham CJ, Brodie G, Festa C, Silber J, Tedesco P, Corral Villa P, Tortorella E, **Mondini A**, Jaspars M, D'Auria MV, Tasdemir D and De Pascale D. Psychrophilic bacteria as source of novel bioactive compounds.

11/11/2019

Antonio Mondini



"In compliance with the Italian legislative Decree no. 196 dated 30/06/2003, I hereby authorise you to use and process my personal details contained in this document."