

Ilaria Finore

PERSONAL DATA

Born 19 December 1981
Italian citizenship
Phone: (+39) 0818675118
E-mail: ilaria.finore@icb.cnr.it
ilariafinore@pec.it

CURRENT POSITION

Scientific researcher - CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy
Major topic: Major topic: Valorization of vegetable waste biomass not in competition with food sector. Recovery of polysaccharides from vegetable wastes. Set up of biotransformation reactions through commercial catalysts and/or extremozymes. Identification and chemical characterization of hydrolysis products.
Isolation and characterization of extremophilic microorganisms, belonging to *Archaea* and *Bacteria* domains. Chemical and biochemical characterization of biomolecules produced by extremophilic microorganisms, their scale-up production (up to 90 liters) and downstream recovery (in particular enzymes, exopolysaccharides and lipids).

LANGUAGES

Italian (native speaker)
English (QEFR “B2” Certificate)

EDUCATION

January 2010- March 2011: **PhD**
Doctor of Philosophy (PhD) In “Environment, Resources and Sustainable Development”.
University: Università degli studi di Napoli “Parthenope”
Project title: ‘Bioethanol: a source of renewable energy from extremophiles’ with Label of “Doctor Europaeus”
Co-Tutor: Dr. Barbara Nicolaus
Tutor: Prof. Stefano Dumontet
Major topics: extremophilic microorganisms, amylases, second generation bioethanol, genes cloning, waste biomass valorisation.
Dicember 2007: Master “Expert of governance of natural protected areas” (II level)
University: Università degli studi del Molise
September 1999 - December 2006 (**MSc.**) **Master’s degree in Environmental Sciences**
University: Università degli studi di Napoli “Parthenope”
Grade: 110/110
Thesis title: Studi di biodiversità di specie alofile del lago salato Fuente de Piedra (IT)
Biodiversity studies of halophilic species from Fuente de Piedra salt lake (EN)
Major topics: extremophilic microorganisms, taxonomy studies.
Tutor: Dr. Barbara Nicolaus
Tutor: Prof. Stefano Dumontet
23/03/2009- 23/06/2009 Short Term Fellowship in Foreign Institution
PhD fellowship within Scientific and Technological Research Council of Turkey (TÜBİTAK) program “2216 - Research Fellowships For Foreign Citizens”
Founded by foreign ministry of Turkey.
Institute: Bioengineering Department of Marmara University (Turkey)
Major topic: Yeast fermentation on waste biomass, Primer design, PCR, cloning techniques.
Supervisors: Prof. Ebru Toksoy Oner.
27/10/2008 - 20/11/2008 Short Term Fellowship in Foreign Institution
PhD fellowship for PhD research activity abroad.
Founded by **UNICAMP** program.
Institute: Bioengineering Department of Marmara University (Turkey)
Major topic: Primer design, PCR, cloning techniques.
Supervisors: Prof. Ebru Toksoy Oner.

PROFESSIONAL EXPERIENCE

02/04/2012 – 30/06/2016: **Research fellow in frame of MIUR project PON01_01966.** “Eco-compatible processes of eNERgy and BIO-CHEMicals production from renewable sources and for the land valorisation” CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy.
Major topic: waste biomass valorisation, enzymatic bioconversion of waste biomass and its optimization, recovery and characterization of by-products, microbial fermentation on waste biomass.

25/07/2016 - 24/01/2017: **Research fellow.** CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy.

Major topic: enzymatic digestion of hemicellulose extracts through extremophilic microbial consortia.

14/02/17 – 14/05/17: **Research fellow.** Dipartimento di Scienze Chimiche, Università degli Studi di Napoli Federico II (Na) *Major topic:* Scale up of lignocellulosic biomass bioconversion.

15/5/17- 14/7/17: **Research fellow in frame of MIUR project PON3PE_00107_1.** “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”. CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy.

Major topic: enzymatic digestion of hemicellulosic biomass through enzymatic cocktail from mesophilic and extremophilic microorganisms.

25/09/17 -24/05/2019: **Research fellow.** CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy.

Major topic: isolation of extremophilic microorganisms from arctic samples and study of their biomolecules.

01/07/2019 **Researcher (permanent position) - III professional level.** CNR - National Research Council of Italy - ICB - Pozzuoli (NA), Italy.

01/11/2019 **Assignment of External Training Tutor** for the design, management and implementation of the activities of "Pathways for transversal skills and for orientation".

03/2019 **Guest Editor** of Microorganisms (ISSN 2076-2607) for special issue “Microbial Extremophiles as Life Pioneers and Wellsprings of Valuable Molecules” in "Environmental Microbiology".

https://www.mdpi.com/journal/microorganisms/special_issues/microbial_extremophiles

PROFESSIONAL SKILLS

Informatic skills: knowledge of Microsoft Office and use of Internet (EIPSASS “*europaean informatic passport*” ITN. 010734); knowledge of EndNote, BLAST, *in-silico*, MEGA, Proseq v.2 and Chromas tools and databases.

Techniques of Molecular Biology: DNA extraction, primer design, PCR, cloning, sequencing.

Microbial Culturing Techniques: medium preparation, cultures growth and maintenance, axenic cultures preparation, microbial fermentation by using waste biomass as sole carbon source, recovery and characterization of biomolecules (enzymes, lipids and exopolysaccharides)

Techniques of Microscopy: Optic microscopy

Chromatography technique: Thin layer chromatography (T.L.C.), Fast protein liquid chromatography (F.P.L.C.), High Performance Anion-Exchange. Chromatography with Pulsed. Amperometric Detection (HPAE-PAD).

Electrophoretic technique: agarose gel, SDS-PAGE, native gel, zymogram gel.

Exopolysaccharides: EPS hyper-production by fermentation technology. Recovery, purification and chemical characterization.

Enzymatic assay: determination of reducing sugars (DNS methods) for carbohydrate activities.

Waste biomass valorisation: chemical extraction of polysaccharides; set up of biotransformation reactions through commercial catalysts and/or extremozymes. Identification and chemical characterization of hydrolysis products.

Research skills: attitude to experimental design and management, capacity to both work alone and in team, great skills in scientific divulgation oral, visual and written.

PRINCIPAL INVESTIGATOR IN THE PROJECT

1. Programma Nazionale di Ricerca in Antartide - PNRA D.D. 1314 del 25/05/2018 PNRA18_00232 – A “Extremozyme applications of Antarctic Microorganisms Isolated from past expeditions or museum Collections”. MIUR Ordinance n. 475 (03.04.2020)
2. Commissioned Research Program ICB - Knowledge for Business Srl, ICB n. 181_25.01.2021

PARTICIPATION IN THE PROJECT

1. **2017-2019** Partecipazione to Programma Nazionale di Ricerca in Antartide - PNRA D.D. 651 del 05/04/2016 PNRA16_00020 - A1, “Antarctic Porifera: hot-spots for Prokaryotic diversity and biotechnological Potentialities - P3”.
2. **2019 – 2021** Partecipazione to Joint Bilateral Agreement BAS/CNR (Bulgaria/Italy), Joint Project “Isolation and characterization of pectin degrading enzymes from extremophilic microorganisms for potential biotechnological application”.
3. **2019 – 2021** POR Campania FESR 2014/2020 O.S. 1.2 Az. 1.2.1 e 1.2.2 Avviso “Piattaforme Tecnologiche di ricerca collaborativa per la lotta alle patologie oncologiche” Title: Antitumor Drugs and Vaccines from the Sea - (FARMACI E VACCINI ANTITUMORALI DAL MARE) prot. ICB n° 2906 (30.07.2019) Project ADVISE - CUP B43D18000240007” – Cod SURF 17061BP000000011