



SULIEIA

MUNA Mediterranean and  
Middle East University  
Network Agreement



## SUMMER SCHOOL

# Exploitation of Biological Waste for Novel Added-value Products

📍 **Naples** 📅 **14–17 July 2025**

Complesso Monumentale

dei

Santi Marcellino e Fesio



## Day 1 - July 14<sup>th</sup>

### 9.15: Opening Session and Greetings

Chairs: Profs C. Valeria L. Giosafatto and Sonia Marghali

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### 9.30: Enzymatic Approach to the Valorization of Fibrous Matrices from Agri-Food Waste

Dr. Angela Sorrentino (CAISIAL- Centre for Innovation and Development in the Food Industry, University of Naples Federico II)

### 10.15: Mining Microbial Dark Matter for Enzymes: Unlocking Hidden Biocatalytic Potential for Bio-Based Processes

Prof. Andrea Strazzulli (Department of Biology - University of Naples "Federico II")

### 11.00: Coffee Break

### 11.45: Thermophilic Biocatalysts as Robust Tools for Biotechnological Applications

Dr. Martina Aulitto (Department of Biology, University of Naples Federico II, Naples, Italy)

### 12.15: Bioprospecting in Industrial Facilities: A Source of Enzymes for Biotechnological Applications

Prof. Salvatore Fusco (Department of Biotechnology, University of Verona, Italy)

### 13.00: Lunch

### 14.00-16.30: Social Event-Visit of “Museum Centre of Natural and Physical Sciences

## Day 2 – July 15<sup>th</sup>

### 9.20: Morning Session

**Chairs: Profs Loredana Mariniello and Raffaele Porta**

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**9.30: Vegetable Oils and Epoxidation Processes: Applications and Innovations in Industrial Chemistry**

Prof. Rosa Turco (Department of Chemical Sciences, University of Naples Federico II, Italy)

**10.15: Innovative Biomass Utilization: From Birch Bark Epoxidized Fatty Acids to Starch-Based Bioplastics**

Dr Domenico Sagnelli (Institute of Applied Sciences and Intelligent Systems “Eduardo Caianiello”, National Research Council, Naples, Italy)

**11.00: Coffee break**

**11.45: Upcycling Agro-Waste Biomasses into Added-Value Materials: The Case of Polyhydroxyalkanoates**

Prof. Cinzia Pezzella (Department of Chemical Sciences, University of Naples Federico II, Italy)

**12.15: From Exhausted Oils to Protein Biosurfactants: Harnessing Fungi for Sustainable Production**

Prof. Alessandra Piscitelli (Department of Chemical Sciences, University of Naples Federico II, Italy)

**13.00: Lunch**

**13.50: Afternoon Session**

**Chairs: Profs Salvatore Fusco and Marco Moracci**

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**14.00: Food Waste or Novel Food? The Root of a Sustainable Future**

Prof. Chiara Nitride (Department of Agricultural Sciences, University of Naples Federico II, Italy)

**14.45: From Fields to Films Sustainable Edible Packaging from Defatted Seed Cake and Plant Extracts**

Prof. Mohammed Sabbah (An-Najah University, Nablus, Palestine)

**15.30: Valorization of Spent Coffee Grounds: Mild Pretreatment and Enzymatic Saccharification for High-Value Monosaccharides and Oligosaccharides Production**

Dr Nicola Curci (Institute of Biosciences and BioResources, National Research Council, Naples, Italy)

**16.15: Green biotechnological platform: a way to valorize whey**

Prof. Alberto Alfano (Department of Experimental Medicine, University of Campania “L. Vanvitelli”, Italy)

**Day 3 – July 16<sup>th</sup>**

**9.20: Morning Session**

**Chairs: Profs Imene Ouzari and Angela Arciello**

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**9:30: Lignocellulose wastes as substrates for microbial melanin production**

Prof. Odile F. Restaino (Department of Chemical Sciences, University of Naples Federico II, Italy)

**10:15 Production of microbial polysaccharides with potential biotechnological applications from renewable resources**

Prof. Donatella Cimini (Department of Environmental, Biological and Pharmaceutical Sciences and Technologies, University of Campania “L. Vanvitelli”)

**11:00 Coffee Break**

**11:45: State of Art of Solid/Liquid Extraction and New Perspectives for Eco-Friendly Environmentally Processes**

Prof. Daniele Naviglio (Department of Chemical Sciences, University of Naples Federico II, Italy)

**12.15: Sustainable extraction, characterization, and valorization of lignocellulosic by-products through fermentative bioconversion using novel bacterial isolates**

Dr. Teresa Gervasi (Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Italy)

**13.00: Lunch**

**13.50: Afternoon Session**

**Chairs: Profs Giuseppina Mandalari and Loredano Pollegioni**

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**14.00: Valorization of *Melia azedarach* Leaf Waste as an Antifungal Agent Improving Crop Yield**

Prof. Safia Elbok (Faculty of Sciences of Tunis, University Tunis El Manar, Tunisia)

**14.45: Use of Natural Products for Controlling Plant Pathogens**

Dr Valeria Scala (Research Center for Plant Protection and Certification, Rome, Italy)

**15.30: Novel Marine Bioactive Compounds for Functional Food Development**

Prof. Marzieh Moosavi-Nasab (University of Shiraz, Iran)

**20.00: Social Dinner**

**Day 4 – July 17<sup>th</sup>**

**9:20: Morning Session**

**Chairs: Profs Odile F. Restaino and Daria M. Monti**

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**9.30: Use Of Agro-Industrial Wastes for Obtaining Novel Bioplastics**

Prof. C. Valeria L Giosafatto (Department of Chemical Sciences, University of Naples Federico II)

**10.15: The importance of packaging and its impact on the environment**

Dr. Fatemeh Mirpoor (Department of Food and Nutritional Sciences, University of Reading, UK)

### 11.00 Coffee break

#### 11.45: Biodegradable polymers and biomass valorization: towards sustainable materials and ecofriendly processes

Dr. Gabriella Santagata (Institute for Polymers, Composites and Biomaterials, National Council of Research, Naples, Italy)

#### 12.15: Green Chemistry in Food Safety: Olive Leaf Extract and Chitosan Nanoparticles for HMF and Acrylamide Reduction

Prof. Asmaa Al-Asmar (Faculty of Science, An-Najah National University, Nablus, Palestine / Energy, Water and Food Security Research Center-Agriculture and Food Research Unit, Scientific Center, An-Najah National University, Nablus, Palestine)

### 13.00: Closing remarks

Profs C. Valeria L. Giosafatto and Sonia Marghali

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### 13.30: Lunch

### 14.30-16.30: Social Event-Visit of “Museum Centre of Natural and Physical Sciences

#### ***Scientific Committee***

- Prof. C. Valeria L. Giosafatto
- Prof. Sonia Marghali
- Prof. Loredana Mariniello
- Prof. Loredano Pollegioni
- Prof. Raffaele Porta

#### ***Organizing committee***

- Dr Marika Avitabile
- Dr Lucas Di Cervo
- Dr Sondozi Hejazi
- Prof. Odile F. Restaino