



Friday, 27th April 2018

13⁰⁰-17⁰⁰ Registration

15⁰⁰ **Opening and welcome remarks**

15⁰⁵ **Welcome and presentation of the Center for Interdisciplinary Research and Innovation, AUTH (CIRI-AUTH)**

Prof. Angeliki Lemonidou, Vice-Head, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece and CIRI-AUTH

15¹⁵ **Presentation of MICROMETABOLITE project**

Dr. Angela Sessitsch, Coordinator of MICROMETABOLITE project, AIT Austrian Institute of Technology, Center for Health and Bioresources, Vienna, Austria

Session 1. Biodiversity

Chairs: Prof. Minas Yiangou, School of Biology (AUTH) - Prof. Stella Kokkini, School of Biology (AUTH)

15³⁰ **Natural Science Collections in the big open data era: Addressing bio-economy challenges through biodiversity discovery**

Dr. Dimitrios Koureas, Head of Department, ISBI, Naturalis Biodiversity Center, Leiden, Netherlands

16⁰⁰ **Linking Biodiversity to Ethnopharmacology: The experience of Cretan lama research group**

Ass. Prof. Stergios Pirintsos, School of Biology, University of Crete, Greece

16³⁰ **Coffee Break**

17⁰⁰ **Biodiversity at Molecular Level: From identification of wild plants to the commercial herbs and spices**

Assoc. Prof. Kostas Vlachonasios, School of Biology, Aristotle University of Thessaloniki, Greece

17³⁰ **Plant Production Systems for Novel Products**

Philipp Rödel, Institut für Pflanzenkultur (IFP), Germany & Inoq GmbH, Germany

18⁰⁰ **Microorganisms of global biodiversity as a source of bioactive metabolites for the discovery and development of novel cosmeceutical agents**

Ass. Prof. Nikolaos Fokialakis, Department of Pharmacy, National and Kapodistrian University of Athens, Greece





Saturday, 28th April 2018

Session 2. Downstream processing of Natural Products

Chairs: Ass. Prof. Christos Chatzidoukas, School of Chemical Engineering (AUTH) - Assoc. Prof. Nektarios Aligiannis, Department of Pharmacy (UoA)

9⁰⁰ Screening of Solvents for Separation Processes

Ass. Prof. Ioannis Tsivintzelis, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece

9³⁰ Extraction procedures for polar phenolic compounds

Ass. Prof. Nikos Nenadis, Department of Chemistry, Aristotle University of Thessaloniki, Greece

10⁰⁰ Recovery of high added-value compounds from natural sources using environmentally friendly techniques

Assoc. Prof. Nektarios Aligiannis, Department of Pharmacy, National and Kapodistrian University of Athens, Greece

10³⁰ Coffee Break

11⁰⁰ NMR and HPLC: two complementary methods for targeted isolation of natural products

Ass. Prof. Anastasia Karioti, School of Pharmacy, Aristotle University of Thessaloniki, Greece

11³⁰ Recent innovations for a global exploitation of natural resources

Dr. Jamal Ouazzani, Research Director, National Center for Scientific Research CNRS & Natural Product Chemistry Institute ICSN, France

Session 3. Analytical Techniques

Chairs: Prof. George Theodoridis, Department of Chemistry (AUTH) - Ass. Prof. Eleni Gika, School of Medicine (AUTH)

12⁰⁰ NMR spectroscopy

Prof. Ioannis P. Gerothanassis, Vice Chairman of Hellenic Quality Assurance & Accreditation Agency, Department of Chemistry, University of Ioannina, Greece

12³⁰ Mass spectrometry - introduction to high resolution and ambient ionization methods

Ass. Prof. Evagelos Gikas, Department of Pharmacy, National and Kapodistrian University of Athens, Greece

13⁰⁰ Lunch Break

14⁰⁰ RAMAN spectroscopy: theory and applications

Assoc. Prof. Dimitris Christofilos, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece

15⁰⁰ Applications of High Performance Thin Layer Chromatography in Natural Product Extracts

Vana Mpoka, Phytochemistry Lab Manager, APIVITA SA, Athens, Greece





School of Chemical Engineering,
Aristotle University of Thessaloniki

Natural Products Summer School Programme

27-29 April 2018, Thessaloniki, Greece

KEDEA (Aristotle University Research Dissemination Center) building

3is Septemvriou street, Thessaloniki



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Session 4. -Omics

Chairs: Ass. Prof. Nikolaos Fokialakis, Department of Pharmacy (UoA) - Ass. Prof. Eleni Gika, School of Medicine (AUTH)

15³⁰

Metabolomics. Introduction to the field

Prof. George Theodoridis, Department of Chemistry, Aristotle University of Thessaloniki, Greece

16⁰⁰

NMR in Metabolomics

Prof. Ioannis P. Gerothanassis, Vice Chairman of Hellenic Quality Assurance & Accreditation Agency (HQA), Department of Chemistry, University of Ioannina, Greece

16³⁰

Coffee Break

17⁰⁰

Targeted Metabolomics. A paradigm of method development and validation

Dr. Christina Virgiliou, Department of Chemistry, Aristotle University of Thessaloniki, Greece

17³⁰

LC-MS pre-processing, from peaks to numbers

Dr. Alexandros Pechlivanis, Faculty of Medicine, Department of Surgery & Cancer, Imperial College London

18⁰⁰

The route from raw data to biochemical pathway annotation

Dr. Olga Deda, School of Medicine, Aristotle University of Thessaloniki, Greece





Sunday, 29th April 2018

Session 5. Biological activities

Chairs: Prof. Maria Tsimidou, Department of Chemistry (AUTH) - Prof. Dimitra Hadjipavlou-Litina, School of Pharmacy (AUTH)

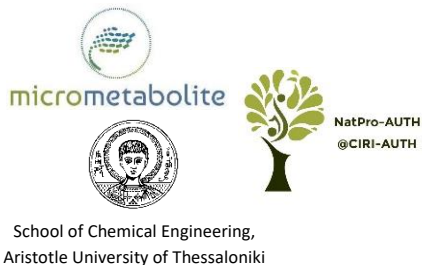
- 9⁰⁰ **The multifunctional biological profile of natural products**
Prof. Dimitra Hadjipavlou-Litina, Department of Pharmaceutical Chemistry, School of Pharmacy, Aristotle University of Thessaloniki, Greece
- 9³⁰ **Experimental breast cancer models in natural compound research**
Prof. Dr. Günter Vollmer, Institut für Zoologie Molekulare Zellphysiologie und Endokrinologie, Technische Universität Dresden, Germany
- 10⁰⁰ **Structure-antioxidant activity relationships**
Dr. Stella Ordoudi, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 10³⁰ **Molecular, cellular and pharmaceutical engineering data about the interaction of natural products on the GPCR OXER1**
Prof. Elias Castanas, School of Medicine, University of Crete, Greece
- 11⁰⁰ **Coffee Break**

Session 6. Technological & Biotechnological applications

Chairs: Prof. Dimitra Hadjipavlou-Litina, School of Pharmacy (AUTH) - Prof. Maria Tsimidou, Department of Chemistry (AUTH)

- 11³⁰ **Smart delivery of bioactive compounds in biomedical and personal care applications**
Assoc. Prof. Amalia Aggeli, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 12⁰⁰ **Essential oils: analysis and biological activities**
Assoc. Prof. Manto Lazari, School of Pharmacy, Aristotle University of Thessaloniki, Greece
- 12³⁰ **Alkannins and Shikonins: From ancient codes to modern medicine**
Assoc. Prof. Andreana N. Assimopoulou, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 13⁰⁰ **Lunch Break**
- 14⁰⁰ **Saffron. An integrated presentation of the potential of a natural product**
Prof. Maria Tsimidou, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 14³⁰ **Natural molecular scaffolds, from compounds to biosynthesis**
Dr. Géraldine Le Goff, Researcher Engineer, Natural Product Chemistry Institute ICSN & National Center for Scientific Research CNRS, France
- 15⁰⁰ **Production of carotenoids**
Ass. Prof. Fani Mantzouridou, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 15³⁰ **Sustainable photosynthetic production of high-added value bioproducts**
Ass. Prof. Christos Chatzidoukas, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 16⁰⁰ **Summer School Closing**





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Organizing Committee

Assoc. Prof. Andreana N. Assimopoulou, School of Chemical Engineering, AUTH | NatPro-AUTH @CIRI-AUTH

Ass. Prof. Eleni Gika, School of Medicine, AUTH | NatPro-AUTH & BIOMIC @CIRI-AUTH

Prof. Dimitra Hadjipavlou-Litina, School of Pharmacy, AUTH | NatPro-AUTH @CIRI-AUTH

Prof. Stella Kokkini, School of Biology, AUTH | NatPro-AUTH @CIRI-AUTH

Prof. George Theodoridis, Department of Chemistry, AUTH | BIOMIC @CIRI-AUTH

Prof. Maria Tsimidou, Department of Chemistry, AUTH | NatPro-AUTH @CIRI-AUTH

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