



## Friday, 27<sup>th</sup> April 2018

### 13<sup>00</sup>-17<sup>00</sup> Registration

15<sup>00</sup> Opening and welcome remarks

15<sup>05</sup> 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

15<sup>15</sup> 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)

15<sup>30</sup> 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

16<sup>00</sup> Linking Biodiversity to Ethnopharmacology: The experience of Cretan lama research group

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

16<sup>30</sup> Coffee Break

17<sup>00</sup> 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

17<sup>30</sup> Plant Production Systems for Novel Products

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

18<sup>00</sup> 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, 28<sup>th</sup> 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)**

#### 9<sup>00</sup> Screening of Solvents for Separation Processes

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

#### 9<sup>30</sup> Extraction procedures for polar phenolic compounds

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

#### 10<sup>00</sup> 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

#### 10<sup>30</sup> Coffee Break

#### 11<sup>00</sup> NMR and HPLC: two complementary methods for targeted isolation of natural products

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

#### 11<sup>30</sup> 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)**

#### 12<sup>00</sup> NMR spectroscopy

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

#### 12<sup>30</sup> Mass spectrometry - introduction to high resolution and ambient ionization methods

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

#### 13<sup>00</sup> Lunch Break

#### 14<sup>00</sup> RAMAN spectroscopy: theory and applications

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

#### 15<sup>00</sup> Applications of High Performance Thin Layer Chromatography in Natural Product Extracts

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





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# 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)**

### 15<sup>30</sup> **Metabolomics. Introduction to the field**

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

### 16<sup>00</sup> **NMR in Metabolomics**

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

### 16<sup>30</sup> **Coffee Break**

### 17<sup>00</sup> **Targeted Metabolomics. A paradigm of method development and validation**

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

### 17<sup>30</sup> **LC-MS pre-processing, from peaks to numbers**

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

### 18<sup>00</sup> **The route from raw data to biochemical pathway annotation**

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





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## Sunday, 29<sup>th</sup> April 2018

### Session 5. Biological activities

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

- 9<sup>00</sup> **The multifunctional biological profile of natural products**  
Prof. Dimitra Hadjipavlou-Litina, Department of Pharmaceutical Chemistry, School of Pharmacy, Aristotle University of Thessaloniki, Greece
- 9<sup>30</sup> **Experimental breast cancer models in natural compound research**  
Prof. Dr. Günter Vollmer, Institut für Zoologie Molekulare Zellphysiologie und Endokrinologie, Technische Universität Dresden, Germany
- 10<sup>00</sup> **Structure-antioxidant activity relationships**  
Dr. Stella Ordoudi, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 10<sup>30</sup> **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
- 11<sup>00</sup> **Coffee Break**

### Session 6. Technological & Biotechnological applications

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

- 11<sup>30</sup> **Smart delivery of bioactive compounds in biomedical and personal care applications**  
Assoc. Prof. Amalia Aggeli, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 12<sup>00</sup> **Essential oils: analysis and biological activities**  
Assoc. Prof. Manto Lazari, School of Pharmacy, Aristotle University of Thessaloniki, Greece
- 12<sup>30</sup> **Alkannins and Shikonins: From ancient codes to modern medicine**  
Assoc. Prof. Andreana N. Assimopoulou, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 13<sup>00</sup> **Lunch Break**
- 14<sup>00</sup> **Saffron. An integrated presentation of the potential of a natural product**  
Prof. Maria Tsimidou, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 14<sup>30</sup> **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
- 15<sup>00</sup> **Production of carotenoids**  
Ass. Prof. Fani Mantzouridou, Department of Chemistry, Aristotle University of Thessaloniki, Greece
- 15<sup>30</sup> **Sustainable photosynthetic production of high-added value bioproducts**  
Ass. Prof. Christos Chatzidoukas, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece
- 16<sup>00</sup> **Summer School Closing**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie No 721365



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

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

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

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