



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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Faculty of Engineering,  
Aristotle University of Thessaloniki

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

|                                    |   |
|------------------------------------|---|
| 13 <sup>00</sup> -17 <sup>00</sup> | <b>Registration</b>   |
| 15 <sup>00</sup>                   | <b>Opening and welcome remarks</b>  |
| 15 <sup>15</sup>                   | <b>Presentation of MICROMETABOLITE project</b><br>Dr. Angela Sessitsch, Coordinator of MICROMETABOLITE project, AIT Austrian Institute of Technology, Center for Health and Bioresources, Vienna, Austria   |
| <b>Session 1. Biodiversity</b>     |   |
| 15 <sup>30</sup>                   | <b>Natural Science Collections in the big open data era: Addressing bio-economy challenges through biodiversity discovery</b><br>Dr. Dimitrios Koureas, Head of Department, ISBI, Naturalis Biodiversity Center, Leiden, Netherlands                                |
| 16 <sup>00</sup>                   | <b>Linking Biodiversity to Ethnopharmacology: The experience of Cretan lama research group</b><br>Ass. Prof. Stergios Pirintzos, School of Biology, University of Crete, Greece   |
| 16 <sup>30</sup>                   | <b>Coffee Break</b>   |
| 17 <sup>00</sup>                   | <b>Biodiversity at Molecular Level: From identification of wild plants to the commercial herbs and spices</b><br>Ass. Prof. Kostas Vlachonasios, School of Biology, Aristotle University of Thessaloniki, Greece  |
| 17 <sup>30</sup>                   | <b>Plant Production Systems for Novel Products</b><br>Philipp Rödel, Institut für Pflanzenkultur (IFP), Germany & Inoq GmbH, Germany  |
| 18 <sup>00</sup>                   | <b>Microorganisms of global biodiversity as a source of bioactive metabolites for the discovery and development of novel cosmeceutical agents</b><br>Ass. Prof. Nikolaos Fokialakis, Department of Pharmacy, National and Kapodistrian University of Athens, Greece |





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## Saturday, 28<sup>th</sup> April 2018

### Session 2. Downstream processing of Natural Products

- 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

- 12<sup>00</sup> NMR spectroscopy**  
Prof. Ioannis P. Gerothanassis, Vice Chairman of Hellenic Quality Assurance & Accreditation Agency (HQA), Department of Chemistry, University of Ioannina, Greece
- 12<sup>30</sup> Mass spectrometry - introduction to high resolution and ambient ionization methods**  
Ass. Prof. Evagelos Gikas, Department of Pharmacy, National and Kapodistrian University of Athens, Greece
- 13<sup>00</sup> Lunch Break**
- 14<sup>00</sup> IR and RAMAN vibrational spectroscopies: theory and applications**  
Assoc. Prof. Dimitris Christofilos, School of Chemical Engineering, Aristotle University of Thessaloniki, Greece  
Assoc. Prof. Ioannis Arvanitidis, School of Physics, 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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## Session 4. -Omics

- 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





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

### Session 5. Biological activities

- 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

- 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
- 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**





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