

# 3<sup>rd</sup> MS-NatMedDay MASSA 2019

Aboca, June 19-21, 2019

## Topics include:

- Characterization of complex natural products
- Metabolomics, proteomics & omics sciences
- Targeted and untargeted methods
- Nutraceutical products
- Biomedical and clinical applications
- Pharmacokinetics and pharmacodynamics
- MS & bioinformatics
- Quantitative analysis
- Imaging MS
- MS & environment
- IRMS and stable isotopes
- New developments in MS

**applications**

**innovation**

**instrumentation**

**methods**

**networking**

**10 fellowships for participation of young researchers**

**[www.spettrometriadimassa.it](http://www.spettrometriadimassa.it)**

# 3<sup>rd</sup> MS-NatMedDay

**“Natural complex products: Characterization, Biomedical pathways and their systems medicine implications”**

**@ Aboca** Sansepolcro [AR] - from 19 June 2019 to 21 June 2019

The **3<sup>rd</sup> MS-NatMedDay** is the third edition of a series of conferences that we are dedicating to the applications of mass spectrometry in the study of complex substances as “natural products”, along with the latest innovations in instrumentation.

The last two editions have been dedicated to the compositional studies of natural products.

The target of the next edition will be the evaluation of the effects and fate of “natural complex products” on animal species and humans by studying their behaviour in biological fluids or tissues like blood, plasma, urine, feces, bile.

Compounds, which are derived from natural sources, e.g., plants, animals and microorganisms, are defined as natural products. Usually contain hundreds of different organic molecules and oligoelements, often organized in "molecular complexes" according to the rules of supramolecular chemistry. Humans are frequently exposed to various natural products (e.g., drugs, herbs, food supplements, and substance based medical devices) and elucidation of their metabolic fate would help to understand their efficiency and safety.

Furthermore, systems medicine is definitely affecting the way academics, researchers and clinicians look at medical research experimental approaches.

Systems medicine is the application of systems biology approaches to medical research and medical practice. It is the systems medicine objective to understand the pathophysiology of chronic diseases, multifactorial diseases (cancer, diabetes, obesity, metabolic disorders, aging ...), through network analysis of disease processes, the identification of biomarkers for early diagnosis and prognosis, personalized treatment and integration of personalized genomics with personalized metabolomics, endocrinomics, proteomics and clinical phenotyping!

In this framework, it is important to notice that the study of absorption, metabolism, distribution, and elimination (ADME) of natural products presents great challenges and is a hot topic also from a regulatory stand point!

Nowadays, Metabolomics is used to study metabolism of complex natural products. Using this powerful technology - mostly by through mass spectrometry - it is possible to sensitively and comprehensively detect complex natural products components in plasma, urine, feces, and/or bile samples.

In this scenario Aboca is investing a lot of energy to study comprehensively natural products, believing in a vision that aims to find - thanks to the most advanced technologies - natural, effective and safe therapeutic solutions for a sustainable health, respecting the human organism.

The **3<sup>rd</sup> MS-NatMedDay** that will be held at Aboca, Sansepolcro, Italy 19-21 June 2019, will be a good occasion to meet scientists in the field of mass spectrometry, systems biology and systems medicine to describe and understand biological processes useful for assessment of efficacy and clinical safety of natural complex products.