

## A Note from Guest Editors

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The 9th International Congress of Food Technologists, Biotechnologists and Nutritionists was held at the Hotel International in Zagreb from 3 to 5 October 2018, and received over 450 participants. Under the theme *Integrating new approaches to produce safe, nutritious and sustainable food*, the Congress explored the latest achievements of national and international scientists. Through the topics related to quality and authenticity of food products, food safety and traceability, innovative and non-thermal technologies and waste utilization as well as sustainability in the food industry and the relationship of diet and health, the Congress revealed innovative ideas in the field of food technology, biotechnology and nutrition. The themes covered were divided into nine sections and presented through 154 presentations. Lectures were given by 13 invited and 49 contributed speakers, and 22 papers were published in the Congress Proceedings.

Session 1, *Olive Oil Session - The EU20202 OLEUM project (Better solutions to protect olive oil quality and authenticity)* comprised six lectures and one poster presentation. Topics of this session primarily focused on chemical and sensory characteristics of virgin olive oil, its geographical origin, as well as processing parameters to preserve its quality and authenticity.

Session 2, *Innovative and Nonthermal Processes* comprised six lectures and five poster presentations. This session demonstrated a potential of high voltage electrical discharges, low pressure oxygen plasma, ultrasound, high hydrostatic pressure, and light technologies. Nonthermal processes showed how to preserve foods without substantial heating, thus retaining microbiological stability, nutritive and sensory characteristics and contributing to the extended shelf life. It is evident that these processes will attract great interest in the future, from the aspect of the research and development, but also of many food manufactures.

Session 3, *Food Engineering, Modelling and Process Control* comprised five lectures and 13 poster presentations. This session discussed some interesting topics, with a special focus on engineering aspects and mathematical modelling to improve the food quality. Among others, possibilities of new methodologies (CRISPR) together with data science to respond to food production challenges due global climate change and growth of human population were proposed.

Session 4, *Food Waste Management and Sustainability in Food Industry* comprised six lectures and ten posters and pointed out the importance of recycling, eco-friendly processes and their sustainability. Application and potential of various agro-industrial wastes, such as winemaking and beer, fruit and vegetable, bread and other food waste that can serve as a source of anthocyanins was emphasized as highly valuable raw material and rich source of bioactive and functional compounds.

Session 5, *Marine Bioprospecting* comprised six lectures and four poster presentations addressing the marine bioprospecting and biotechnology; in particular, the potential of algae and seaweed as sources of bioactive molecules for pharmaceuticals, nutraceuticals, and cosmeceuticals and possibilities of biopreservation with lactic acid bacteria of marine origin. Also, use of biomass from agricultural fisheries and forestry waste and sustainable management of fisheries and processing industry were discussed.

Session 6, *Bioactive Compounds* comprised five lectures and 17 posters addressing the characterization of different bioactive compounds, namely polyphenolic compounds in

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different plant materials and foods, as well as their antioxidative properties. This section offered some interesting conclusions regarding the influence of agricultural characteristics and processing technologies on the stability of aforementioned bioactive compounds.

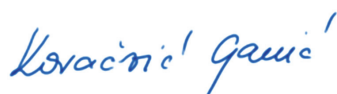
The main topics in the field of biotechnology in Croatia were presented in Session 7, *Biotechnology in Croatia 'Vera Johanides'* through seven lectures and eight poster presentations. This section was dedicated to Vera Johanides, *professor emeritus*, a founder of Biotechnology in Croatia, organized by the Department of Bioprocess Engineering, Croatian Academy of Engineering. Recognizing the global impact of biotechnology on sustainable development of modern world, life quality, ecology and economy, it was finally concluded that biotechnological research in Croatia will focus on: (i) innovative approaches for live biotherapeutic product (LBP) development, (ii) biotechnological processes for biologically active substance production, (iii) improvement of integrated bioprocesses (the biorefinery concept) of biofuel and biochemical production, (iv) development of marine biotechnology, and (v) improvement of environmental protection.

Session 8, *Nutrition and Health* comprised seven lectures and eight poster presentations. Topics in this session addressed currently investigated issues of interest for children, adolescent and adult health-oriented consumers and consumers seeking to manage their disease or reduce risk of chronic diseases through functional food or dietary modifications.


Session 9, *Food Quality, Safety and Authenticity* comprised six lectures and 26 poster presentations. Topics in this session addressed currently investigated issues of interest for: (i) food quality controlled through analytical and sensory methods, (ii) food safety, from the aspects of microbiology as well as other potential contaminants and residues, and (iii) food legislation.

Through its agenda, the *9th International Congress of Food Technologists, Biotechnologists and Nutritionists* created new connections and collaboration between stakeholders in research and innovation in food technology, biotechnology and nutrition that could offer driving force for transferring knowledge into economic activity.

From these nine sessions, we selected here five papers based on rigorous peer-review process covering the topics of novel infant products containing *Bifidobacterium*, foam mat-dried cocoa powder enriched with lavender extract, polyphenol-rich olive leaf infusions, millet bran with improved nutritive value by ultrasound, and the effect of sous-vide cooking on Atlantic mackerel quality and structural changes during storage as an insight into the exciting discussions at the conference.




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