

9th International Congress of Food Technologists, Biotechnologists and Nutritionists

The 9th International Congress of Food Technologists, Biotechnologists and Nutritionists was held in Zagreb, from 3th to 5th October, 2018, under the high sponsorship from the President of the Republic of Croatia Mrs. Kolinda Grabar-Kitarović, MSc, and under the auspices of the Ministry of Science and Education, Ministry of Agriculture, Ministry of Health and Croatian Chamber of Economy. The Congress was organised by Croatian Society of Food Technologists, Biotechnologists and Nutritionists and co-organised by University of Zagreb, Faculty of Food Technology and Biotechnology, International Union of Food Science & Technology (IUFoST), The European Federation of Food Science and Technology (EFFoST) and Croatian Academy of Engineering (HATZ).

Under the main theme „Integrating new approaches to produce safe, nutritious and sustainable food“ different research aspects were valued and integrated during the Congress, in order to efficiently establish the link between science and industry, exchange experiences and create new connections and collaborations.

The themes covered by the Congress were divided into nine sessions and presented in Book of abstract through 154 presentations of which 92 as posters and 62 as lectures (oral presentations). We had 13 invited lectures and 49 contributed lectures, as well as 22 papers published in the Proceedings of Congress. These are the main conclusions:

- The Session 1 **“Olive Oil Session - The EU20202 OLEUM project (Better solutions to protect olive oil quality and authenticity)”** comprised of 6 lectures and 1 poster presentations. Topics of this session were 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.
- The Session 2 named **“Innovative and Nonthermal Processes”** comprised of 6 lectures and 5 poster presentations. In this session, potential of high voltage electrical discharges, low pressure oxygen plasma, ultrasound, high hydrostatic pressure, and light technologies were demonstrated. Nonthermal processes showed how to preserve foods without substantial heating, retaining microbiological stability, nutritive and sensory characteristics and contributing to the extended shelf life. It is evident that these processing will rise great interest in the future, from the aspect of the research and development, but also of many food manufactures.
- The Session 3 named **“Food Engineering, Modelling and Process Control”** comprised of 5 lectures and 13 poster presentations. In this session some interesting topics were discussed where special focus was put on engineering aspects as well as mathematic modeling 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.
- The Session 4 named **“Food Waste Management and Sustainability in Food Industry”** comprised of 6 lectures and 10 posters and pointed out the importance of recycling, eco-friendly processes and their sustainability. Application and potential of various agro-industrial waste as winemaking and beer waste, fruit and vegetable waste, and other food waste as bread waste and waste sources of anthocyanins were emphasized as highly valuable raw and rich source of bioactive and functional compounds.
- The Session 5 **“Marine Bioprospecting”** comprised of 6 lectures and 4 poster presentations addressing to 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.

- The Session 6 named **“Bioactive Compounds”** comprised of 5 lectures and 17 posters addressing to the characterization of different bioactive compounds, namely polyphenolic compounds in different plant materials and foods, as well as their antioxidative properties. This section offered some interesting conclusions regarding the influence of agricultural characteristics as well as processing technologies on the stability of aforementioned bioactive compounds.
- The main topics in the field of biotechnology in Croatia, just a part of the ongoing researches, were presented in Session 7 named **Biotechnology in Croatia “Vera Johanides”** through 7 lectures and 8 poster presentations. This section was dedicated to Prof. Emer. Vera Johanides as a founder of Biotechnology in Croatia, organized by Department of Bioprocess Engineering, Croatian Academy of Engineering. Our guest was PhD Krešimir Gjuračić who holds Master and PhD degree from Faculty of Food Technology and Biotechnology University of Zagreb, and currently is in the position of Vice-Director of R&D Biotech in Gnosis company from Italy (Lesaffre group). He shared with us a part of a research in industrial development and production of pharmaceuticals and food supplements, offering the opportunity for future collaboration. Recognizing the global impact of biotechnology on sustainable development of modern world, life quality, ecology and economy, finally it was concluded that biotechnological research in Croatia will be focused on the: (i) innovative approaches for live biotherapeutic products (LBPs) development; (ii) biotechnological processes for biologically active substances production; (iii) improvement of integrated bioprocesses (the biorefinery concept) of biofuel and biochemical productions; (iv) development of marine biotechnology and (v) improvement of environmental protection.
- The Session 8 named **“Nutrition and Health”** comprised of 7 lectures and 8 poster presentations. Topics in this session addressed currently investigated issues of interest for children, adolescents and adult health oriented consumers and consumers seeking to manage their disease or reduce risk of chronic diseases through functional food or dietary modifications.
- The Session 9 **“Food Quality, Safety and Authenticity”** comprised of 6 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.

I would like to thank to all participants for their contribution in exchanging knowledge and experience in the field of food technology, biotechnology and nutrition, emphasizing different research approaches in order to efficiently establish the link between science and industry. Therefore, I hope that this Congress has contributed in new connections and future cooperation between science and entrepreneurship.

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