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EDITORIAL

by Paola Pittia, from University of Teramo & new ISEKI-Food Association President, Italy

Dear ISEKI-Food Association members

Dear readers and friends

It is a great honor to open the new issue of the ISEKI e-news in my role as new President, elected at the last General Assembly. I ended my past Presidency of the Association in 2020 and now here back to lead and guide an organization that in in the last years has confirmed and increased its role and position among the most important ones in the international framework with main reference to the promotion of the network among universities, research institutions and companies in the food chain and the quality of food studies.

A new team has been set and I will be closely collaborating with

- Liliana Tudorenau, University of Agronomical Sciences and Veterinary Medicine Bucharest (RO), as Vice President
- Rui Costa, Polytechnic Institute of Coimbra (PT), as Secretary General
- Marwen Moussa, AgroParisTech (FR), Deputy Secretary General
- Maria Papageorgiou, International Hellenic University (GR), Treasurer
- Victor Acha, Institut Polytechnique UniLaSalle (FR), Deputy Treasurer
- Margarida Vieira, University of Algarve (PT), Past President
- Adrian Rivis, University of Life Science "King Michael I" from Timişoara (RO), Board member
- Milan Vukić, University of East Sarajevo (Bosnia and Herzegovina)

The Board will be supported by the Advisory Board that includes:

- Cristina L.M. Silva, Catholic University of Portugal College of Biotechnology, (PT)
- Marco Dalla Rosa, University of Bologna (IT)
- Ferruh Erdogdu, University of Ankara (TR),
- Huub Leliveld, Global Harmonization Initiative (NL)

And the team of Auditors:

- Luis Miguel Cunha, University of Porto (PT)
- Julian Drausinger, LVA (AT).

The **new IFA board** is committed to give continuity to all the activities that have been set and developed in the past years including, among others, the conferences, the training platform, the EQAS certification. Networking, enlargement of the community, support to the future generation of food scientists, engineers/technologists in their professional careers in all sectors (academia, industry, organizations) to boost innovation and sustainability of the food system will be supported by new initiatives that the new Board will design in the future.

To conclude this brief message, let me thank all the members of the past ISEKI-Food Association Board and in particular Margarida Vieira that worked hardly to keep active and support our mission in the Food science and Technology/Engineering sector, especially during the COVID pandemic.

Stay tuned with us!

Paola Pittia

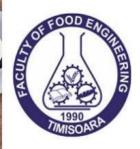


NEWS FROM THE ISEKI-FOOD ASSOCIATION

6th edition of the ISEKI-Food E-conferences: "Food Production Based on Food Safety, Sustainable Development and Circular Economy"







Registration open until 18th November, and abstract submission deadline 30 September 2023.

We are happy and honored to announce that the 2023 e-conference will be supported by the ISEKI-Food Association and will be organized in collaboration with the University Lucian Blaga, Sibiu, Romania, as the main organizer, the University of Life Sciences "King Mihai I" from Timisoara, Romania, as co-organizer and the ISEKI Special Interest Group (SIG) "Food Structure and Bionanotechnology".

We are all looking forward to this new edition of our E-conference and to hearing your interesting presentations, seeing your posters and participating In the discussions on the topics presented.

The three days will be dedicated to hot topics such as:

- New methods of processing raw materials, waste and by-products in food production
- Bioprocessing and bio-refining for the conversion of food waste and by-products into value-added foods
- Development of new foods and food packaging innovation
- Development of sustainable business models in the food sector
- Sustainable ecodesign for food
- Food safety & Risk assessment
- Consumer perception and market needs
- Health and Nutrition

and will be the perfect opportunity to discover new partners for research projects and to make scientific friendships that may last a lifetime.

Every year a special section for students is organized and the best three student oral presentations as well as the best three student posters will be awarded. The awards will be supported by ISEKI-Food Association and the e-conference sponsors. All students are welcome (PhD, MSc and BSc students)!

We look forward to welcoming you to be part of the beautiful ISEKI scientific family for 3 exciting e-conference days! See you online soon!

The Organizing Committee

Overview of the 7th ISEKI-Food Conference 2023

The 7th ISEKI-Food Conference, organized by the ISEKI-Food Association under the presidency of Margarida Vieira and AgroParisTech, took place in Paris at the University of Paris-Saclay from July 4th to 7th, 2023 where 230 participants that included scientists, engineers, and students from universities all around the world, as well as experts from food industry, that once more contributed to bridge universities, research and industry. The Conference's Scientific Committee was chaired by Margarida Vieira from Universidade do Algarve, Portugal, Rimantas Venskutonis from Kaunas University of Technology, Lithuania and Marwen Moussa from AgroParisTech, France and the Organising Committee was chaired by Florence DUBOIS-BRISSONNET from AgroParisTech, France, and Jean Marie Herry from INRAe, France.







Some moments of the Opening Session with Margarida Vieira, the President of the ISEKI-Food Association, Florence Dubois Brissonnet chair of the Organizing Committee and Laurent Buisson, Head of AgroParisTech.

The theme of the conference was "Next-Generation of Food Research, Education and Industry". The ISEKI-Food 2023 focused on future challenges in education on food science and technology, in research activities related to production, processing, quality and

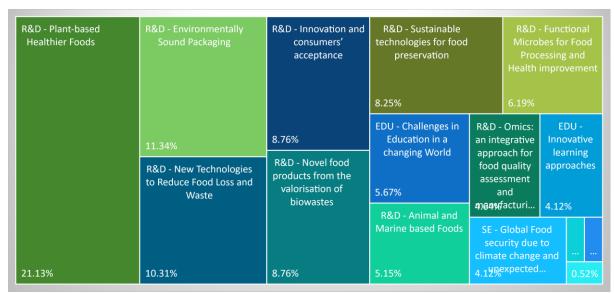
safety, packaging of foods and in **societal engagements** in the field divided into three main sections: **EDUCATION: CHALLENGES OF EDUCATION IN A CHANGING WORLD, RESEARCH: NEXT GENERATION OF FOODS** and **SOCIETY ENGAGEMENT: SOCIETY AND FOOD INDUSTRY.**

The delegates could exchange new ideas and application experiences face-to-face, establish business and research relations, and find global partners for future collaborations. This world map shows the international nature of the participation, with the most French participants (18%) followed by Greeks (10%), Italians and Portuguese (both with 8%), followed by Croatians and Turks (6%).



Participant Origin

There were 244 abstracts submitted and accepted! Among them, 80 were selected to be oral presentations, and the others were poster presentations. The distribution per topic within each section is presented on the following Treemap which shows that research on Plant-based Healthier Foods is where most researchers are focusing their interest followed by Environmentally Sound Packaging. One noteworthy highlight of the event was the remarkable emphasis on education in food science and technology. Several presentations on this topic reaffirmed this conference's position as the world leader in advancing education in the field. The presence of two exceptional keynote speakers, along with 12 other captivating oral presentations and 10 engaging posters, inspired the enthusiastic participants, many of whom were teachers, to further enhance their skills and teaching practices in food science and technology.



Treemap of the topics presented in the conference.

The abstracts of the keynote speakers together with the abstracts of the oral and poster presentations can be found in this **Book of Abstracts**.

The Pre-conference took place on the 4th of July, with "Food and Nutrition Security Cloud tools and services: How can I benefit?" from the FNS Cloud project, "Intermediate Food Value Chains In Practice" from the FAIRCHAIN project, "Recent scientific and policy developments on plastic food Packaging" from Fitness2, "European qualifications and competencies for a plant-based, sustainable and digital Food Industry: the EQVEGAN project", "Short Food Supply Chains: Building an EU learning ecosystem through multi-level collaborations for sustainable, robust and regenerative food systems" from the EU4Advice project. The 3rd Workshop of Food Waste Recovery & Bioeconomy was also held on the 4th of July. On the 5th the Conference started and lasted till the 7th of July. We were privileged to host In the section EDUCATION: CHALLENGES OF EDUCATION IN A CHANGING WORLD, the following keynote speakers: HUGO DE VRIES from INRAE, France, talked about "FOODPathS towards sustainable outcomes" discussing examples on the development of new circular business models for locally valorising and functionalizing bio-diverse coproducts from the agrifood sector; JESPER TÆKKE from Aarhus University, Denmark whose talk was about "Digitalization of education - the theory of the three waves" emphasizing that a narrow focus on competencies alone is insufficient for adequate teaching in a digital media environment and suggesting an adequate approach to "Bildung" where education based on critical-thinking will produce autonomous citizens capable of taking social responsibility in a digitalized society; FERRUH ERDOGDU from Ankara University, Turkey presented the "Future of Food Engineering in the Digitalization Era - Preparing for Industry X.0" calling attention to the fact that food processing and food science/technology concepts, improved food safety and quality assurance with productivity with applied simulation, artificial intelligence and machine learning approaches (in addition to the use if IoT and big data usage) are expected in the near future which demands an engineering background that should be solid to prepare the young generation for digitalization and integration of engineering science with food science and technology.

In the section **RESEARCH: NEXT GENERATION OF FOODS, LAURENT GUILLIER** from ANSES, France in his talk "Challenges and perspectives in food safety" highlighted the complexity of the microbiological safety of foods and the challenges that need to be addressed, improving the understanding of foodborne illnesses, ensuring food safety in an ever-evolving environment, and reconciling the goal of food safety with other consumer expectations;

GILLES TRYSTRAM from AgroParisTech, France, talked about "Some research questions in food and biotechnological process engineering" presenting several examples illustrating both potential innovations at the scale of an operation, the strength of combinations of operations to build all the expected properties of food or bio-products and processes using microorganisms;

HORST-CHRISTIAN LANGOWSKI from Fraunhofer Institute, Germany, talked about "Circular Economy for Plastic Food Packaging – Options and Challenges" calling attention to the present need for Design for Circularity (D4C) and the design for Functionality (D4F) and referring to technologies that apply thin barrier layers to plastics to enable both packaging functions and minimization of the risk of product contamination from recyclates without compromising recyclability.

A question was posed to us by **CATHERINE BAYARD** from **Givaudan Naturals, France**, in the section **SOCIETY ENGAGEMENT: SOCIETY AND FOOD INDUSTRY**: "Are you prepared for the future of dairy alternatives?" She explained that it is difficult to compete with all the aspects of dairy products in plant-based milk or yogurt and offer the same food experience, and that Givaudan's research in conjunction with Synthesis is dedicated to the future scenarios for this alternative dairy market; **MAURO SERAFINI** from **Teramo University**, Italy, spoke about *"Functional food and health: essentiality of human evidence"* stressing the importance of strengthening human-based evidence and on practical aspects of eating, the "real life" settings, to significantly improve scientific-



based evidence about the association between diet and wellbeing; STELLA CHILD from GFI Europe, Belgium informed us on "The 3 pillars of future protein production: Plant-based, cultivated, and fermentation-made meat, eggs and dairy" outlining scientific and industrial challenges as identified through a market-shaping analysis, whitespace ideation, and interviews with more than 150 experts across the alternative protein field, and described some high-leverage opportunities for innovation along the sustainable protein value chain.



HUGO DE VRIES

INRAE, France
"FOODPathS towards
sustainable outcomes"



JESPER TÆKKE

Aarhus University, Denmark

*Digitalization of education

- the theory of the three

waves*



LAURENT GUILLIER

ANSES - French Agency for
Food. Environmental and
Occupational Health &
Safety. France
"Challenges and
perspectives in food safety"



GILLES TRYSTRAM

AgroParisTech. France
"Some research questions in food and biotechnological process engineering"



FERRUH ERDOGDU

Ankara University, Türkiye
"Future of Food Engineering
in the Digitalization Era Preparing for Industry X.0*



HORST-CHRISTIAN
LANGOWSKI
Fraunhofer Institute.
Germany
"Circular Economy for
Plastic Food Packaging –
Options and Challenges"



CATHERINE BAYARD Givaudan Naturals, France "Are you ready for the future of dairy alternatives?"



MAURO SERAFINI
Teramo University. Ilaly
"Functional food and health:
essentiality of human
evidence"



STELLA CHILD
Good Food Institute Europe.
Belgium
"The 3 pillars of future
protein production: Plantbased, cultivated, and
fermentation-made meat,
eggs and dairy"

Keynote Speakers

An EPNOE roundtable "Modern Analytics of Polysaccharides in Food: Challenges, Limitations, Labelling" also took place at this conference.

Another important moment was the ISEKI-Food Academy Award, supported by Cristina Silva and Marco Dalla Rosa, who took care of the process of choosing someone with the required criteria to become a member of this Academy. The award was attributed to Chelo Gonzalez for her outstanding contribution to the ISEKI-Food Association.

Congratulations to Rimantas Venkutonis and Chelo Gonzalez-Martinez who became members of the ISEKI-Food Association







There was also the Young Entrepreneurship Award: 1000€, awarded by Graduate School Biosphera, Paris-Saclay University given to two PhD students Alexandre Lima and Nathana Cristofoli from MED – Mediterranean Institute for Agriculture, Environment and Development and the Universidade do Algarve, who developed a project EvoFIBER: Sustainable Solutions in Dietary Fiber from Olive Pomace.

Marwen Moussa handing in the Young Entrepreneur Award to Nathana Cristofoli and Alexandre Lima

The authors of the best oral and poster presentations were also awarded. The **IFA Awards** went to Pedro Xavier (best oral presentation) and Francesco Rizzotto and Manon Guivier (best poster presentations, 1st and 2nd prize, respectively). The B.S. **Biosphera Awards** went to Narcís Feliu-Alsina (best oral presentation) and Xiyu Jiang and Indre Poceviciené (best poster presentations, 1st and 2nd prize, respectively).



Oral presentation awarded to Pedro Xavier and poster presentations awarded to Francesco Rizzotto and Manon Guivier

Many works were of very good quality and can now be published through invitation in the **Food and Bioproducts Processing Journal**, in the **International Journal of Food Studies**, and in the book of Proceeding published by Springer entitled **NEXT-GENERATION OF FOOD RESEARCH, EDUCATION AND INDUSTRY**.

We would like to express our sincere appreciation to all participants, speakers, and contributors for their valuable inputs to the success of the 7th International ISEKI-Food Conference with special thanks to the Secretary-General of the ISEKI-Food Association, Rui Costa, who was always present and ready to manage and help whenever needed and to our staff, the ISEKI-Food Secretatiat.

Our gratitude goes out also to the members of the local organizing committee, to the Scientific committee, our sponsors EHEDG and the University of Paris-Saclay, along with Graduate School Biosphera, the Oral and Poster Awards sponsors ISEKI-Food Association and Graduate School Biosphera, and all the supporters/endorsers, Unimed, I.S.L.E., ICA, GHI, IAAS, University of Algarve, Politécnico de Coimbra, KTU, and ICC.





The local organizing committee



The Conference dinner was also a success as we had the pleasure of a dinner cruise on the Seine and enjoying all the beautiful lighted bridges and the Eiffel Tower in Paris.

ISEKI-Food Conference Seine Dinner Cruise

In closing the conference, the President announced where the 8th ISEKI-Food Conference will take place, University of Life Sciences «King Michael I» from Timisoara in Romania.



8th International ISEKI-Food conference





July 2025

We hope to see all ISEKI members there again!

University of Life Sciences «King Michael I» from Timisoara (Romania)

Margarida Vieira



ISEKI-Food Participation in the 8th EPNOE International Polysaccharides Conference

by Andreia Pinheiro-Torres, ISEKI-Food Association

The 8th International Polysaccharide Conference was held for the first time in Graz, Austria, from 18-22 of September 2023. This congress was an initiative of EPNOE, the Cellulose and Renewable Division of the



American Chemical Society (ACS CELL), and the Cellulose Society of Japan (CSJ), and organized by the Austrian University Consortium – TU Graz, UNI Graz, BOKU Vienna, UNI Vienna and UNI Innsbruck.

EPNOE Conference 2023 introduced, for the first time, <u>Round Table Event</u> with four leading networks under the umbrella topic "circular bioeconomy". The round table event was chaired by Pedro Fardim (KU Leuven, President of EPNOE) and Karin Stana Kleinschek (TU Graz, Vice-President of EPNOE).

Four introductory lectures gave an overview on biomass use in different world regions. Josef R. Wünsch, BASF Senior Vice President, Chairman of the SusChem, the European Technology Platform for Sustainable Chemistry opened the event.

One of the four parallel Round Table Discussions was organized by **the ISEKI-Food Association**, represented by our Board Member **Prof. Margarida Vieira** and Advisory Board **Prof. Marco Dalla Rossa**, as Moderator and Panellist, respectively, and under the theme "Re-imagining Food Systems towards Sustainability: Contribution of Carbohydrates to New Strategies".

The contribution of ISEKI-Food in this Conference embraces one of our main objectives of establishing and maintaining a network among universities, research institutions and companies in the food chain. We believe that these interactions foster a deeper understanding of our objectives and inspire new opportunities for promoting synergies between research, education/teaching and industry, and the stimulation of the development of further, related projects either with or fostered by the **ISEKI-Food Association**.

HealthFerm Citizen Science Experiment

by Javier Berterreche, Bridge2Food - EcoSystem, Spain

Calling on sourdough bakers and all fermentation enthusiasts - HealthFerm launches a Citizen Science Experiment to advance research into plant-based fermented foods

You can now register for the HealthFerm Citizen Science Experiment

Fermented foods are present in our daily diet and across different food cultures: from (sourdough) bread to beer, wine, pickles, sauerkraut, miso, kombucha and many more. Fermentation is on the rise, and many people make their own fermented foods at home. Fermentation technology could help us transition to more plant-based diets. The European research project HealthFerm wants to understand the relationships between microorganisms involved in food fermentation, the fermented food products resulting from these processes, and their



effects on human health. To reach this goal, the research team of HealthFerm needs the support of citizens willing to participate in this project. At first, citizen scientists will provide information about their fermentation practices and attitudes towards fermented foods. Based on two questionnaires, researchers will select up to 1,000 citizens who can send their fermented foods for analysis, with an initial focus on sourdough.

Depending on the geographical location, citizens can send their samples to five different partners across Europe: ETH Zurich (Switzerland), Institute of Biology Bucharest (Romania), University of Bolzano (Italy), University of Helsinki (Finland) and Vrije Universiteit Brussel (Belgium). ETH Zurich and KU Leuven (Belgium) will coordinate the citizen science project. Umeå University (Sweden) and the University of Copenhagen (Denmark) will use the data on the attitudes to inform the scientific community and policymakers about the requirements to advance and support a transition towards a more plant-based diet in the best possible way.



The microorganisms isolated from fermented foods will be used to further investigate innovative pulse and cereal-based food fermentations, together with the health effects and consumer perceptions of novel fermented foods. Data on the microorganisms, genome, and metabolites discovered in the fermented foods from citizens will become available via an online, open access food microbiome atlas where participants will be able to assess and compare the microorganisms from their fermented foods.

Citizens in four countries were actively involved in the co-design of the questionnaires and of the sampling kit. After an initial testing period, the large-scale citizen science project is now ready to start!

Registration for the citizen science project is now open and accessible in seven different languages on the HealthFerm website (https://healthferm.eu/healthferm-community/citizen-science).

For more information on the project and the experiment, please visit the HealthFerm website (https://www.healthferm.eu/). Here, you can watch the new project clip and join us on our social media for updates and news.

NEWS ABOUT ISEKI-FOOD ASSOCIATION MEMBERS/PARTNERS

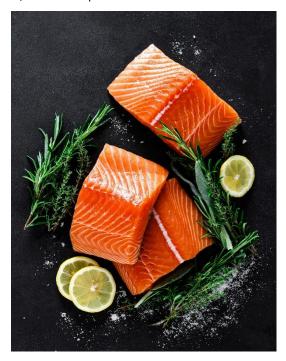
About LIKE-A-PRO: From niche to mainstream - alternative proteins for everybody and everywhere

by Julian Drausinger, Food Research Institute/ Lebensmittelversuchsanstalt, Austria

The interest of Europeans in alternative proteins is becoming clear and this trend is the perfect ground for the dietary shift towards sustainable and healthy nutrition and food systems, in line with the ambitions of the EU Green Deal, Farm to Fork strategy and EU's climate goals. Yet, this interest is not reflected in the European dietary patterns, as alternative proteins are mainly consumed by early adopters, while the majority is less receptive towards alternatives or have limited possibilities to integrate them in the diets. This gap between interest and consumption is due to obstacles in the food environments such as product limited offering, suboptimal product taste, isolated product placement in shops or menus etc. Without overcoming these obstacles, alternative proteins will remain a niche.

<u>LIKE-A-PRO</u> aims at mainstreaming alternative proteins, making them accessible, available, and acceptable to everybody (from children to elderly, vulnerable groups) and everywhere (across Europe, in urban, peri-urban, and rural areas). To achieve this, key representatives along the entire alternative protein value chain (growers, producers, cooks, retailers, consumers, researchers) will work together in a trans-disciplinary consortium.

To improve European food environments towards fostering alternative protein consumption, practical solutions will be codesigned with citizens. This social innovation will take place in 11 living labs and in 4 real life food environments. For a diversified alternative protein offering, 16 new alternative protein products will be developed with 7 sustainable, healthy, and novel sources. To secure result deployment, the project will actively involve middle food system actors (+35,000 companies) — via co-creation and capacity building. For a maximised impact, innovative communication campaigns will be launched in 6 countries, reaching 8 M citizens in 4 years.





LIKE-A-PRO project has received funding from the European Union's HORIZON EUROPE research and innovation programme under Grant Agreement No 101083961

CTNC (National Technological Centre for the Food and Canning Industry, Spain) Operational Groups

by **Angel Martinez, David Quintín, Milagros Sánchez** and **Presentación García**, National Technological Centre for the Food and Canning Industry, CTNC, Spain

Ana Belen Morales, Food and Agriculture Cluster Foundation of de Murcia Region, AGROFOOD cluster, Spain

Within the frame of EIP-AGRI Network, the Operational Groups are intended to bring together multiple actors such as farmers, researchers, advisers, businesses, environmental groups, consumer interest groups or other NGOs to advance innovation in the agricultural and forestry sectors.

In order to promote innovative technologies in the agrifood sector, CTNC and AGROFOOD cluster inform about two Operational Groups of special relevance, linked to digitalization and food safety.

In the OG SAFEOILS CTNC, together with the Department of Agricultural Chemistry, Geology and Soil Science of the University of Murcia, advises and provides technical support to propose production systems of essential oils derived from lemon for agri-food companies, which avoid the degradation of the quality of the oils and which are sustainable with the environment, improving the competitiveness of the sector by promoting better practices in lemon production, establishing operating procedures that allow the elimination of pesticide residues if any. Specifically, the collaborators of the OG SAFEOILS project are carrying out extraction and characterization tests, evaluating different technologies to eliminate pesticides in products from the citrus processing industry, mainly lemon essential oil. More info https://gosafeoils.es/.

On the other hand, the CTNC is also a collaborator, together with the company Chemometric Brain, of the OG DIGFOOD project, where the aim is to implement the Chemometric Brain software, based on NIR technology, in the quality control systems of food companies. The development of quantitative and qualitative models is being carried out from more than 500 samples of foods, ingredients, and mixtures, for the faster and more efficient validation of new samples of the same ingredients or products, obtaining immediate results on their conformity and thus reducing the number of destructive analyses that are currently carried out in the strict food quality assurance processes based on the requirements of international certifications. More information https://godigfood.es/.

These two projects are financed within the operational aid for "Support for the creation and operation of operational groups of the European Innovation Partnership on agricultural productivity and sustainability", corresponding to measure 16.1 of the Rural Development Programme of the Region of Murcia 2014-2020, 3rd Call of the year 2020 and 4th Call of the year 2021. AGROFOOD Murcia cluster acts as an Innovation Agent and it is responsible for coordination in both projects.











"Fondo Europeo Agrícola de Desarrollo Rural: Europa invierte en las zonas rurales"



NEWS ABOUT PROJECTS WITH ISEKI-FOOD ASSOCIATION PARTICIPATION

WASTLESS for the people and for the planet!

by Luminita Ciolacu and Sofia Reis, ISEKI-Food Association



WASTELESS was involved on the 29th of September in the 4th International Day of Awareness of Food Loss and Wastes (IDAFLW) and invite you all to take action! Reducing food loss and waste is a shared responsibility and in the hands of each of us: governments, private sector, civil society, development agencies, research and academic institutions and consumers. You can raise awareness among your peers, expand understanding of consumer behaviour and food waste, invest in climate-friendly research and innovation, work with local authorities and much more and you will make a big difference! In the end, we need to transform the agri-food system to a more efficient, inclusive, sustainable, and resilient one for better production, better nutrition, a better environment, and a better life.

With the ambition of reducing food loss and waste (FLW) by at least 20% annually, WASTELESS - Waste Quantification Solutions to Limit Environmental Stress (2023-2025), is a European funded project gathering the expertise of 29 organizations from 14 EU countries. WASTELESS will start by developing a mix of tools and methodologies for FLW measurement and monitoring, which will be tested in 5 case studies: industries, retailers, services, households, and a selected food commodity. The results will be used to recommend a harmonised methodological framework for FLW quantification and will be the basis for a decision support systemic Toolbox targeting all food value chain stakeholders. Additionally, WASTELESS will carry research activities on innovative processes and streams to valorise unavoidable FLW. By providing the proper tools to measure and monitor FLW, WASTELESS will contribute to the Food 2030 priorities on: climate and environment, circularity and resource efficiency, innovation, and empowerment of communities.

It is time to get involved! Our collective efforts can make a difference! Stay connected with WASTELESS on wastelesseu.com, Twitter and LinkedIn.



WASTELESS is funded by the European Union (Grant Agreement No. 101084222). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

e-SafeFood webinar on microbiological safety under new societal challenges

by **Federica Striglio, Luis Mayor, Sara Barbosa, Luminita Ciolacu**, Project managers at ISEKI-Food Association



On June 19, the e-SafeFood project organised its first webinar on microbiological safety under new societal challenges. About 70 participants from many parts of the world attended, mainly from European countries. This was an opportunity to present project activities and our online training program in more detail.

The project and its activities were introduced by the project coordinator, **Gemma Cornuau**, ACTIA. Following this presentation, participants had the opportunity to take an introductory quiz related to current societal factors affecting the microbiological safety of foods. After the quiz, **Federica Striglio**, from ISEKI-Food Association introduced the ISEKI e-learning platform where the training modules are being developed. Then, participants were given an online training taster covering a general presentation of the Microbial Shelf Life Module by **Valérie Stahl**, AERIAL and two examples of training units: Current societal factors by **Benjamin Duque**, ACTALIA and Durability studies by **Catherine Denis**, ACTALIA. The session then continued with **Gemma Cornuau** informing participants about future project training activities, and the webinar was concluded with a Q&A Session.

The first e-training module on **Microbial shelf life** will be freely available in late **Autumn 2023**, stay tuned for more information! Follow us on: website, LinkedIn, Twitter and Facebook.



https://www.esafefood.net/post/its-1st-webinar-on-microbiological-safety-under-new-societal-challenges

Project details can be found on the ISEKI Project Overview page here: https://www.iseki-food.net/projects/project-overview

Contact: Gemma Cornuau, Project Coordinator: g.cornuau@actia-asso.eu





e-SAFE Project: project outputs and free training are available online

by Ana Ramalho, Project Manager ISEKI-Food Association, Austria



The 34-month Erasmus+ KA2 project e-SAFE – Enhance Safer & Healthier Meals through Food Handlers' Education and Training started in November 2020 and was completed in August 2023. The e-SAFE outputs and results are freely available on the **project website**, including a comprehensive training curriculum for chefs, kitchen staff, food handlers, and agri-food processing employees across Europe, with the aim of increasing their knowledge and skills in preventing the impact of foodborne diseases on public health. The **training platform** offers a free e-course on seven food safety topics, designed primarily for food handlers and is available in English and in the project partner languages (German, Greek, Italian, Lithuanian, and Polish).

The e-SAFE Training Package was the result of extensive desk and field research into existing training opportunities for food handlers across Europe and beyond, available for download. Its 7 training modules are based on needs verified during the preliminary research. The partners also developed a *Guidance and Recommendations for VET Trainers* document to support VET trainers, food handlers, and all individuals interested In taking e-SAFE's course.



Towards the end of the project, the partners organised their final national Conferences for e-SAFE, disseminating project results and training materials at each national language event. ISEKI welcomed food handlers in Grinzing, Vienna in July 2023.

Valentina Mayer-Buchegger, ISEKI project manager, presenting e-SAFE project at the national day event in Vienna, Austria

ISEKI was a partner of the project consortium, coordinated by Polish Farm Advisory (Poland), which also included the participation of Prolepsis (Greece), CSI (Cyprus), Italian Cuisine (Italy) and Kaunas (Lithuania). As part of our role, ISEKI led the Intellectual Output 3: Development of the e-SAFE Training Package and organised the C1 joint-staff training activity in Austria. It was real pleasure to be part of this team in this exciting and fruitful project with so many important and useful outcomes for the society and for the prevention of foodborne diseases.



Ana Ramalho, ISEKI project manager, at the e-SAFE final meeting in Warsaw, July 2023.

You can read details about the outcomes and learn more about e-SAFE on the project website.

https://e-safe-project.eu/

@eSAFE.ErasmusPlus

A snapshot of the latest FNS-Cloud publications

by Katherine Flynn, Luis Mayor and Sofia Reis (alphabetically) ISEKI-Food Association

Existing Food and Nutrition and Security (FNS) resources, including data, knowledge and tools are nowadays fragmented, heterogenous, and often have differences in syntax and semantics. To link different food databases, standards and platforms, researchers in the FNS Cloud project aim to make FNS resources "communicate" and "work together". Here are plain language short summaries of their latest work! Read other summaries on the myfnscloud CoP or the original publications on the FNS-Cloud Project website.

FNS-cloud project is coming to its end this month, and this will be the last snapshot published in the ISEKI-Food newsletter. Many thanks for your attention and interest!

APRICOT: Towards smarter food waste management



The billion tons of food waste generated annually demand urgent, fast, and advanced solutions. Sharing information about the composition of various food waste streams and links to other food data sources can lead to smarter waste management, processing and reusing. Can a web tool fulfil these requirements?

Researchers first created a web tool to describe components in food waste streams, called FoodWasteEXplorer, and now present APRICOT, a web tool for experts and the general public to access data from various sources about food waste streams, food and food compounds.

APRICOT enables a link between FoodWasteEXplorer and other sources in the food domain using an auto-mapping algorithm (AutoMap) aimed to produce a fast mapping process. The link of FoodWasteEXplorer to the largest and most comprehensive resource on food constituents (FooDB) may allow answers to questions about micronutrient content in each food waste stream. Additionally, a link to the DBpedia platform may allow identification of products that can be produced using components from different waste streams, potentially creating new ways to valorise food waste.

The **APRICOT** tool allows experts and the general public to get an insight into complex knowledge that can contribute to developing new solutions for food waste valorisation.

Based on: Dimoski, B., Stojanov, R., Eftimov, T., Pinchen, H., Traka M., Finglas, P. and Seljak, B.K. APRICOT: A humAn-comPuteR InteraCtion tool for linking foOd wasTe streams across different semantic resources. 2020 IEEE International Conference on Big Data (Big Data), Atlanta, GA, USA, 2020, 3557-3562, https://doi.org/10.1109/BigData50022.2020.9377744

FoodOntoMapV2: AI technologies towards achieving UN 2030 Sustainable Development Goals (SDG)



Big data and artificial intelligence (AI) technologies can contribute to achieving the second SDG of UN 2030 "End hunger, achieve food security and improved nutrition, and promote sustainable agriculture" by developing applications for understanding the relation between food systems, human health, and the environment.

FoodOntoMap is a methodology for extracting food concepts from recipes using four linked food AI vocabularies (ontologies) to enable links among food domains, e.g., food nutrients, food allergens, food systems. A second version (**FoodOntoMapV2**), presented in this study,

includes four new biomedical ontologies (with links to food and environmental concepts) making this methodology more comprehensive and representative of the large and diverse food domain.

FoodOntoMapV2 was tested for the extraction of food concepts using more than 23,000 recipes from the AllRecipes platform. The authors did not present the accuracy of the methodology but claimed that it is useful for interoperability (normalising food concepts across ontologies) and the development of applications to understand the relationship between food, human health, and the environment.

Based on: Popovski, G., Seljak, B.K. and Eftimov, T. FoodOntoMapV2: Food Concepts Normalization Across Food Ontologies. 2020. In: Fred, A., Salgado, A., Aveiro, D., Dietz, J., Bernardino, J., Filipe, J. (eds) Knowledge Discovery, Knowledge Engineering and Knowledge Management. IC3K 2019. Communications in Computer and Information Science, vol 1297. Springer, Cham. https://doi.org/10.1007/978-3-030-66196-0_19

NEWS ABOUT FDUCATION AND TRAINING

The FAIRCHAIN e-trainings are open!

by Luminita Ciolacu, Katherine Flynn, and Ana Ramalho (alphabetically), ISEKI-Food Association



The two courses of the FAIRCHAIN e-learning programme: 'Introduction to intermediate food value chains (IFVC)', and 'From short to intermediate value chains' are now open! They are available to anyone, anywhere, and at any time of day!

Both are fully independent online course, structured into five chapters, and organized as innovative microlearning lessons including: short videos, PowerPoint presentations, interactive e-learning activities, reading of scientific and lay articles, and website visits. Each microlearning lesson takes only 3 to 8 minutes to complete! And you may start, stop, and come back to the lessons at any time and as often as you wish. Short quizzes monitor progress throughout, and all who complete the course successfully will receive a FAIRCHAIN certificate!

After taking the 'Introduction to intermediate food value chains (IFVC)' course you will understand differences between existing FVCs, the development of an IFVC definition, the benefits and challenges in the transition towards IFVCs, and more. The course 'From small to intermediate value chains' is designed for Short Food Supply Chain (SFSC) entrepreneurs interested in growing their SFSC, in other words going from a local to a regional business.



Take our Earna e-learning!



The courses are available on the ISEKI-Food Association's Moodle Platform and easily accessible via the FAIRCHAIN-managed Sustainable Food System Innovation Platform, free of charge!



Follow us and learn more on LinkedIn, Facebook and Twitter and through our FAIRCHAIN website, where you can subscribe to the FAIRCHAIN newsletter.



The FAIRCHAIN project has received funding from the European Union's 2020 research innovation programme under the grant agreement No: 101000723

New programme: UGent Master of Science in Nutrition and Food systems

by Prof Dr MSc Andreja Rajkovic, University of Gent, Belgium

If you are interested in healthy diets, nutrition and food system approaches that tackle these challenges structurally, this might be something for you!

From the academic year 2023-2024, UGent organises a new MSc in Nutrition and Food Systems. The programme is a 2-year Master of Science, fully lectured in English, in Ghent Belgium, Europe's best Erasmus destination of 2023 and Youth Capital of 2024.

After graduation, you will

- have a strong academic background in human nutrition. The programme contains all necessary courses to work as a public health nutritionist,
- understand how human diets and nutrition are driven by food systems, from the production, post-harvest handling, transformation, storage, marketing of food up to the behaviour of consumers,
- be capable of identifying nutritional problems, their underlying causes and develop, manage, and evaluate relevant interventions,
- be able to critically evaluate nutrition research findings and be competent to develop evidence-based recommendations, and
- be able to collaborate, communicate and creatively apply these competencies across the disciplines for sustainable food systems change.

Through interactions with a diverse and international group of students and lecturers, you acquire international and intercultural competencies. In brief, you will start your professional career with an international network and hit the ground running.

The two-year curriculum is a gradual build-up of learning opportunities over 4 semesters. The fundamental knowledge courses in the beginning make way for courses that provide



generic competencies for life-long learning and employment at the end. The programme provides flexible learning opportunities that allow you to tailor a part of the curriculum to your needs, talents, and interest.

You can find our alumni at local and national governments, United Nations agencies, (inter)national non-governmental organisations and research institutions across the globe. A considerable share of the students pursue further PhD study.

Want to know more?

Have a look at the MSc Nutrition and Food Systems website, with details on courses, lecturers and admission requirements, or get in touch with the International Training Centre of the Faculty of Bioscience Engineering, Ghent University, Belgium

www.itc.ugent.be , email: applications.itc@ugent.be.



UPCOMING FOOD-RELATED EVENTS / WEBINARS

19thFood Colloids Conference: Using colloid science to find new sustainable solutions in food

by **Maria Papageorgiou**, Department Food Science and Technology, International Hellenic University, Thessaloniki, Greece







14 - 18 April 2024 Thessaloniki Concert Hall www.foodcolloids2024.org

Date: 14 - 18 April 2024

Location: Thessaloniki Concert Hall, Thessaloniki, Greece

The 19thFood Colloids Conference: Using colloid science to find new sustainable solutions in food, will be held on 14-18 April 2024 in Thessaloniki, Greece. The Conference is organized by the International Hellenic University- Dept. of Food Science and Technology, Conference Chair: Eleni P. Kalogianni. The conference aims to bring together international experts from Academia and Industry in order to share their latest research and developments in the field of Food Colloids.

The 19thFood Colloids stresses the latest trends in colloidal food systems covering at the same time the classical but ever modern physical chemistry aspects in the field. This year's conference also has a special focus on sustainability with clean, environmentally friendly, plant-based approaches. Furthermore, the conference extends its focus in non-food, or close to food, applications including nutraceutics, paharmaceutics, packaging and medicine providing ground for interdisciplinary scientific interactions.

Thematic Topics

- · Surfactants, Lipids, Macromolecules, Particles: Adsorption, Interactions and Self-assembly
- From nano to macro: Interfacial structure vs colloidal stability and properties
- Emulsions, Foams, Gels: from classical approaches to novel systems
- New Methods and New Insights in Food Colloidal Systems
- Colloids in Humans: Delivery systems, Bioavailability, Digestion and Oral Processing
- Sustainable Food Colloids: Clean, Environmentally Friendly, Plant-based
- Food Colloids in Non (or close to) Food Applications: Nutraceutics, Pharmaceutics, Packaging, Medicine

Key dates:

- Abstract Submission Deadlines for Oral Presentations: 31 October 2023
- Abstract Submission Deadlines for Poster Presentations: 1 December 2023
- Early Bird Registration Deadline: 14 January 2024

For more information & updates visit the 19th Food Colloids Conference website!

Join us at the 2024 GHI World Congress to develop global solutions for a future with a sustainable, safe and secure food supply

by Gerhard Schleining, GHI (Global Harmonization Initiative), Austria

The 2024 GHI World Congress will be held in Rotterdam, the Netherlands, on the 18th to 20th March 2024. From all over the world, food scientists, food industry experts and people with an interest in transforming our food systems to develop a sustainable future for a safe and secure food supply will come together in-person and online to highlight issues, discuss solutions and develop roadmaps.

This GHI World Congress marks 20 years since the founding of GHI, the Global Harmonization Initiative, and we are marking the occasion by focusing our attention and scientific collaborations on developing plans for a sustainable future for food for the next 20 years and beyond.

The line-up of world renowned speakers includes: the future foods expert, Professor Mark Post, explaining the regulatory and consumer acceptance challenges for



cultivated meat. Professor Arnold van Huis, Chief Editor of the Journal of Insects as Food and Feed, discussing the advantages of edible insects in assuring future food security. Gut microbiome specialist Professor Stanley Brul describing the known role of the gut microbiome in health and disease, with an emphasis on open questions that remain. And Professor Adewale Olusegun Obadina of the WHO Guideline Development Group on traditional food markets outlining the life-saving activities underway to make the cassava crop safer to eat - cassava is an important staple food in many parts of the Global South.

Other notable speakers include: The Chief Scientist of the European Food Safety Authority, Professor Carlos Gonçalo das Neves. Emeritus Professor Ruth Oniang'o, the recipient of the Africa Food Prize, Laureate and one of Fortune Magazine's 'Top 30 Women Achievers' Globally in Food and Drink'. And the Guardian columnist and environmental activist, George Monbiot.

The 2024 GHI World Congress will include sessions on innovation in food safety and security, future foods, consumers and sensory science, the transformation of food systems, and much more. To ensure your views are included as part of the discussions, save the date and register now. We look forward to welcoming you there. There will be ample opportunity for open discussions of issues faced, solutions hypothesized, and roadmaps developed. You are welcome to join our invited speakers on the podium by presenting your work and ideas at the Congress. Abstract submissions are being taken now. All speakers will have the opportunity to publish their papers in a conference book of the proceedings and in several special editions of scientific journals. For more information, visit the congress website www.ghiworldcongress.org and view the congress video - See you there! About the 2024 GHI world Congress

See you there!

Dr. Gerhard Schleining, Chair of the Organising Committee for the 2024 GHI World Congress.

For information about holding a special session for your organisation at the 2024 Congress email: communications@globalharmonization.net



Invitation to the International Committee on Food Microbiology and Hygiene (ICFMH) conference

by Prof. Dr. MSc Andreja Rajkovic, Ghent University, Belgium

Dear Colleagues and Friends,

It is my great pleasure to welcome you to the upcoming International Committee on Food Microbiology and Hygiene (ICFMH) conference in Burgos, Spain. FoodMicro2024 will focus on the latest advances in new technologies in food production and microbiological analysis, and we are thrilled to bring together experts, researchers, regulators, and industry professionals from around the world to share knowledge and exchange ideas.

Revolutionary advancements in technology are transforming the field of food microbiology and hygiene, leading to unprecedented opportunities for **scientific evolution**. The conference will offer an exciting opportunity to delve into cutting-edge research and technological breakthroughs, exploring the ways in which innovation is driving improvements in food safety and quality. This will surely cover all aspects from the wet lab studies to in silico work as well as global changes that influence the food web.

Keynote speakers and scientific sessions will cover a range of topics, including new trends in food processing, innovative approaches to food safety and quality, and novel methods for microbial analysis. We will also for the first time tackle some emerging fields such as microplastics and microbiome interactions. By sharing insights and exploring new ideas together, we hope to spark new collaborations and inspire future innovation in the field.

Beyond the scientific program, we have organized social events that will give you the opportunity to immerse yourself in the rich history and culture of Burgos, Spain. We are confident that this conference will offer an unforgettable experience for all attendees, fostering new collaborations, sharing insights, and providing opportunities to expand your knowledge.

We look forward to welcoming you to the ICFMH conference in Burgos where we will explore the ways in which the revolution in technology is driving scientific evolution in the field of food microbiology and hygiene.

Sincerely,

Prof. dr. Andreja Rajkovic, Ghent University

President, International Committee on Food Microbiology and Hygiene (ICFMH)

III International Scientific and Practical Conference "Healthy Eating from Childhood to Longevity"

by Serhii Tokarchuk and Iryna Volovyk, National University of Food Technology, Kiev, Ukraine

Dear colleagues!

The organizing committee has the honor to invite you to participate in the III INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE "HEALTHY EATING FROM CHILDHOOD TO LONGEVITY: INTEGRATED APPROACH, STATUS AND PROSPECTS"

scheduled for October 27, 2023 in Kyiv, Ukraine on the basis of the National University of Food Technologies. Your participation can be in a format convenient for you.

Considering the state of war in Ukraine, the conference is planned to be held in a mixed format: offline and online.

The conference will pay attention to the following thematic areas:

- Relationship between nutrition and human health: scientific and practical aspects.
- Innovative trends in scientific developments in technologies and equipment for the production of healthy nutrition products.
- The state and prospects of the organization of healthy food in extreme conditions: the challenges of time. Health food products in the rehabilitation of military personnel.
- Issues of eco-safety of technologies of health products using natural food ingredients.
- Packaging materials in the production of products for healthy nutrition.
- Requirements for quality and safety control of raw materials and finished products for healthy nutrition.
- 7. Healthy food: Ukrainian superfoods.

We would like to invite all interested scientists, doctors, specialists, companies, government officials, professional associations working in the fields of food production, food industry, food quality and safety, nutrition, hygienic technology and design, innovative technologies, new trends in safety food products, from Europe and around the world to attend this event.



Scientists, doctors, food specialists, industrial workers, representatives of specialized associations and unions have confirmed their participation in the conference. Representatives of government organizations are invited.

Best regards

Deputy Chairman of the Organizing Committee, Vice-rector for scientific work of NUHT Serhii TOKARCHUK

68. Volodymyrska Str., Kyiv, 01601, Ukraine; e-mail: et-healthy@nuft.in.ua



More UPCOMING FOOD-RELATED EVENTS / WEBINARS

October 2023

New! 09-11 October 2023

13th ICA Rectors and Deans Forum 2023 - ICA Webinars focusing on the One Health Triad

More information: https://www.ica-europe.info/pre-forum-webinar-programmes

Online

15-17 October 2023

2023 IFT-EFFoST International Nonthermal Processing Workshop & Short Course

 $\textbf{More information:}\ https://biorefining.cfans.umn.edu/2023-ift-effost-international-nonthermal-processing-$

workshop-short-course Minnesota, United States

18-20 October 2023

6th International Symposium on Gluten-Free Cereal Products and Beverages 2023 (GF23)

More information: https://www.gluten-free-symposium.com/en/

Roma, Italy

25-27 October 2023

10th International Symposium on the Delivery of Functionality in Complex Food Systems

More information: https://www.monash.edu/engineering/dof2023

Melbourne, Australia

New! 27 October 2023

III International Scientific and Practical Conference "Healthy Eating from Childhood to Longevity: Integrated Approach, Status and Prospects"

More information: et-healthy@nuft.in.ua

Kyiv, Ukraine

November 2023

14-17 November 2023

14th European Nutrition Conference (ENC) FENS 2023

More information: https://fens2023.org/

Belgrade, Serbia

New! 22-24 November 2023

6th ISEKI-Food e-conference "Food Production Based on Food Safety, Sustainable Development and Circular Economy"

More information: https://isekieconf23.meetinghand.net/en/

Online



March 2024

18-20 March 2024

2nd GHI World Congress on Global Food Safety and Security

More information: https://ghiworldcongress.org/

Rotterdam, Netherlands

April 2024

New! 14-18 April 2024

19th Food Colloids Conference: Using colloid science to find new sustainable solutions in food

More information: https://foodcolloids2024.org/

Thessaloniki, Greece

22-25 April 2024

17th ICC International Cereal and Bread Congress

More information: https://icc-icbc.com/en/

Nantes, France

July 2024

New! 8-11 July 2024

28th International ICFMH Conference FOOD MICRO 2024

More information: https://foodmicro2024.com/home.php

Burgos, Spain

September 2024

New! 8-12 September 2024

22nd World Congress of Food Science and Technology IUFoST 2024

More information: https://iufost2024-italy.com/

Rimini, Italy

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