

ISEKI e-news Issue 40

DECEMBER 2021





Contents

ditorial	
IEWS FROM THE ISEKI-FOOD ASSOCIATION	2
th ISEKI e-conference "Food Texture, Quality, Safety and Biosecurity in the Global Bioeconomy" held on 10-12 Noven	nber
021	
SEKI-Food Association Secretary General nominated President of the European Alliance for Subject-Specific and	
rofessional Accreditation and Quality Assurance	4
IEWS ABOUT ISEKI-FOOD ASSOCIATION MEMBERS/PARTNERS	5
TEP 2022 – Process technology and energy in agriculture, 3 – 8 April 2022, Serbia	
th Cereals & Europe Spring Meeting, 6-8 April 2022, Thessaloniki, Greece	
Center for Research and Development in Food Cryotechnology (CIDCA)	8
IEWS ABOUT PROJECTS WITH ISEKI-FOOD ASSOCIATION PARTICIPATION	9
NS Cloud concludes "Intro to Open Space" workshops	9
IEXTFOOD: FoodFactory-4-Us on Short Food Supply Chains: Final Virtual Conference on 27 January 2022	10
-SAFE Project: Enhance safer and healthier meals through food handler education and training	11
DGs Labs – Making the SDGs our Business – launch of the online tool	12
AIRCHAIN definition of intermediate food value chains available on YouTube!	13
IEWS ABOUT OTHER PROJECTS	14
TNC (National Technological Centre for the Food and Canning Industry, Spain) project involvement	14
Development of bio-active nanostructured fibrous membranes for an extension of fresh fruit postharvest shelf life	
COLAB4FOOD – Collaborative Laboratory for innovation and Development (I&D) in the agri-food sector	16
AVITECH project at CISAS-IPVC: Portuguese autochthonous chicken breeds coordinator	18
IEWS ABOUT JOB OFFERS	19
OS-DOC FELLOWSHIP at University of Sao Paulo, Brazil	19
IPCOMING FOOD-RELATED EVENTS / WEBINARS	19



Editorial

By Margarida Vieira, University of Algarve, Portugal & President of the ISEKI-Food Association

Close to the end of 2021, it is time to make a short overview of the Association activities. During this year, while contributing to 10 European projects, the ISEKI-Food Association worked very hard to hold, though in an online version, the 6th ISEKI-Food Conference "Sustainable Development Goals in Food Systems — Challenges and Opportunities for the Future" with almost 200 participants. One more ISEKI-Food e-conference on "Food Texture, Quality, Safety and Biosecurity in the Global Bioeconomy" was successfully held in November. From the second half of the year, the accreditation of the European Quality Assurance Scheme for Food Science and Technology studies label (EQAS-Food) became solely awarded by the worldwide respected quality assurance agency ASIIN. The members of our Association are being challenged to reactivate the Special Interest Groups (SIGs) to be used as a forum for all with similar goals, to stimulate the development of new projects and activities and, to establish and maintain a network of experts from Universities, research institutions and companies in the food chain. The Association is building a new curricula database to be launched beginning of next year with 6000 bachelor, master and PhD programmes from all over the world, to support members and its students on its mobilities and new partnerships.

We keep hoping that we will beat this virus and be able to meet in person in Paris for the 7th ISEKI-Food Conference in 2023. No variant of this ignoble virus will stop us from celebrating Christmas! May all the vaccines and boosters, may all the tests, PCR or antigen, may all the masks, replication of tables in our homes to enable the right distance, air renewable, and above all, may all of us have the necessary common sense to shield us against the COVID-19 and be able to share with our loved ones moments of love and peace offered by this lovely Season. A Merry Christmas and a Happy New Year are the wishes of the ISEKI-Food Association to our members all around the world!

NEWS FROM THE ISEKI-FOOD ASSOCIATION

4th ISEKI e-conference "Food Texture, Quality, Safety and Biosecurity in the Global Bioeconomy" held on 10-12 November 2021

by Liliana Tudoreanu, ISEKI member & member of the Organizing Committee

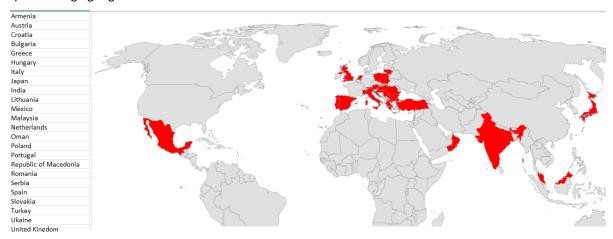






The 4th edition of the ISEKI Food Association E-conference was supported by the ISEKI-Food Association and was organized in collaboration with the Banat University of Agricultural Sciences and Veterinary Medicine "King Michael I of Romania" from Timisoara, Romania, as the main organizer and the ISEKI Special Interest Group (SIG) "Food Structure and Bionanotechnology".

The e-conference this year offered an international platform for communication across 4 continents and many disciplines bringing together over 90 food scientists from 24 countries.



We had the opportunity to attend the presentations of the 6 invited speakers who brought to our attention exciting and up to the minute topics in food sciences as well as 73 scientific works as oral presentations or posters.

Every year we try to bring news and improve communication between participants. This year the E-conference offered the exiting experience of reading the posters in the virtual Poster Room and discussing with the poster authors through their dedicated breakout rooms in Zoom.

A tradition of the ISEKI E-conference is to encourage student participation by organizing a separate session where students can present their research work and a competition for the three best student oral presentation and the best three posters. The awards were supported by **ISEKI-Food Association** and the conference sponsors ASIAR (Romanian Association of Specialists in the Food Industry) and Prospero SRL Romania.

The winners of 2021 are:

Student oral & competition winners

1st prize: EUR 225.-





Juliana A. BARRETO PEIXOTO - Influence of a coffee silverskin extract on glucose intestinal transporters: an apparent synergism between caffeine and 5-O-caffeoylquinic acid

2nd prize: EUR 175.-

Carola BÜCHER - Optimization of the identification of dairy propionic acid bacteria using mass spectrometry

3rd prize: EUR 75.-

Diana Alexandra GHEORGHIU - Textural properties of some assortments of grilled and baked fish preferred by 20 to 50+ years old consumers in Romania

Student poster & short oral & competition winners

1st prize: EUR 225.-

Simelda Elena ZIPPENFENING - Evaluation and discrimination of fruit-based pasta by ATR-FTIR-PCA

2nd prize: EUR 175.-

Lucija PODRZAJ - Comparative analysis of Clostridium tyrobutyricum genomes reveals high genetic diversity

3rd prize: EUR 75.-

Matea HABUŠ - Rheological and textural properties of 3D-printed snacks and breakfast cereals enriched with grain by-products

The E-conference erased the thousands of kilometers between us, made us enjoy the presentations and discussions and made us feel once again the warmth and support of the beautiful ISEKI family.



We thank all participants at the 4th edition of the ISEKI E-conference and we look forward to meeting you and new participants in November 2022.

On behalf of the organizing committee Liliana Tudoreanu, Adrian Rivis and Margarida Vieira





by Rui Costa, ISEKI-Food Association Secretary General



Rui Costa, Secretary General of the ISEKI-Food Association, was nominated President of the European Alliance for Subject-Specific and Professional Accreditation and Quality Assurance (EASPA) for the term 2022-2023.

EASPA is a non-profit association that promotes subject specific quality assurance in higher education, providing information and "best practice" examples and developments in the European Higher Education Area. It works on the development of Europe-wide qualification frameworks, learning outcomes and competence profiles of

graduates and professionals. Its members cover a wide range of subjects, from engineering, to business and music.

The aims of EASPA in the short term are to promote the adoption of subject-specific criteria, defined by its members, by the national accreditation agencies, and to promote the wide use of micro-credentials.

NEWS ABOUT ISEKI-FOOD ASSOCIATION MEMBERS/PARTNERS

PTEP 2022 – Process technology and energy in agriculture, 3 – 8 April 2022, Serbia

by Mirko Babic, ISEKI Institutional Member, Serbia





FIRST

TRADITIONAL XXXIV SCIENTIFIC-PROFESSIONAL CONFERENCE

- with international participation -

PROCESS TECHNOLOGY AND ENERGY IN AGRICULTURE

PTEP2022

April 03 – 08, 2022 Sokobanja, hotel Moravica (https://hotelmoravica.rs/)

PRELIMINARY INFORMATION AND CALL FOR PAPERS

TOPICS:

- 1. Advanced post-harvest technologies of agricultural materials
- 2. Energy efficiency and renewable energy sources in agriculture and food industry
- 3. Advanced seed processing technologies
- 4. Sustainability of food technologies (economy, quality, energy, social aspects, integral and organic production, etc.)
- 5. Technical and technological aspects of food safety for humans and animals
- 6. Innovations in food technologies and aspects of the food quality chain
- 7. Physical properties of biomaterials and food
- 8. Education in post-harvest and food technologies
- 9. Trends in agricultural development
- 10. Process control and
- 11. Heating and air conditioning

Applications and abstracts are accepted until January 28, 2022 exclusively through the website of PTEP, in the conference menu. The abstract should be written in Serbian or English language, 1500 to 3000 characters. Abstracts will be printed in the Proceedings of the conference.

Manuscripts may also be proposed for publication in the *Journal on Processing and Energy in Agriculture* (M51). Manuscripts intended for publication in the journal should be prepared according to the instructions for writing papers





in the journal and <u>submitted exclusively through the CEON</u> platform until **February 25, 2022**, for publication in the first two issues for 2022, which are shared at the meeting.

Papers and abstracts submitted in another way (mail, e-mail ...) will not be considered.

The Conference will include:

- o SEMINAR FOR TECHNOLOGISTS AND MANAGERS OF SILOS AND SEED PROCESSING
- Round table National workshop: SPECIFICS OF RECEIPT, DRYING, STORAGE AND PROCESSING OF GRAIN AND SEEDS DURING 2021
- o Offers of EQUIPMENT AND SERVICES for silos and seed processing

CO-ORGANIZERS OF THE CONFERENCE: ISEKI - Food association, Vienna; Institute of Food Technology, Novi Sad; Faculty of Technology, Novi Sad; Zemun Polje Maize Institute, Zemun; Institute of Field and Vegetable Crops Novi Sad and Faculty of Technical Sciences, Novi Sad.

Contact: Filip Kulić, PhD (kulic@uns.ac.rs), Milivoj Radojčin, PhD (milivoj.radojcin@polj.uns.ac.rs), Ivan Pavkov, PhD (ivan.pavkov@polj.uns.ac.rs) and Miladin Kostić, MSc (miladin.kostic@ifvcns.ns.ac.rs)

Detailed information at: www.ptep.org.rs



7th Cereals & Europe Spring Meeting, 6-8 April 2022, Thessaloniki, Greece

by Maria Papageorgiou, International Hellenic University, ISEKI Institutional Member, Greece



You are cordially welcome to lively and relaxing Thessaloniki and to the **7th Cereals & Europe Spring Meeting**, to be held at **The MET Hotel**, **Thessaloniki**, **Greece**, **6 – 8 April 2022**!

Since 1915 the world's largest organization of cereal scientists, Cereals & Grains Association, formerly AACC International, is advancing cereal science worldwide and has significantly contributed to the progress in this science. Cereals&Europe as the largest section of AACC International is fulfilling this mission in Europe.

Every two years we are bringing cereal scientists and technologists together to share and discuss their latest findings in a pleasant venue with sufficient time to scientifically and socially interact.

Therefore, it is a really great pleasure that the lively and historic city of Thessaloniki can host the biyearly C&E Spring Meeting. The Cereals & Europe team will do everything to guarantee a friendly environment for our guests for effective scientific work and networking!

Looking forward to welcoming you to Thessaloniki!



Center for Research and Development in Food Cryotechnology (CIDCA)

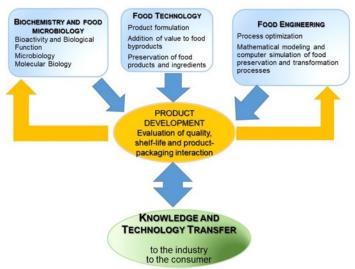
by Sergio Giner, Universidad de la Plata, Argentina, ISEKI-Food Association Member

CIDCA was created by an agreement dated February 10th, 1973, between the National University of La Plata, the National Scientific and Technical Research Council (CONICET) and the Scientific Research Commission of the Province of Buenos Aires (CIC), all of Argentina. The Center currently depends on the three institutions and is led by Dr. Andrea Gomez-Zavaglia since 2016. The center is placed in La Plata, capital of the Province of Buenos Aires, Argentina.

CIDCA is composed of a multidisciplinary scientific-technological research team devoted to research, development and innovation in Food Science and Technology. About **150 staff** having a **multidisciplinary background** (Chemical and Food Engineers, Chemists, Biochemists, Pharmacists, Biologists, Agricultural Engineers, Biotechnologists, Food Science and Technology graduates) work at CIDCA including **researchers**, **technical and administrative staff** and research **fellows** (PhD and postdocs). The purpose of CIDCA includes:

- To improve scientific and technological capabilities.
- To promote the transfer of knowledge to the society at large, thus facilitating the access of the population to food products of high nutritional value.
- To provide innovative design of prototypes and technical support to entrepreneurs, food producers, and established food companies.

CIDCA has three main research lines, namely Biochemistry and Food Microbiology, Food Technology and Food Engineering. The following scheme shows the main fields addressed by the research lines of the center, also indicating the interactions among them.



The work carried out at **CIDCA** has received national and international funding in highly competitive calls (*e.g.*, Argentinian Agency for the Promotion of Science and Technology, Argentinian Research Council, Iberoamerican Program for the Development of Science and Technology -CYTED-, European Commission -Horizon 2020-, amongst the most important ones).

Regarding academic activities, most of the **CIDCA** staff acts also as Professor or Teaching Assistant in different subjects at the Engineering, Exact Sciences, Veterinary or Agricultural Engineering Faculties of the National University of La Plata. Furthermore, **CIDCA** coordinates a Master career in Food Science and Technology receiving students from Argentina and other Latin-American countries.

NEWS ABOUT PROJECTS WITH ISEKI-FOOD ASSOCIATION PARTICIPATION

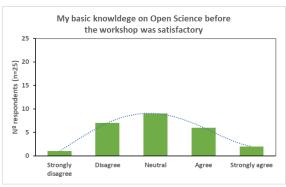
FNS Cloud concludes "Intro to Open Space" workshops

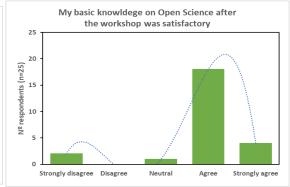
by Katherine Flynn, Luminita Ciolacu and Luis Mayor, Project Managers ISEKI-Food Association, Austria



How would you rate your basic knowledge on Open Science? The ISEKI-Food team asked that question to attendees at our 2021 interactive workshops.

Before the workshop, most people were neutral: neither agreeing nor disagreeing that their knowledge level was satisfactory. After our workshop, most people agreed that they had a satisfactory basic knowledge of Open Science.





Our series of five "Intro to Open Science" workshops in 2021 took place at international conferences and universities. At the workshops, we introduced EOSC and FNS, covered GDPR and FAIR and open data, and explained the various open access publishing options. The sessions were interactive and trained not only Open Science principles but also how to talk about Open Science with colleagues – Training the Trainer.

FNS workshops will continue in 2022 with the working topic of "Uploading Your Scientific Work to an Open Repository". Participate in our workshops and increase your practical Open Science skills while also learning how to share that knowledge with your team! Workshops are planned for the annual EuroFIR, ILSI, and EFFoST conferences as well as an online version for IFA members.

Stay informed! Follow FNS-Cloud on Twitter: @FNSCloudEU and Instagram: fnscloudeu2019

NEXTFOOD: FoodFactory-4-Us on Short Food Supply Chains: Final Virtual Conference on 27 January 2022

by Line Friis Lindner, Project Manager ISEKI-Food Association, Austria



Since mid-October 2021, 5 teams (19 master students from universities in India, USA and France) enrolled in food study programmes around the world have been attending online trainings and preparing projects.

The topic of this year's competition is Supporting and Developing Short Food Supply Chains and the student teams are designing and developing tools and actions to solve a problem related to food supply chains that is doable and of interest to the food industry and/or food chain. Teams will present their projects at the **FINAL VIRTUAL CONFERENCE on THURSDAY 27 JANUARY 2022 from** 2.00-4.00 PM CET. The conference is open to the public and registration is free, but spaces are limited. Register here!



FoodFactory-4-Us is one of 11 action-learning courses in the Horizon2020 project NextFood, where ISEKI-Food is a partner. Our 6 online trainings focus on cultivating the 5 "core competences" that an action-learner should have to improve sustainability in agri-food and forestry systems: observation, participation, dialogue, visioning and reflection.

In our "Student Presentation" training, one student from each team shares a 5-minute presentation on a practical experience (e.g., internship, company visit, volunteer activity) related to the topic of supporting and developing short food supply chains. Presentations focus on the insights, knowledge and/or skills gained. In the "Virtual Visit" training, Denis Twinamatsiko from the *Now Africa Initiative Coffee* in Uganda shared his experiences and insights on building the community initiative with coffee farmers to stimulate the development of short food supply chains - and students had the opportunity to ask questions. In these trainings we practice the action-learning competences of observation and reflection. Observation: carefully examining situations in the "world out there", before making any judgements. Reflection: exploring and examining ourselves, our perspectives, attributes, experiences and actions and interactions. In each online training, we practice at least 1 of the 5 core competences.

In the NextFood Toolbox (on the NextFood Platform), teaching practitioners at any level (high school, vocational training & university), as well as extension specialists devoted to experiential learning approaches can find inspiration on methods and models of action-learning.

Hope to see you at the FINAL VIRTUAL CONFERENCE where the winning team will be announced!!

e-SAFE Project: Enhance safer and healthier meals through food handler education and training

by Foteini Chrysanthopoulou & Ana Ramalho, Project Managers ISEKI-Food Association, Austria



The aim of the e-SAFE project is to provide **modern, tailor-made training to professionals working in the food sector**, focusing on emerging, re-emerging and persisting food hazards in meal preparation, and also taking into consideration the needs created from the current coronavirus pandemic.

During the first year of the project, a **review of existing training programs** for food handlers around Europe was carried out. At the same time, a **questionnaire survey** was conducted in six European countries (Poland, Greece, Cyprus, Austria, Lithuania, Italy) to identify the exact gaps, needs and requirements of training for food handlers.

The online research in 28 European countries identified 1245 training programs on food safety and hygiene, with the UK and Greece having the highest number of training opportunities for food handlers. Other countries, such as Lithuania and Slovakia, have very low number of such training

programs. Most programs are continuous/vocational education that focus on general hygiene and safety aspects. This research highlighted that training should also focus on specific topics, such as COVID-19 and trans fatty acids.

The survey among food handlers from diverse socioeconomic, educational and professional backgrounds showed that most of the participants had already completed a training in the field of food hygiene and food safety. Fewer had completed an education program regarding food allergens and COVID-19 prevention measures during food preparation, and even less regarding mycotoxins and aflatoxins, acrylamide and trans-fatty acids.

Thus, the project's consortium started developing innovative training materials which cover 7 specific topics:

- Food safety basics
- Nutrients/food content
- Chemical hazards
- Mycotoxins
- Food allergies
- Trans fatty acids
- COVID-19 preventive measures

The materials will be ready in November 2022 and available in an online e-learning platform.

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



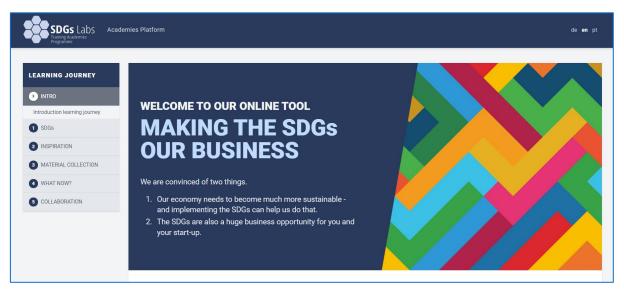


SDGs Labs - Making the SDGs our Business - launch of the online tool

by Line Lindner & Foteini Chrysanthopoulou, Project Managers ISEKI-Food Association, Austria

The SDGs Labs project recently launched its online tool: Making the SDGs Our Business for business people (start-ups, start-up incubators and existing companies) who want to learn about the benefits of the SDGs for their business.

The online tool is structured as a "learning journey" providing pieces of information, inspiration and food for thought to business people interested in learning about concrete activities as well as economic benefits of integrating the SGDs into their businesses.



The learning journey consists of five stations:

- **SDGs:** a guiz with a spinning wheel with informative guestions on each of the 17 SDGs.
- Inspiration: here the learner can find a plethora of video recorded interviews with so-called "SDGs Labs Role
 Models" talking about their stories, ideas and concrete innovations and how the SDGs helped them to
 succeed.
- Material collection: the leaner can find a pool of materials such as podcasts and videos (open access).
- What now?: advice for reflecting on the inspiration and ideas provided I
- **Collaboration:** a platform for businesses to grow their network, to join forces and form partnerships on the basis of the SDGs.



of the European Union

The project SDGs Labs is coming to an end in January 2022 and the Online Tool is the result of three years of work where partners from regions in Austria, Italy, Germany and Portugal organised a series of interviews, focus group discussions, and online workshops with pioneers in the regions to understand how they integrated the SDGs in their businesses. It is the aim and hope of the project partners that the Online Tool *Making the SDGs our Business* will remain a place where business people can be inspired by pioneer activities and eventually embed the SDGs into their own business.

FAIRCHAIN definition of intermediate food value chains available on YouTube!

by Luminita Ciolacu, Katherine Flynn & Luis Mayor, Project Managers ISEKI-Food Association, Austria



value chains in agro-food

FAIRCHAIN is the short name for, "Innovative technological, organisational and social solutions for FAIRer dairy and fruit and vegetable value CHAINs". FAIRCHAIN aims to develop intermediate food chains via scaling-up small and mid-sized actors and encouraging down-scaling of conventional and larger actors.

Do you know what an Intermediate Food Value Chain (IFVC) is?

Research conducted a complete research process to identify essential and optional characteristics of IFVCs. Based on these, they formulated a definition presented by Dr. Bärbel Hüsing and Tanja Kaufmann to the FAIRCHAIN consortium in October 2021. The webinar also included an introduction to the concept and background of food value chains, real-life examples of IFVCs as well as the pathways to be used towards IFVCs. Short and engaging videos (5 to 8 minutes each) of the webinar are now available on FAIRCHAIN's YouTube channel.

FAIRCHAIN project just celebrated its 1st year! ... and held its 1st annual meeting

This year FAIRCHAIN partners developed technological and organisational innovations with special focus (but not only) on: a flexible filling machine, new whey-based drinks, blockchain technology and 'zero waste' distribution modes. The co-creation process started with assessment of current value chains and involved stakeholders in Goal-defining workshops. Working groups with other European projects and European bodies' meetings contributed to sharing work on sustainable food systems. Soon, in collaboration with the CO-FRESH project, the updated "Sustainable Food System Innovation platform" will be launched! Results presented at the First Annual meeting in November 2021 show our rich and stimulating progress.

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



NEWS ABOUT OTHER PROJECTS

CTNC (National Technological Centre for the Food and Canning Industry, Spain) project involvement

by Angel Martinez Sanmartin, ISKI-Food Association Institutional Member CTNC, Spain

CTNC has a Technological Transfer area with experience in European projects within the following programs: EUROPEAID, H2020, 7PM, LIFE, ERASMUS, EUROMANAGEMENT, INTERREG LEONARDO DA VINCI, etc.

To promote innovative technologies in the field of environment and agri-food sector, CTNC was a partner of the project "Circular economy applied to the treatment of table olives brines based on solar evaporation" (LIFE SOLIEVA - LIFE17 ENV/ES/000273), which ends this December, after 3 years of work and it is cofounded by the LIFE program of the European Union. This project has demonstrated the technical, environmental and economic viability of organic compound recovery technology (OCR) in process waters for the production of table olives.

From the CTNC, it has been possible to work with vacuum concentration and spray drying systems to treat the rejection of a previous membrane system used in the project to obtain an extract of polyphenols with a concentration of 7% and with a yield of 89 % recovery. In addition, with a subsequent purification process optimized on a laboratory scale and carried out on a pilot scale, the objective of recovering 50% of the polyphenols with a higher concentration, on the order of 24%, has been achieved, obtaining a product called purified extract of polyphenols with suitable characteristics for application in the development of new foods.

On the other hand, the CTNC achieved this year, 2021, to be Cervera Center of Excellence for the project "Establishment of a Cervera Network for the development of highly sustainable technical materials derived from by-products or residues of the agricultural industry and of the operations of conservation of natural spaces - Agromatter" which has a budget of almost 4 million euros and which supports technological innovation in the area of Circular Economy. It is a project financed by the CDTI (Center for Industrial Technological Development), through the Ministry of Science and Innovation of Spain, within the framework of grants for "Cervera" Technological Centers of Excellence. CER-20211013.

The objective of the project is to establish a network of Technological Centers of scientific-technical excellence in the field of Circular Economy applied to the development of biobased materials for technical applications (textile, packaging, agricultural sector, etc.), based on the valorization of agro-food waste and by-products, and thus achieve a position as reference R&D centers both nationally and internationally, in a way that results in growth in R&D projects and in technology transfer actions to business. The CERVERA AGROMATTER Group is made up of five highly complementary Technological Centers in the agricultural, biotechnological and materials science fields: CTNC, the Textile Industry Research Association (AITEX), the Technological Institute of Packaging, Transport and Logistics (ITENE), the Andaltec I+D+i Foundation (ANDALTEC) and the National Agrifood Technological Center of Extremadura (CTAEX).



Circular economy applied to the treatment
of table olives brines based on solar evaporation
The LIFE SOLIEVA project has received funding from the LIFE programme of the European Union



























by Nastasa Poklar Ulrih, ISKI-Food Association Institutional Member, Slovenia

SLOVENIAN NATIONAL RESEARCH PROJECT (ARRS)

DEVELOPMENT OF BIO-ACTIVE NANOSTRUCTURED FIBROUS MEMBRANES FOR AN EXTENSION OF FRESH FRUIT POSTHARVEST SHELF LIFE

Volatile organic compounds (VOCs), synthesized by plants including aldehydes such as hexanal have been shown to suppress the growth of plant pathogenic microorganisms indicating that these compounds could be one of the important mechanisms for biological control of plant diseases. Hexanal inhibits activity of phospholipase D enzyme, which is a key enzyme causing degradation of membrane phospholipids.



Project Goals

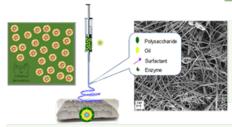
Design of a biocatalytic procedure exploiting sunflower oil for the production of hexanal (imitating biosynthetic pathway in plants using enzyme system composed of lipase, lipoxygenase and hydroperohyde lyase)

Sunflower oil

Design of a polymer-micro to nano-emulsion solution (W/O emulsion of aqueous enzymes of micro to nano sized droplets, dispersed in the continuous oil phase)







Encapsulation of enzyme systems by formation of stabile emulsions of essential oils – lipids. Development of functional electrospun nanofibrous membranes, enabling the in-situ hexanal release, using emulsion electrospinning.

Determine the optimized electrospun membranes efficacy on the fruits' nutritional quality. The final product will be electrospun nanofibrous mats on the tray templates i.e. biodegradable fiber tray.



Project partners

University of Maribor, Faculty of Mechanical Engineering, University of Ljubljana, Biotechnical Faculty, University of Ljubljana, Faculty of Chemistry and Chemical Technology. University of Maribor, Faculty of Electrical Engineering and Computer Science

Acknowledgement: Project J7-2593 and research core program group for Textile Chemistry P2-0118 financed by the Slovenian Research Agency (ARRS).

COLAB4FOOD – Collaborative Laboratory for innovation in the agri-food sector



by Helena Gomes, COLAB4FOOD, Portugal

COLAB4FOOD

Colab4Food - Collaborative Laboratory is a new entity for innovation and development (I&D) in the agri-food sector with the objective of increasing the resilience and competitiveness

of this sector by promoting innovation, development and knowledge transfer in a collaborative way between academia and industry, being a catalyst in the process of developing new products and applying innovative technologies to the food industry.

SERVICES

Colab4Food provides services related to the development of innovative solutions in areas such as new ingredients and formulations of functional products, more nutritious foods, and adding value for the consumer, using more efficient and sustainable food processes and technologies, and in integrated solutions in the circular economy perspective.

SCIENCE & TECHNOLOGY



State of the art review studies



Troubleshooting & technical consultancy



Development & optimization of new formulations



Proof of concept for innovative technologies





Scientific market analysis for ingredients, products & claims



Supplier identification (incl. ingredients, formulations & food technologies)



Development of roadmaps

R&D FUNDING



Consultancy for R&D funding announcements



Support in the whole process of tax incentives SIFIDE & patent box

PRODUCT DESIGN & TRAINING



Advanced, specialized & customized training for industry



Product design & database structuring services in information technology





ASSOCIATES







































HEADQUARTERS



Co-financed by:











AVITECH project at CISAS-IPVC: Portuguese autochthonous chicken breeds coordinator

by Nuno Brito, CISAS, ISEKI-Food Association Institutional Member, Portugal

¹CISAS - Center for Research and Development in Agrifood Systems and Sustainability – Polytechnic Institute of Viana do Castelo, 4990-706 Refóios do Lima, Portugal.

²TOXRUN – Toxicology Research Unit, University Institute of Health Sciences, CESPU, CRL, 4585-116 Gandra, Portugal.

³LEPABE—Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal

4Agrarian Higher School, Polytechnic Institute of Viana do Castelo, 4990-706 Refóios do Lima, Portugal.



The conservation of autochthonous breeds is a topic of great importance for the maintenance of local animal genetic resources, contributing to sustainable productive systems and the preservation of a unique genetic heritage. In recent years, due to the concern about animal welfare and consumer demand for high quality products, interest in autochthonous breeds and local products has significantly increased.

AVITECH is a research project of the Polytechnic Institute of Viana do Castelo (IPVC) funded by NORTE-01-0145-FEDER-000043 which aims for the valorisation of the four Portuguese autochthonous chicken breeds, "Branca", "Amarela", "Pedrês Portuguesa" and "Preta Lusitanica" (Figure 1) through the physicochemical and microbiological characterization of meat and eggs and the physicochemical and sensory characterization of traditional Portuguese gastronomic products that value and differentiate the products.



Figure 1. The four Portuguese autochthonous chicken breeds: (A) Branca; (B) Amarela; (C) Pedrês Portuguesa; (D) Preta Lusitânica.







NEWS ABOUT JOB OFFERS

POS-DOC FELLOWSHIP at University of Sao Paulo, Brazil

by Paulo Sobral, ISEKI-Food Association Member, Campus de Pirassununga, Brazil



Institution: School of Pharmaceutical Science- University of São Paulo, Brazil

Project: Passiflora fruit: Interindividual variables on bioavailability of phenolic compounds

and effects on metabolic response

The Food Research Center (FoRC) has opened a selection for a post-doctoral scholarship linked to a study aiming to evaluate the effects of fruit polyphenol intake on metabolism. The study will be developed at the Food Research Center, located at the School of Pharmaceutical Sciences, University of São Paulo in São Paulo, Brazil with the support of São Paulo Research Foundation – FAPESP.

The insertion of native species of fruits into the market may enhance the socioeconomic development of the region, and also increase the valorization of the Brazilian biodiversity. The native passion fruit is rich in bioactive compounds, mainly phenolics, that have been associated with a reduced incidence of obesity-associated comorbidities. Considering that the biological activity attributed to phenolics depends on their absorption and metabolism, we propose to evaluate the factors underlying the bioavailability of the phenolics of passiflora fruit and mechanisms of action not yet explored to understand how these compounds can modulate metabolism. For this purpose, a clinical study will be carried out and different 'omics' platforms will be employed.

The candidate must have:

- Obtained the PhD degree in the last 7 years;
- experience in analytical chemistry (bachelor degree in chemistry, biochemistry, pharmacy, nutrition or related areas);
- experience in metabolomics and transcriptomic analysis applied to nutrition/ metabolism of phytochemicals. The experience would be attested by publications in indexed journals;
- Desirable experience in conducting clinical study.
- Be the first author in at least one scientific publication in an indexed journal.

Applicants must send a CV, motivation letter and two recommendation letters to forc@usp.br until **30/01/2022**. The result of the selection will be announced on 28/02/2022. The estimated date to start in the new position is **01/04/2022**.

FAPESP post-doctoral fellowships include a monthly allowance of R\$ 7,373.10 and an additional grant equivalent to 15% of the monthly allowance to cover costs related to the research project. The fellowship will be for 1 year and can be renewed for up to 1 more year. More information about FAPESP post-doctoral fellowships can be found here.

UPCOMING FOOD-RELATED EVENTS / WEBINARS

January 2022

New! 24-27 January 2022





Sustainable Foods Summit NA Virtual Edition

More information: http://www.sustainablefoodssummit.com/northamerica/program/

Online

March 2022

15-18 March 2022

13th Ibero-American Congress of Food Engineering – CIBIA XIII

More information: https://www.udea.edu.co/wps/portal/udea/web/inicio/campanas/congreso-iberoamericano-

ingenieria-alimentos Medellín, Colombia

April 2022

New! 6-8 April 2022

7th Cereals & Europe Spring Meeting

More information: https://cespringmeeting2020.eu/

Thessaloniki, Greece

New! 25-27 April 2022

20th ICC Conference 2022 – Future Challenges for Cereal Science and Technology

More information: https://icc2022.meetinghand.com/en/

Vienna, Austria

May 2022

3-5 May 2022

7th International Conference on Food Digestion

More information: https://www.icfd2021.com/

Cork, Ireland

New! 11-13 May 2022

RETASTE: Rethink Food Waste

More information: https://retaste.gr/

Athens, Greece

June 2022

9-10 June 2022

7th International Food Safety Congress

More information: https://www.foodsafetycongress.org/

Istanbul, Turkey

New date! 12-16 June 2022

4th Insects to Feed the World Conference

More information: http://ifw2020.org/

Québec, Canada

21-24 June 2022

3rd International Conference on Food Bioactives & Health





More information: http://www.fbhc2020.com/

Parma, Italy

August 2022

28-31 August 2022

Food Micro 2021 – Next Generation Challenges in Food Microbiology

More information: http://foodmicro2022.com/

Athens, Greece

Editorial Board

	Margarida Vieira	
Rui Costa	Paola Pittia	Katherine Flynn
Cristina L. M. Silva	Foteini Chrysanthopoulou	Anita Habershuber







