



ISEKI e-news Issue 37

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NEWS FROM THE ISEKI-FOOD ASSOCIATION

Editorial

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

Easter time is celebrated by the Christian world as the resurrection of Jesus Christ after his crucifixion. In many European languages, this time of the year has names derived from the Greek word "pascha", which in turn, derives from the Hebrew word "pesach" for Passover. Venerable Bede, in the seventh century, claimed it is derived from the name of the pagan goddess Eostre, associated with spring and fertility. We are now used to symbols such as eggs and rabbits, mainly edible, in chocolate or marzipan, that the food industry offers during this season. In fact, and out of curiosity, these symbols come from pre-Christian pagan rituals, the egg symbolizing new life breaking through the apparent death (hardness) of the eggshell and the rabbit, known as being an extremely fertile animal, symbolizing spring.

Therefore, this season is for everyone in the world, a time of renewal, of rebirth, and, in this year of 2021, a time of great hope that the vaccination against COVID-19 has a positive effect on banishing this pandemic that is cutting our freedom to live normal lives, and that the economy may resume growing, and, for those of us that are lecturers, that face-to-face teaching can be resumed. Though some countries are still struggling with a third wave, others are already seeing the light at the end of the tunnel. Unfortunately, due to the new variants and vaccination delays, our 6th International ISEKI-Food Conference (now ISEKI-Food 2021) meeting cannot be face-to-face, and so the Scientific and Organising Committees and the Iseki Food Association secretariat have been very busy doing all the required adjustments to change it to an online meeting. We hope to meet online you all!

In this issue, we also want to pay tribute to Dominique Colin from ONIRIS (France) who passed away in January this year. Dominique was a partner in all ISEKI-Food projects that preceded the ISEKI Food Association, was always present at ISEKI meetings, and ready to contribute to the building of this strong group in Food Education and related studies. Dominique will always remain in our memory as a keen contributor to the ISEKI-Food group and a gentle and bright colleague!

6th International ISEKI-Food Conference: 23-25 June 2021, ONLINE

by Margarida Vieira & Paola Pittia, Chairs of the ISEKI-Food 2021 Organising & Scientific Committees



6th International ISEKI-Food Conference

ISEKI-Food 2021

23 - 25 June 2021, ONLINE

Sustainable Development Goals in Food Systems:
challenges and opportunities for the future



Join us for the ISEKI-Food 2021 ONLINE Conference and meet
the ISEKI-Food network!

You are invited to register, submit your abstracts, and apply for a
Poster or Oral Award.

The 6th International ISEKI-Food Conference will focus on:

Sustainable Development Goals in Food Systems:

Challenges and Opportunities for The Future

This conference aims to promote a wide and constructive discussion on the status and achievements of the SDGs. For all those who have already registered for the ISEKI-Food 2020 Conference which should have been held in Cyprus, please note that your registration is still valid and converted to the ONLINE conference (with new registration fees), but all abstracts have been deleted and you are kindly asked to resubmit them. Just enter your [conference account](#).

For more information about [conference topics](#), [registration](#), [abstract submission](#), [awards](#), and much more, please visit the [conference website](#).

The Chairs of the Scientific & Organising Committees look forward to welcoming you at the

ISEKI-Food 2021 ONLINE Conference!

Paola Pittia, Cristina L.M. Silva & Florence Dubois-Brissonnet (Chairs of the Scientific Committee)

Margarida Vieira & Dimitris Tsaltas (Chairs of the Organising Committee)

NEWS ABOUT ISEKI-FOOD ASSOCIATION MEMBERS

Tribute to Dominique Colin – Oniris – France

Dominique Colin passed away on Friday, 15 January 2021.



Dominique got a civil engineer diploma from the “Ecole Centrale - Nantes” and joined “ENITIAA” Engineering school in 1978 to teach refrigeration. ENITIAA became ONIRIS in 2010.

Dominique was also involved in the international relations of ENITIAA/ONIRIS until his retirement in October 2014, with as a milestone, the establishment of collaboration and double degree with USP in Brazil. He was also heavily involved in the International ISEKI-Food Association network.

Often travelling, sometimes in unexpected countries, and using as well unexpected means of transport especially in Eastern Europe, Dominique loved to discover new cultures and new horizons. He used to take great care to pick up visitors on their arrival at a train station or airport. The director of international relations Ministry of Agriculture, with which ONIRIS is affiliated, sent ONIRIS a message indicating “... A great man is leaving us. Very invested and efficient in his cooperation projects without ever taking himself seriously and whose humour was refreshing and benevolent. ”

Dominique had kept in touch with ONIRIS, ISEKI and many of his friends after his retirement. Dominique was a valued, generous and caring personality. Always a nice word or a joke to tell. Several people speak of how lucky they are to have met Dominique in their lifetime. Dominique left too early, we will miss him for a long time.

NEWS ABOUT PROJECTS WITH ISEKI-FOOD ASSOCIATION PARTICIPATION

NextFOOD – FoodFactory4Us Competition on Valorising Food Biodiversity

by Katherine Flynn & Line Lindner, Project Managers ISEKI-Food Association, Austria



...and the Winner is: Team FAM!

Team FAM from Audencia Business School in Nantes, France, won the FoodFactory-4-Us International Student Competition Game in Valorising Food Biodiversity.

With the project *“Reverse and Diverse: Reverse food waste to probiotic food, improve health and diverse diet in Nigeria”*, team FAM clinched the first-place finish at the FoodFactory-4-Us Competition’s Final Virtual Conference on 18 February 2021 in front of more than 100 participants. Reverse and Diverse outlined the challenges of tackling fruit and vegetable waste in Nigeria and proposed a solution of probiotic waste fermentation to make a nutritious beverage while providing local jobs.

Nine teams worldwide (31 students) participated in the 4.5-month online FoodFactory-4-Us competition addressing the valorisation of food biodiversity at any point along the food chain. Teams identified a specific problem, then designed and developed an industry-exploitable solution which they presented at the Final Virtual Conference. During the course of the competition, teams attended 6 online trainings which followed action learning methods to focus on the core competences of dialogue, participation, observation, reflection, visionary thinking, and facilitation. An Advisory Board of academic and industry experts evaluated the projects, including at the Final Conference where team members answered audience questions. All 9 teams that completed the competition had excellent projects and only a few points determined the winners.

The winning team FAM gets a free conference registration for the [ISEKI-Food 2021 conference](#) from 23-25 June 2021 where they are guaranteed a presentation of their winning project in the Biodiversity session, and €300, both sponsored by [ISEKI-Food Association](#). They will also be invited to present their project at the NextFOOD final project meeting scheduled for April 2022 in Brussels.

The [FoodFactory-4-Us Sustainable Supply Chain Competition](#) in Valorising Food Biodiversity was the 3rd of a series organized by [ISEKI-Food Association](#) as one of the case studies of the [NextFOOD project](#) where 12 cases are applying action-learning to their educational activities. The next competition cycle is planned for autumn 2021. Check the ISEKI website in summer to find the call for applications!

SDGs Labs – Fostering collaborative and creative learning spaces for regional agri-food stakeholders

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



SDGs Labs
Making the SDGs our business



With the support of the
Erasmus+ Programme
of the European Union

Between December 2020 and March 2021, SDGs Labs partners in Italy, Portugal, Germany, and Austria organised various online workshops in the so-called SDGs Innovation and SDGs Co-learning labs.

In Vienna, ISEKI-Food Association with WU Wien facilitated a series of online workshops. Together with a Viennese pioneer restaurant chain, 3 online SDGs Innovation Labs were held with the participation of 4 employees, applying different learning methodologies with the overall purpose

of fostering and creating a collaborative and creative learning space for SDG-based innovation and transformation. In the first Lab, participants were asked, in an *inspirational journey*, to reflect on specific actions or initiatives they are currently undertaking and planning considering each of the 17 SDGs. The idea behind this exercise was to make participants reflect on current practices directly linked to the SDGs and to activate future initiatives. Following this session, participants were taken on a *descriptive travel* in the future to imagine where they are in the year 2025, using the “Walt Disney” methods whereby participants slipped into different roles reflecting on what is realistic, what can be implemented, and what makes sense when launching a new product. In the second Lab, one week later, the main objective was to ignite the *doing phase* and thereby foster the development of concrete actions and plans for the nearest future. In the last Lab, which took place two months later, *concrete goals* for 2021 were highlighted in relation to defined visions and participants worked in teams discussing the information needed from customers to get more acquainted with their needs and to find solutions on how customers can contribute to the development of new products, services, and ideas. Very concrete and actionable solutions came out of the 3 Labs and; all in all, the Innovation Labs in Vienna provided room for the development of sustainable and innovative ideas and solutions within the realms of the SDGs.

In parallel with the SDGs Innovation Labs, also the so-called SDGs Co-learning labs were held in Vienna. In collaboration with the Viennese Nutrition Council (*in German Ernährungsrat Wien*), WU Wien and ISEKI-Food Association facilitated two online Labs in January 2021. On the topic of “Re:Localising a food hub for Vienna”, 15 stakeholders from the Viennese agribusiness and food production sector shared ideas on setting up a food hub in Vienna where active and responsible citizens came together to collaboratively develop sustainable solutions for the local value chain. In the first part of the Lab, participants discussed the social, economic and environmental challenges standing in the way of “relocalisation”, but also looked for first solutions in Vienna. Here, the importance of awareness building, knowledge exchange and education; networks and collaborations; consumer behaviour; the share of organic products on the market; and the availability of healthy and sustainably produced food also in relation to social aspects, were mentioned as solutions to be tackled by the food hub. All in all, the two consecutive online Labs provided space for exchange and co-creation of ideas and solutions with the overarching aim to collaboratively work on a food hub for Vienna.

The outcomes of all regional SDGs Innovation and Co-Learning Labs will be published in a report by summer 2021 and can be found on [SDGs Labs \(sdgs-labs.eu\)](https://sdgs-labs.eu)

You are Invited to Two FNS-Cloud Open Science Events

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



If you have been hearing a lot about Open Science but are not sure what exactly that means for your research work, then these events are for you!

“Opening up food and nutrition science: the FNS-Cloud project” a part of the ASKFOOD – Beyond COVID-19 webinar series on 7 April, 40 minutes

This webinar will introduce open data, open access publishing, and some of the many features of the now-in-progress [H2020 project, FNS-Cloud](#). The target audience is food and nutrition scientists interested in learning how to be a part of the Open Science future.



- We will compare and contrast open data and FAIR data
- We will introduce types of creative commons licenses for data sharing
- We will explore the varied open access publishing roads
- We will share the progress of the FNS (food nutrition security)-Cloud project

This webinar is free and open to the public. Information on registration are available on the [ASKFOOD website](#).

“An Open Science Taster” an FNS-Cloud Interactive Workshop at the EuroFIR Food Forum on 13 April, 75 minutes

This workshop will introduce the many pillars of Open Science while focusing on open data and open access publishing for food and nutrition scientists.



- We will introduce you to EOSC, the European Open Science Cloud and to the FNS-Cloud project, building a Food Nutrition Security Cloud.
- We will cover how to apply GDPR so that data can be shared, licensing for sharing data, and open data repositories.
- We will cover the characteristics of the colourful - green, gold, yellow, blue - open access publishing roads and the motivations for publishing open access.

The workshop is interactive with most of the time spent on individual and small group exercises. Registration fee is included with your EuroFIR Food Forum registration, but the number of attendees is limited to the first 15 requests. Those who successfully complete the workshop will receive an [FNS-Cloud](#) certificate.

More information soon to be available at the [EuroFIR Food Forum website](#).

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

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



According to “*Europe 2020 – A European strategy for smart, sustainable and inclusive growth*”, the improvement of quality & efficiency in education and the enhancement of training procedures & equality of all EU citizens is very important for a high quality of life. In relation to this, life is highly affected by healthy eating which is consequently influenced by food safety. Thus, in order to guarantee safe meals for consumption, an appropriate and complete training of food handlers is required.

The e-SAFE project aims 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.

The project started in November 2020 with the support of the Erasmus+ Programme and has a duration of 34 months. During this period, the transnational consortium (Poland, Greece, Austria, Cyprus, Italy, Lithuania) will explore the available training opportunities for food handlers across all the EU countries, assess current food handling knowledge and needs, and develop an innovative training tool to deliver skills and competences to the target group through an e-learning platform.

Several events, in which you can actively participate, will take place during the project. On 21-22 June 2021, the e-SAFE project will participate in a pre-conference event at the **6th International ISEKI-Food Conference** which will be held online.

You can learn more about e-SAFE on the [project website](#).



E-learning course “Best practices in innovation: Short Food Supply Chain”

by Foteini Chrysanthopoulou & Katherine Flynn, Project Managers ISEKI-Food Association, Austria



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 773785

A 5-week e-learning course on best practices in innovation in short food supply chains will be available in April 2021. The course, developed within the **SMARTCHAIN Project**, a Horizon 2020 project funded by the European Union, will be taught in English and is free.

In this course, you will learn what Short Food Supply Chains (SFSC) are and what differences exist among innovations that apply at the local, the regional and the national/international levels. Moreover, the course combines insights of consumers about SFSC experiences and expectations. You will also understand how to apply SFSC innovations in your own work from the perspective of technological, social, environmental, and other advances. Finally, you will learn and benefit from different levels of collaboration in your SFSC interactions by applying the GAIN model.

The course will be mainly interesting for SFSC entrepreneurs and stakeholders in all fields (farmers, producers, regulators, marketers, distributors, financiers, consumer organisations, etc.), but also for all others participating in or interested in SFSCs.

A Certificate of Completion will be awarded to participants who complete all the activities of the 5-week course within 6 weeks of starting the course and receive a grade of 80% or above on the final quiz.

[Register for the e-learning course "Best Practices in Innovation" here!](#)

NEWS ABOUT OTHER PROJECTS

Immersive virtual worlds applied to the design of agricultural machinery to avoid damage and bruises of table olives. AGRO-DEM-VR Project

by Angel Martinez Sanmartin, National Technological Centre for the Food and Canning Industry CTC, Spain & ISEKI-Food Association Institutional Member

AGRO-DEM-VR

COORDINA

PARTICIPA

FINANCIA



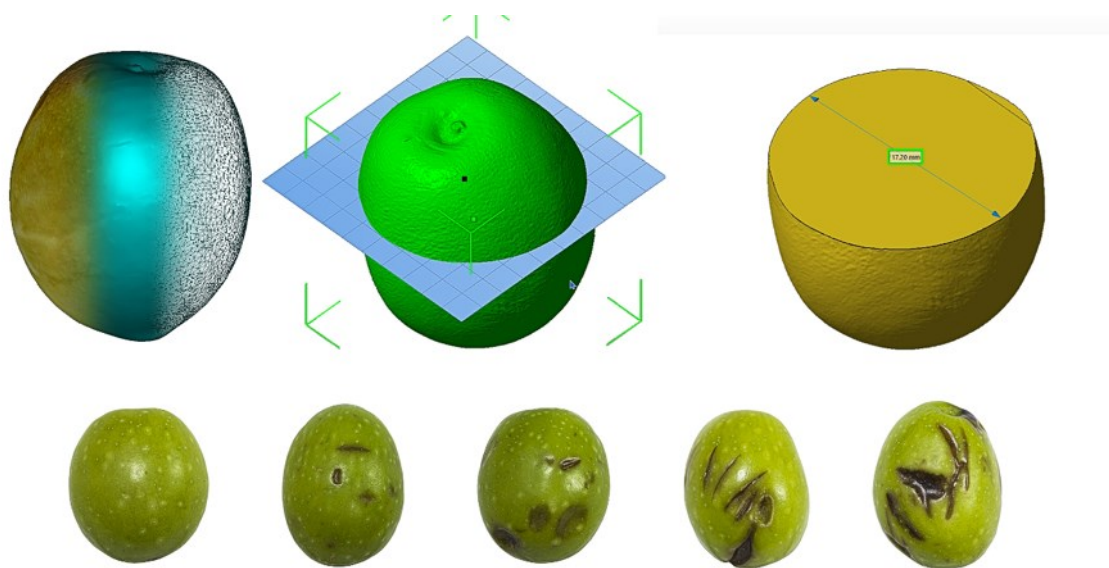
The AGRO-DEM-VR cooperative project was approved within the framework of the Spanish 2020 call for aid to support innovative business groups in order to improve the competitiveness of SMEs of the Ministry of Industry, Trade, and Tourism. The project coordinators are INOLEO and CETEMET. CTNC and the company ILDEFONSO ROSA RAMIREZ E HIJOS S.L. participate as partners.

The general objective of the project is to obtain a digital twin through virtual reality (VR) that allows combining the results of mathematical simulations of the interactions between machines and fruit, creating a new concept of machine design and helping its commercialization by means of immersive experiences.

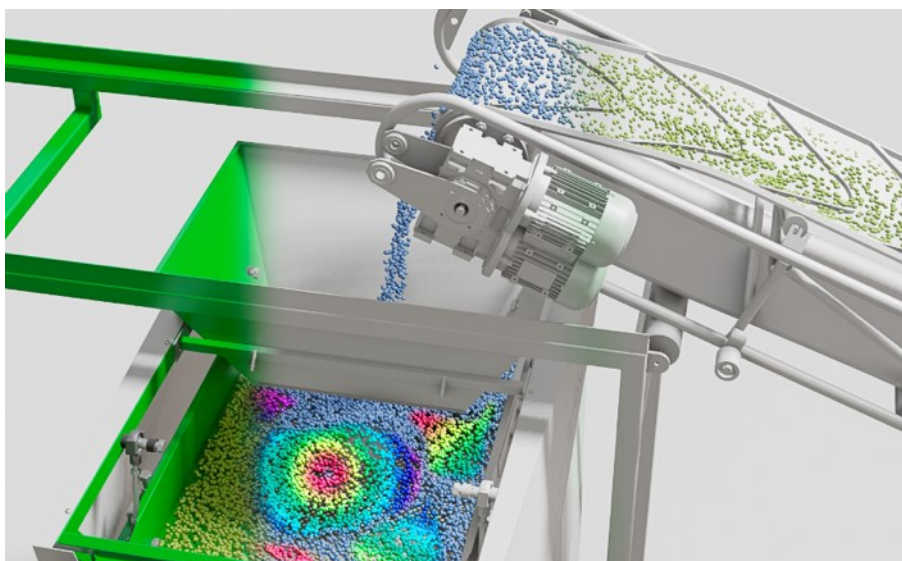
The specific objectives of the project are set out below:

- Reduce the damage and bruise time evolution of table olives during production processes, establishing design guidelines that minimize the damages of olives.
- Develop a new design system using VR. Inclusion in the agro-industrial sector of the use of immersive technologies belonging to Industry 4.0, exploiting its benefits in the design of machinery.
- Generate the detailed virtual model of the olive for DEM (*Discrete Elements Method*) simulations. The model will serve for the study of the different machines and processes for both the table olive and olive oil sectors.
- Extrapolate the results from virtual models to different kinds of fruit. The fundamental principles and methodology to face different models of fruit will be established.
- Feedback the models. The development models will be refined through the results of simulations and obtained virtual models.
- Reduce manufacturing time by use of VR. The ability to simulate and perform immersive experiments reduces the chance of errors and speeds up design and prototyping time for final models.

The agricultural machinery sector is facing a radical change in the era of digitization, going from being a very traditional and low-tech sector to entering fully into Industry 4.0. International competition creates the need to automate, mechanize, and digitize the olive sector in order to face its future, be competitive, and continue to lead multiple international markets.



Virtual models of olives obtained using a high-resolution 3D scanner (*upper*). Real olive images for DIA (*Digital Image Analysis*) of damages and bruises (*lower*).



Render of DEM simulation

ROBS4CROPS – Robots for protecting crops

by Tetiana Pavlenko, University of Hohenheim, Germany, ISEKI-Food Association Institutional Member



The new Horizon 2020 project ROBS4CROPS aims to accelerate a large-scale application of robots and autonomous vehicles in agriculture. The project started in January 2021 and will run until December 2024. It involves 16 partners from 7 European countries and is led by Stichting Wageningen Research. The University of Hohenheim, which is a member of the ISEKI-Food Association, is leading Work Package 2 and will bring its expertise in developing smart implements.

ROBS4CROPS WILL ADDRESS LABOUR SHORTAGES ON FARMS

Farmers are strongly influenced by falling prices for agricultural produce as well as the cost of labour and labour shortages, in particular when it comes to such operations as crop planting and harvesting. The repeatability and precision of the agriculture tasks that will be done within the ROBS4CROPS project will demonstrate how the need for human labour can be reduced. The COVID-19 virus has demonstrated an urgent need in the automation of farming operations, especially those which are dangerous for human health like spraying in orchards.

ROBS4CROPS WILL CONTRIBUTE TO INCREASING ADOPTION OF ROBOTIC FARMING

Existing agricultural machinery, communication standards, and best practices will be brought together to develop and deliver a fully autonomous system, ready for large-scale implementation. Four case studies with iterative testing and business model experimentation will be demonstrated on commercial fruit and vegetable farms in France, Greece, Spain, and the Netherlands. The project will focus on the most demanding field operations, such as mechanical weeding and pest- and disease-spraying.

For more information, please visit our [website](#).



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101016807.

Local Development and Cross Border Cooperation in the area of Agricultural Products and Traditional Feed – LOC-FOOD

by Maria Papageorgiou, International Hellenic University, Greece, ISEKI-Food Association Institutional Member



The Department of Food Science and Technology at the International Hellenic University is participating in the above project, which is funded by the **Black Sea Cross Border Cooperation**, Joint Operational Programme Black Sea Basin 2014-2020 with ≈0.8 M Euros.

The context: Agriculture forms an important part of the economy of the regions and countries in which the project partners are located. Many high-quality traditional foods are produced from indigenous varieties of crop plants and animal breeds to unique processed products and regional speciality dishes, but these are not widely distributed. Promotion of traditional foods will help support the economy of these areas, help preserve rare varieties and traditional techniques, and help raise safety and quality standards.

Partners:

Lead partner: Ministry of the Interior, Sector Macedonia and Thrace, GREECE, International Hellenic University, Dept. of Food Science and Technology, GREECE, Dunarea de Jos University, ROMANIA, Association of Tourism Development, MOLDOVA, Varna University of Management, BULGARIA, Odessa National Academy of Food Technologies, UKRAINE

The project will run for two years from June 2020. The overall objective is to promote economic development of the agricultural and food sectors of the participating regions. In order to achieve this objective, the following main tasks will be carried out:

- Create a database of high-quality local traditional foods.
- Submit selected foods for inclusion in the **EU geographical indications scheme**.
- Increase awareness of local food specialities by producing food guides to the region and encouraging culinary tourism.
- Help local food producers, local authorities and agricultural associations operate more effectively by analysing the current situation in the market and legislative environment and reporting on best practices from other parts of the EU.
- Report on procedures for obtaining EU geographical indication certification to assist food producers, agricultural associations, and local authorities.
- Organize training events and seminars and produce informative literature to support food producers who wish to improve their standards and increase their market share.

The team from IHU Food Science and Technology, led by Professor Maria Papageorgiou, is involved in all work packages of the project, and has particular responsibility for assessing the current situation in the agri-food sector and market and reporting on best practices in other parts of the European Union. The Dunarea de Jos University team is guided by Gabriela Iordachescu, also in the ISEKI family!

Common borders. Common solutions.



BIOCARB-4-FOOD



Extraction and characterization of BIOactives and CARBohydrates from seaweeds and seagrasses FOR FOOD-related applications

Efficient extraction of algae and seaweed compounds in an efficient and sustainable way

Common carbohydrate extraction procedures are inefficient in terms of processing time, water, and energy use. Furthermore, the remaining biomass (generally more than 50% of the initial material) although still rich in bioactive

compounds is usually disposed as organic waste. As a multidisciplinary project, BIOCARB-4-FOOD aims not only to improve extraction procedures from marine resources, such as seaweeds and seagrasses, but also to explore various potential applications of the extracted materials. This includes texture modification, functional ingredient development or the extraction of lignocellulosic fractions and nanocellulose from alternative resources and their potential applications. In collaboration with industry, the BIOCARB-4-FOOD project has developed more environmentally-friendly seaweed and seagrass extraction techniques including the valorisation of the remaining biomass. BIOCARB-4-FOOD has simplified extraction processes and their resource efficiency by combining conventional extraction methods, like hot water extraction with microwave, ultrasound or enzyme-based extraction and fewer purification steps. Since our article in ISEKI e-news in June 2019, we would like to provide you with some new project results:

During the project, several milestones were reached with impactful application potential for industries. Among them are the development of a simplified extraction protocol, reducing the extraction time 4-fold compared to conventional methods by using ultrasound and reduced purification, thus proving to be a cost-effective alternative to generate agar-based extracts (Martinez-Sanz et al. 2019). Microwave-assisted extraction also showed enhancement in extraction results and resource efficiency (Gomez et al. 2020). Further, it was investigated how matrices from seaweed-derived agar-based fractions protect probiotic bacteria compared to conventional purified agar microcapsules. It was shown that the less purified fractions from *Gelidium sesquipedale* performed better than pure agar due to the presence of polyphenolic seaweed compounds acting as antioxidants (Alehosseini et al. 2018). Additionally, the tested combinations of PVA/cellulose/nanocellulose aerogels combined with the less purified agar extracts obtained from *Gelidium sesquipedale* seaweed can be used as packaging materials with antioxidant properties to prolong the shelf-life of fresh food products (De Oliveira et al. 2018). Martinez-Sanz et al (2019) found out that non-purified agar-based extracts can also be used as packaging films for the food industry. Normally, plasticizers are added to purified agars to increase their flexibility. The most frequently used plasticizer is glycerol, often derived from petrochemical propene. Using non-purified agar-based extracts from *Gelidium sesquipedale* can make the use of plasticizers obsolete, since a plasticizer effect is caused by the presence of other compounds such as proteins. More so, non-purified agar films are much more resistant to humidity, one of the major flaws of agars in the food packaging industry.

Apart from this, the residues, and their extracted cellulose-rich fractions, also from *Posidonia oceanica*, have been used to produce biodegradable packaging materials without competing with food resources like e.g. corn starch. One promising application of *Posidonia oceanica* is its use as filler material to improve the properties of biopolymers. Bio-based substitutes made from starch often lack the required mechanical properties. The incorporation of cellulose from *Posidonia oceanica* into the starch

composites enhances mechanical properties and limits the degree of starch retrogradation upon storage (Benito-Gonzalez et al. 2018).

Finally, extracts from *Posidonia oceanica* waste biomass can also serve medical purposes. Bioactive extracts from this seaweed proved to have high antioxidant capacities due to phenolic compounds, proteins, and polysaccharides. Some extracts also showed antimicrobial properties against several foodborne fungi and even the ability to reduce the infectivity of viruses such as Feline calicivirus and Murine norovirus (Benito-Gonzalez et al. 2019).

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biocarb4food



biocarb4food.eu



amparo.lopez@iata.csic.es or
daniel.fenrich@uni-hohenheim.de



Funding Agencies

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by decision of the
German Bundestag



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727473.



PrO4Bake – Supporting SME bakeries in Europe with digitalisation technologies

Bread and baked goods are some of the most consumed food products per capita in Europe. However, European SME bakeries face multiple unique challenges when producing and selling these goods: (1) High energy consumption in the production process, (2) low margins on the selling price, and (3) a very limited shelf life for many of the produced specialities. Consequentially, technology uptake in the bakery sector is rather slow and affected by a high financial risk, including a long return of investment, hidden costs by process disruption, as well as a general lack of time and information regarding new technologies and their technical feasibility. In order to overcome these challenges, it is essential to raise awareness for energy efficiency measures, transfer the knowledge about opportunities provided by the application of innovative technologies, as well as to ensure effective communication with SMEs for understanding their needs, limitations and possibilities.

The EIT Food project **PrO4Bake** uses a holistic approach for minimizing energy consumption and food waste in European SME bakeries, applying Industry4.0 technologies, artificial intelligence and design via co-creation with SMEs and consumers. The project develops a production planning tool for optimal scheduling combined with the prediction of daily product demands, as well as training and consultancy support of SMEs for technology uptake. In order to provide a robust design for the computational tool, production data is collected in SME bakeries all over Europe. Preferences regarding consumption are explored with consumer questionnaires and focus group interviews.

By optimizing the production schedule and using the demand forecast function of the tool, bakeries will be able to substantially reduce CO₂ emissions and avoid overproduction and its consequences, such as unnecessary labour and food waste, as well as costs for (wasted) raw material and energy. In addition, the developed production planning tool and consulting service will help to minimize the volume of unsold goods and harmonize production processes without the need to acquire new equipment for the SMEs. In order to facilitate the uptake of the tool in SME bakeries, a training set on the use of the tool is currently being developed. Furthermore, technical support will ensure the application of the tool in a real-life environment through on-site visits and assistance. A continuous discussion between the project partners and the involved bakeries ensures the exploration, applicability, understanding and respect of requirements and needs in the production processes of different SME cultures, sizes, and technological differences.

Adapting the produced amount and range of baked products to the demand of consumers as well as optimizing the bakery production processes and schedules is an essential part in making SME bakeries more competitive and sustainable. This is an important step towards more resource-efficient food production in the European bakery sector and potentially beyond.

For more information, please contact: kevin.thellmann@uni-hohenheim.de



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food and drink innovation



This activity has received funding from EIT Food, the innovation community on Food of the European Institute of Innovation and Technology (EIT), a body of the EU, under the Horizon 2020, the EU Framework Programme for Research and Innovation

NEWS ABOUT EDUCATION AND TRAINING

Horizon Europe Intelligence & Proposal Development Workshop



This workshop will be a 2-stage training for all ICC, HGF and ISEKI members.

Part 1: 28/04/2021 | Part 2: 07/05/2021

Horizon Europe is the EU's research and innovation framework programme running from 2021-2027. As the successor programme of the Horizon 2020, Horizon Europe, will continue to support the entire research and innovation cycle. It will encourage partnerships, a stronger involvement of citizens and more clearly communicate the positive impacts of research and innovation, such as progress in the health and environmental sectors. In order to achieve this, the programme will incorporate research and innovation missions to increase the effectiveness of funding by pursuing clearly defined targets.

In our 2-stage workshop, our trainers

Daniel Spichtinger, *Independent expert*, with core competences in EU research policy, open access and FAIR data as well as EU Horizon 2020 proposal writing and

Rainer Svacinka, *CEO Sumo Technologies GmbH*, with core competences in research project management as well as European and national research funding schemes

will present on day one of this workshop what's new in Horizon Europe and what's not while they will develop together with the participants initial project ideas and pre-proposals on day two.

This webinar will be held in English!

You can find more information and registration details [HERE](#).

Part 1: [Free for ICC, HGF and ISEKI Members](#) | € 50 for Non-Members

Part 2: € 150 for all interested participants

Please note: you need to register for each part separately!

7th School on Pulsed Electric Field Applications



7th School on Pulsed Electric Field Applications in Food and Biotechnology
Zaragoza, Spain
31 May - 2 June, 2021

ISEBTT International Society
for Electroporation-Based
Technologies and Treatments



Universidad
Zaragoza

Following the success of the previous Schools: Zaragoza (Spain), Salerno (Italy), Dublin (Ireland), Vienna (Austria), Osnabrück (Germany) and Casena (Italy), the 7th School on PEF applications in food and biotechnology that was postponed in 2020 will be held from May, 31st to June 2nd, 2021 at the University of Zaragoza (Spain). The Scientific Committee has decided to transform the School into an on-line event. We hope you understand this decision was based on the health and safety of participants, their families, and our staff, which are the highest priority for us at this critical time.

The aim of the course is to offer attendants (PhD students, early-stage researchers, and industrial users of the technology) an overview of knowledge and understanding of the basic principles involved in processing by pulsed electric fields and to provide practice in the use of these principles in the food and biotechnological industries. Basic concepts that are required to understand electroporation and generation of pulsed electric fields from an electrical point of view, main effects of the treatments on microbial, plant and animal cells, techniques and research procedures to investigate electroporation and the most recent applications of PEF in the food industry will be presented by experts in the field. Live lectures online will be complemented with live practical sessions online, and short presentations of activities conducted by participants. The course will offer the opportunity of promoting networking and communication between young scientists, experts and industrial partners interested in this attractive technology.

More information about the event and the application procedure can be found on the [website](#).

NEWS ABOUT ISEKI-SUPPORTED EVENTS

7th INOPTEP 2021 – Sustainable Postharvest and Food Technologies, 18-23 April 2021

by Mirko Babic, National Society of Processing and Energy in Agriculture, Serbia, ISEKI-Food Association Institutional Member



The seventh international conference INOPTEP 2021 will be held from 18 to 23 April 2021, as planned. This traditional meeting will take place at the „Srbija“ hotel in Vrsac. This town is located in north-eastern Serbia, near the border with Romania.

DUE TO THE CURRENT STATE OF THE COVID-19 PANDEMIC, THE CONFERENCE WILL BE OF A HYBRID CHARACTER. Participants choose the way they participate. Direct participation will be determined by the framework of regulations

valid at the time in the Republic of Serbia. The number of direct participants will be limited to the reduced capacity of the hotel. A larger number of conference participants will use the ZOOM platform and indirectly participate in the conference. All conference participants must verify their direct or indirect participation, which is defined and there is information about it on the website of PTEP.

82 abstracts from 15 countries (Europe, Asia and Latin America) were registered for the conference. This is certainly less than usual, but also encouraging given the circumstances. Young researchers dominate, but there are also enough seniors.

We thank all the registered authors, but we express special gratitude to our regular and renowned participants. A participant at the conference is also the new president of ISEKI-Food association, Prof. Margarida Cortez VIEIRA. Professor Marco Dalla Rosa (member of the Advisory committee of ISEKI FA), to our great joy, once again announced his participation this year with a very interesting and current topic. Prof. Dalla Rosa has participated in all six previous conferences. The lecture will be given by Prof. Zuzana Hlavačova from the Slovak Faculty of Agriculture in Nitra, Slovakia, who was also a participant at all previous INOPTEP and at a large number of PTEP conferences. From renowned foreign participants we list: Prof. Dorota Kregiel, Poland, Prof. Vangelče Mitrevski, Northern Macedonia, Prof. Cosmin Salasan, Romania, Prof. Antonio Modesto Chaves, Brazil, Dr. Branimir Šimić, Croatia and others. Most of these esteemed colleagues will present their lectures through the ZOOM platform. A large number of domestic professors and scientists from very different faculties and institutes will be part of INOPTEP 2021. ISEKI FA members can request a link to follow the conference from us, and they can find all recordings of the conference (postponed) on YouTube for free.

It should be noted that the conference participants from Serbia will be partly in the hotel and participate directly, and partly participate online. Poster presentations must be supported by a short online presentation and "defense" of the poster. Technical instructions can be found on the [website](#).

2nd International Olive Center Conference, 3-4 June 2021, ONLINE

by Kiki Zinoviadou, Perrotis College, Greece, ISEKI-Food Association Institutional Member



This will be the second in a series of biennial conferences designed to address selected current topics relating to table olives and olive oil (markets, products, technologies & practices). The conference will be held online.

PROGRAM-DATES

The conference includes two days of presentations and round-table discussions (3-4 June).

ABSTRACTS

Proposals for poster presentations are invited. The abstracts will be submitted exclusively online.

DEADLINE FOR ABSTRACT SUBMISSION: 10 May 2021.

More specifically, the thematic areas are:

Thursday 03, June

- Best Agricultural Management Practices
- Sensory Evaluation on olive oil and table olives-Legislation and marketing trends
- The olive sector as a tool of rural development

Friday 04, June

- A. Nutritional and health aspects of olive products
- B. Waste Management and Bio-economy
- C. IT use for sustainable production and novel tools of traceability
- D. Marketing of olive products: exports branding and e-commerce

The first day of the conference will be held in Greek and the second one in English. Participation on both days is free of charge.

Additional information can be found [here](#).

International symposium “Food connects people and shares science in a resilient world”, 7-8 October 2021

by Gabriela Iordachescu, Dunarea de Jos University of Galati, Romania, ISEKI-Food Association Member



The 10th Anniversary Edition of the International Academic Symposium “Food connects people and shares science in a resilient world” is organised by Dunarea de Jos University of Galati – Faculty of Food Science and Engineering and will showcase between 7-8 October 2021.

Due to pandemic conditions and with the purpose of ensuring all safety conditions for the participants, the symposium will be organized on-line, hoping to create a bridge of knowledge and real integration of scientists, thus favouring the exchange of results, ideas, and scientific cooperation.

During the two-day meeting, key aspects of food science and technology, nutrition, food safety, biotechnology, aquaculture and aquatic resources, bioeconomy, and new models to connect science to business will be debated in the plenary sessions and parallel symposium sections.

The symposium topics are:

- Trends and drivers in food science, technology, and nutrition in a resilient world;
- Food safety in a pandemic world;
- Biotechnological strategies for innovation in bioeconomy;
- Multidimensional approaches for aquaculture and aquatic resources sustainability;
- Sustainable approaches for reintegration of by-products into valuable bioproducts;
- Science to business: Networking new models for further transition.

Willing to share relevant insights in terms of significant research results, experience, and knowledge, leading keynote speakers joined to support the core message of our event - *Food connects people and shares science in a resilient world*, wishing to create lasting value and meaningful change with a view to shape new and emerging solutions and technologies for the development of food after the pandemic crisis.

We cordially invite you to follow the information about our event. For more information and registration, please visit the [Symposium website](#).

UPCOMING FOOD-RELATED EVENTS / WEBINARS

April 2021

18-23 April 2021

INOPTOP 2021 – Sustainable Postharvest and Food Technologies

More information: <http://www.ptep.org.rs/Sajt%20engleski/indexen.html>

Serbia

New! 20-23 April 2021

4th International Conference on Education, Innovation and Learning Technologies (ICEILT-4)

More information: <https://www.iceilt-4.com/index.html>

Virtual conference, Spain

May 2021

CANCELLED! 3-5 May 2021

FoodBalt 2021 – Sustainable Food for conscious consumer

More information: <https://tftak.eu/foodbalt/>

Tallin, Estonia

New! 31 May – 2 June 2021

7th PEF School on Pulsed Electric Field Application

More information: <http://pefschool2020.electroporation.net/>

Zaragoza, Spain

June 2021

New Date! 3-4 June 2021

2nd International Olive Center Conference

More information: <https://www.medevents.gr/congress/olive2020?lang=2#/content-top>

ONLINE

23-25 June 2021

6th International ISEKI-Food Conference

More information: <http://iseki-food2020.isekiconferences.com/en/>

ONLINE

September 2021

September 2021

2nd UNIFood International Conference – UNIFood2020

More information: <http://unifood.rect.bg.ac.rs/index.php>

Belgrade, Serbia

19-22 September 2021

Food Micro 2021 – Next Generation Challenges in Food Microbiology

More information: <http://foodmicro2020.com/>

Athens, Greece

New! 20-22 September 2021

SAAFoST 2021 – 24th Biennial International Virtual Congress

More information: <http://saafost2021.org.za/>

KwaZulu-Natal, South Africa

October 2021

7-9 October 2021

ProtStab'2021 – 13th International Conference on Protein Stabilization

More information: <https://www.protstab2021.org/>

Plovdiv, Bulgaria

May 2022

3-5 May 2022 – **postponed**

7th International Conference on Food Digestion

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

Cork, Ireland

June 2022

June 2022 – **postponed**

Int. Conference Insects to Feed the World

More information: <http://ifw2020.org/>

Québec, Canada

New Date! 09-10 June 2022

7th International Food Safety Congress

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

Istanbul, Turkey

New Date! 21-24 June 2022

3rd International Conference on Food Bioactives & Health

More information: <http://www.fbhc2020.com/?fbclid=IwAR2giw5ex5cxtDVMWfh-7CbadgISG73IGr3cj0d1KsB9EIXEc65QDLrxsB0>

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