36th EFFoST International Conference

Shaping the Production of Sustainable, Healthy Foods for the Future

7-9 November 2022
Dublin, Ireland

Conference Book

www.effostconference.com

EFFoST 2022 INTERNATIONAL CONFERENCE
7-9 November
Dublin, Ireland

Organised by: EFFoST

Hosted by: UCD DUBLIN

Co-event: NTP 2022


Nestlé
KitKat
VEGAN
Per bar
Energy
891kJ
214kcal
11%*
Energy per 100g:
2146kJ/515kcal
Vegan

Dear Colleagues and Friends,

We would like to welcome you to the 36th EFFoST International Conference and to Dublin, Ireland. We are excited to share the latest scientific knowledge and advances in Food Science and Technology under this year's conference theme: ***Shaping the Production of Sustainable, Healthy, Foods for the Future.***

It is timely, given the unprecedented pressures on global food systems, that we come together to discuss how food science and technology can positively contribute to these challenges. The conference will demonstrate how the scientific community, the food industry, the food service sector, regulatory bodies and other stakeholders, are working in unison to address global issues.

The conference programme was developed by the Local Organising Committee which includes colleagues from across the island of Ireland, from University College Dublin, University College Cork, University of Limerick, Technical University of Dublin, Queen's University Belfast and Teagasc. The status quo will be challenged, and scientific innovation and development highlighted in five plenary lectures, panel discussions, more than 150 oral contributions in 28 parallels sessions, 60 presentations in the 10 special sessions dedicated to EU project results and association activities, and over 430 poster presentations.

We are delighted that the EFFoST/IFT-NPD Workshop on Nonthermal Processing of Foods will also be held at the 36th EFFoST International Conference. This means that as a EFFoST2022 delegate, you will also have access to 10 NTP sessions with more than 50 speakers during the parallel programme. More information on NTP2022 can be found on page 18.

We look forward to giving you a "Céad Mile Fáilte"!

With kind regards,

Prof. James Lyng
UCD Institute of Food and Health, Ireland

Prof. Dolores O'Riordan
UCD Institute of Food and Health, Ireland

James Lyng *is the Head of the Food and Nutrition Section at University College Dublin. His scientific research focuses on the use of emerging thermal and non-thermal technologies in the processing of foods including their assessment for preservation and impact on product quality/nutritional value. He also assesses their use in valorization of food waste and their role as novel processing technologies in the bioeconomy.*

Dolores O'Riordan *is a Full Professor of Food Science, the Director of UCD's Institute of Food and Health and UCD's Vice President for Global Engagement. Her research focuses on the physico-chemical properties of food ingredients and food structures that enhance health benefits. She has active global partnerships and holds appointments on several national and European committees and boards.*

About the 36th EFFoST International Conference

The 36th EFFoST International Conference 2022 **'Shaping the Production of Sustainable, Healthy Foods for the Future'** is hosted by University College Dublin. It is held in the city of Dublin, Ireland from 7-9 November 2022.

Healthy and sustainable food systems must be achieved as a matter of urgency to improve human health and the health of the planet. Ensuring that healthy eating equates to sustainable eating requires the collaboration of many stakeholders across the food chain. EFFoST2022 aims to assemble a range of experts to articulate the challenges and advance our knowledge of how to produce and process healthy sustainable foods and mobilise citizens to make sustainable dietary choices.

Every year the European Federation of Food Science and Technology (EFFoST) organises this prestigious academic food science and technology conference. Join world-renowned researchers, scientists, policy makers, professionals and students from multi-disciplinary food-related fields to share the latest developments and create new partnerships.

EFFoST2022 explores the theme **'Shaping the Production of Sustainable, Healthy Foods for the Future'**. This theme is further examined with these five main conference subthemes that highlight the expertise of this year's conference host.

1 Green Food Processing – Innovations to meet the future challenges of food production

- Innovative and novel sustainable food processes
- Sensor technology to enhance food quality
- Robotics, automation, and control of food processes
- Modelling, its role in quality by design

2 Developments in foods to underpin an appealing, healthy, sustainable diet

- Enhancing the sensory appeal of foods
- Formulation of foods to enhance their sustainability and/or nutritional value
- Engineering food structures to enhance nutrient quality and bioavailability
- Bioactives and secondary metabolites: generation and characterisation
- Advances and challenges in alternative proteins
- Designing and producing foods to meet future challenges

3 Advances to enhance food safety, security, authenticity and integrity

- Bioinformatics and its role in food safety, hygienic design & contamination control
- Protecting the food chain, biosecurity, food fraud and authenticity
- Emerging technologies for the rapid detection of food safety issues
- Identifying and preparing for emerging food safety risks
- Food toxicology and allergenicity

4 Implementing the circular economy across the food chain

- Emerging technologies for valorising side steams, food waste & by-products
- Advances in food packaging to safeguard food the environment
- Approaches to minimise water use and water waste.
- Techniques to enhance energy efficiency & minimize environmental impact
- The Internet of Food for Things

5 Market perception of food processing and sustainable, healthy diets

- Consumers' attitudes to processed foods and desire for clean labels
- Consumer trends and responses to emerging and future foods
- The role of foodservice & food retailers in the provision of food to satisfy sustainable healthy diets
- Supporting consumer choices and preferences: technologies to help consumers make informed decisions
- Dietary recommendations consistent with a sustainable healthy diet, current & future policies

Organizing committee

Conference Chairs

Prof. James Lyng
UCD Institute of Food and Health, Ireland

Prof. Dolores O'Riordan
UCD Institute of Food and Health, Ireland

Organising Committee

Dr Catherine Barry-Ryan
Technological University Dublin, Ireland

Prof. Paula Bourke
University College Dublin, Ireland

Prof. Mark Fenelon
Teagasc, Ireland

Prof. Maeve Henchion
Teagasc, Ireland

Prof. Mary McCarthy
University College Cork, Ireland

Dr Anne Nugent
Queen's University Belfast, Northern Ireland

Dr Geraldine Quinn
University College Dublin, Ireland

Prof. Brijesh Tiwari
Teagasc, Ireland

Programme coordination committee

Alva O'Loughlin Kennedy
UCD, Ireland

Steven Mulrooney
UCD, Ireland

Scientific committee

Lilia Ahrné
University of Copenhagen, Denmark

Wayne Anderson
Food Safety Authority of Ireland, Ireland

Serafim Bakalis
University of Copenhagen, Denmark

Diána Bánáti
International Life Science Institute Europe, Belgium

Remko Boom
Wageningen University and Research, the Netherlands

Gail Bornhurst
University of California Davis, USA

Kaye Burgess
Teagasc, Ireland

Sylvie Chevallier
ONIRIS-GEPEA, France

Milena Corredig
Aarhus University, Denmark

Marco Dalla Rossa
University of Bologna, Italy

Kees de Gooijer
TKI Agri&Food, Netherlands

Hugo de Vries
INRA-UMR IATE, France

Ferruh Erdogdu
Ankara University, Turkey

Giovanna Ferrari
Università degli Studi di Salerno, Italy

Vincenzo Fogliano
Wageningen University and Research, the Netherlands

Richard Frazier
IFST, United Kingdom

Jesús Frías
Dublin Institute of Technology, Ireland

Eimear Gallagher
Teagasc, Ireland

Kata Galić
University of Zagreb, Croatia

Eleni Gogou
NTUA-National Technical University of Athens, Greece

Tara Grauwet
KU Leuven, Belgium

Christoph Hartmann
Nestle, Switzerland

Delphine Huc-Mathis
AgroParisTech, France

Henry Jäger
University of Natural Resources and Life Sciences, Austria

Anja Janssen
Wageningen University and Research, the Netherlands

Alain Le Bail
ONIRIS, France

Uri Lesmes
Technion - Israel Institute of Technology, Israel

Ioanna Mantala
Agricultural University of Athens, Greece

Olga Martin-Belloso
University of Lleida, Spain

Alexander Mathys
ETH Zurich, Switzerland

Viktor Nedovic
University of Belgrade, Serbia

Lisa O'Connor
Food Safety Authority of Ireland, Ireland

Laura Piazza
University of Milan, Italy

Paola Pittia
University of Teramo, Italy

Cornelia Rauh
Technical University of Berlin, Germany

Catherine Renard
INRAE , France

Anet Režek Jambrak
University of Zagreb, Croatia

Anwesha Sarkar
University of Leeds, United Kingdom

Oliver Schlüter
Leibniz Institute of Agricultural Engineering, Germany

Felix Schottroff
University of Natural Resources and Life Sciences, Austria

Cristina Silva
Catholic University of Portugal, Portugal

Petros Taoukis
National Technical University of Athens, Greece

Declan Troy
Teagasc, Ireland

Vasilis Valdramidis
University of Malta, Malta

António Vicente
University of Minho, Portugal

About EFFoST

The European Federation of Food Science and Technology (EFFoST) facilitates knowledge and technology exchange among food professionals. EFFoST creates opportunities for food scientists, engineers, technologists, policymakers and businesses in food and food-related areas to connect and collaborate with the objective to enhance the uptake of new technologies and developments. By supporting the further development of food science and technology, EFFoST aims to advance the production of sustainable and healthy ***food for all in a changing world.***

The sustainability of our food supply chain is threatened by environmental and societal shifts, such as climate change and depletion of natural resources, as well as the increasing consumption per capita and changing dietary preferences. Guaranteeing the availability and accessibility of food for future generations will require creativity, expertise and entrepreneurial spirit to generate sustainable and innovative solutions.

In support of this, EFFoST is dedicated to creating a community of European food experts to advance the field of food science and technology through:

EFFoST community

More than 130 societies, institutes and universities all over Europe are affiliated to the non-profit organisation EFFoST. We are Europe's largest food science expert base and stakeholder group. EFFoST is the European group of the International Union of Food Science & Technology (IUFoST), which in turn is a full member of the International Council for Science (ICSU).

Agro Business Park 82 | 6708 PW Wageningen | The Netherlands | +31 88 3663 700 | info@effost.org

Find The European Federation of Food Science and Technology on @EFFoST

www.effost.org

Networking

EFFoST International Conference: at this annual event recent advancements in food science and technology are discussed. This year marks the 36th EFFoST International Conference.

EFFoST awards: Food professionals are recognised for their outstanding contributions to the field with the Science to Society and Lifetime Achievement Awards. The next generation of food scientists are acknowledged with the Student of the Year award.

EFFoST Membership: allows food professional to expand their network and stay informed of the latest developments.

Sharing knowledge

EFFoST journals: In collaboration with the academic publishing house Elsevier, EFFoST has three official peer-reviewed journals, namely: *Trends in Food Science & Technology*, *Innovative Food Science and Emerging Technologies*, *Food Control*.

Taste of Science: Taste of Science is an online magazine with easy-to-read articles to inspire food entrepreneurs to give them an edge in the increasingly competitive food market.

EFFoST media channels: EFFoST shares the latest developments in food science and technology, including research results and project outcomes on the EFFoST website, in our newsletter and on social media.

Building collaborations

Young EFFoST: This young scientist group is created by and for students and early-career food professionals. Young EFFoST is dedicated to helping young scientists develop personal and professional skills.

Working groups: The EFFoST working groups dedicated to *'Digital Food'*, *'Health & Food'* and *'Sustainable Food Systems'* allow for the cross-polination of knowledge, ideas and applications from various food science disciplines.

About University College Dublin

The host of the 36th EFFoST International conference is University College Dublin (UCD). It is the largest university in Ireland with over 33,000 students drawn from 144 countries, including almost 4,000 students based at locations outside of Ireland. UCD is ranked within the top 1% of higher education institutions worldwide and is one of Europe's leading research-intensive universities with research activities falling within its four strategic themes:

- Creating a Sustainable Global Society
- Transforming Through Digital Technology
- Building a Healthy World
- Empowering Humanity

Food Science and Technology is a core academic and research strength within UCD spanning two of its constituent schools, the School of Agriculture and Food Science and the School of Biosystems and Food Engineering. In 2008, the UCD Institute of Food and Health was established to draw on the research strengths of these two schools alongside other schools working in the area of food and health, to create a centre of excellence and a hub for multidisciplinary research. Under the Directorship of Professor Dolores O'Riordan, co-Chair of the EFFoST 2022 International Conference, the Institute's research focus is to Future Proof Global Food Systems. It currently draws its membership of over 200 from faculty, postgraduate students and postdoctoral researchers working across the university in the areas of Food Safety; Food Sustainability; Primary Production Systems; Innovative Food Processing; and Nutrition and Health. Within this membership, the Institute hosts some of the world's most highly cited researchers and world leading experts in the area of food science and technology. Working with research partners across the university and within national and international multidisciplinary research programmes, the Institute to 'future-proof global food systems enabling healthy living and societal well-being'.

UCD is privileged to be part of a large eco-system of research leadership on the island of Ireland. The Irish government has made significant investment in research as well as in public-private partnerships, which have stimulated food and bio-economy research and innovation to be responsive to the changing nature of innovation and global challenges. It has also led to the development and consolidation of considerable research expertise in food technology. Ireland has recently published its 2030 agri-food strategy which sets out the high ambition to become an international leader in Sustainable Food Systems over the next decade. The State has committed to continue to support the research required to underpin this ambition with appropriate funding.

Together with our colleagues from across the island of Ireland, from University College Cork, University of Limerick, Technical University of Dublin, Queen's University Belfast and Teagasc, we are delighted and honoured to have the opportunity to host the 2022 EFFoST International Conference. We look forward to welcoming you and meeting you in Dublin.

Special Issues

The 36th EFFoST International Conference will be partnering with the academic publishing house Elsevier to create two special issues with a collection of articles representing the most cutting-edge research presented at EFFoST2022.

This year special issues that highlight the themes and topics of the conference will be published in *Innovative Food Science and Emerging Technologies* and *Future Foods*. The Conference Organising Committee will invite a select number of authors to contribute to the high-impact journal Innovative Food Science and Emerging Technologies. There will also be an open call for all other EFFoST2022 presenters and attendees to submit their work to the special issue of the open-access journal, Future Foods. Elsevier will be providing a full waiver for all contributors to the special issue of Future Foods; therefore authors will exceptionally not need to pay the article processing charge fee.

Every article will undergo a rigorous peer view process lead by the Editors-in-Chief and the EFFoST2022 Guest editor. The deadline for the submission of manuscripts for both special issues is 31 December 2022.

Supporting Journals of EFFoST2022

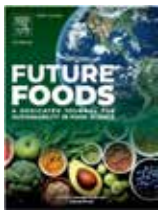
The 36th EFFoST International Conference will be partnering with the academic publishing house Elsevier to create two special issues with a collection of articles representing the most cutting-edge research presented at EFFoST2022.

Innovative Food Science and Emerging Technologies (IFSET) aims to provide the highest quality original contributions on new developments. It presents works to advance current scientific knowledge and understanding or with high technical relevance. The journal publishes research and review papers dealing with key advances in food science, food engineering and technology, safety, security, sustainability, fundamental, kinetics and mechanistic aspects of promising emerging food processing technologies as well as key food science innovations.

For more information, please visit:
www.sciencedirect.com/journal/innovative-food-science-and-emerging-technologies

Trends in Food Science & Technology is one of the premier international peer-reviewed journals publishing critical reviews and commentaries of current technology, food science and human nutrition. Its role is to fill the gap between the specialized primary journals and general trade magazines by focusing on the most promising new research developments and their current and potential food industry applications in a readable, scientifically rigorous way.

For more information, please visit:
www.sciencedirect.com/journal/trends-in-food-science-and-technology



Future Foods is a dedicated Journal to address the challenges of climate change and sustainability in food production. A transformation of the way food is currently manufactured and consumed is necessary to feed an ever-growing population whilst limiting its environmental impact. Future Foods publishes research that embodies the objective of developing new technologies and food sources for more sustainable food systems.

For more information, please visit:
www.sciencedirect.com/journal/future-foods

Food Control is an international journal that provides essential information for those involved in food safety and process control. It covers the main areas that relate to food process control or to food safety of human foods, such as microbial food safety and antimicrobial systems, mycotoxins, risk assessment, quality assurance, etc. The contributions should be innovative either in the approach or in the methods used.

For more information, please visit:
www.sciencedirect.com/journal/food-control

On-site information

Registration

The registration desk will be located in the Atrium of the AVIVA Stadium. The registration desk will be open on Monday 7 November from 8:00-18:30 and will remain open for queries and registration for the duration of the conference.

Security

The health and safety of our attendees is our number one priority. From 21 January 2022, the Irish Government removed the majority of Covid-19 public health restrictions however we encourage you to

- Avoid physical contact, such as handshakes and embraces
- Wear face masks (if you so wish) in the public areas of the conference
- Respect others by maintaining where possible one metre social distance
- The venue will have enhanced cleaning procedures, with hand washing and sanitising facilities at frequent intervals, and will employ the highest standards of food safety. This guidance will continue to be reviewed in line with government and local authority updates.

Badges

For security reasons and for catering purposes, please ensure that you wear your conference badge throughout the conference. The colour coding of the badges is as follows:

Teal blue: Delegates
Light blue: Plenary/Keynote Speakers
Orange: Conference Session Chairs and Committee
Yellow: Exhibitors & Sponsors
Dark Green: NTP2022 workshop
Light green: Staff

Conference session locations

The conference plenary sessions will be held in the Presidents Suite, beginning at 13:00 on Monday 7 November. Please see the full programme for individual sessions, presentations, poster sessions and catering times.

Room Usage	Room Name
Conference Plenary Sessions & Parallel Session 1	Presidents suite, level 2
Conference Parallel Sessions	Havelock room, level 4 1872 room, level 3 Lansdowne room, level 1
NTP2022 Workshop	Vavasour Room, level 0
Special sessions	Corporate box 441 and 442, level 4
Poster Sessions, Lunch and Refreshment Breaks	Presidents Terrace, level 2
Exhibition, Lunch and Refreshment Breaks	Atrium, level 3

Poster sessions

The poster sessions will take place in the Presidents Terrace. Poster presenters should refer to the presenter author index in the back of the programme booklet, to check which poster session and board have been allocated to them.

Poster pin-up and removal times are as follows:

Poster Session	Pin-up	Removal
Poster Session 1	8:30 on Tuesday 8 November	18:30 Tuesday 8 November
Poster Session 2	8:30 on Wednesday 9 November	18:00 Wednesday 9 November

Please note that any posters remaining in place after the indicated times above may be removed by the organisers who accept no responsibility for loss or damage.

Important: Posters should be fixed to boards with Velcro stickers. Please see the Conference organisers at the registration desk who will provide fixing materials.

Programme

Any last-minute changes to the programme or news will be available on the app.

Speakers

Oral presenters are reminded to be in the room that they are speaking in no later than 15 minutes before the start of the session in order to meet with the session chair. **Please bring your presentation on a USB** to the Speaker Preview Room (room 440) located on level 4, two hours before your presentation. The technicians will ensure that your presentation is uploaded to the room you will be presenting in.

Abstracts

All the conference abstracts can be viewed online, this the QR code

Password: EFFO2022

Lunch, refreshments and reception

The registration fee includes the following catering arrangements:

Catering Arrangements	Dates	Times
Welcome Drinks Reception	Monday 7 November	18:00-20:00
Refreshment Breaks	Monday 7 November - Wednesday 9 November	Please see the full programme for timings
Lunch	Tuesday 8 November and Wednesday 9 November	Please see the full programme for timings

Wi-Fi access

There will be free access to the Wi-Fi.

Certificates of attendance

You will receive your certificate of attendance 4 weeks after the conference has concluded, you must fill out the feedback survey to receive your certificate of attendance. The feedback survey will be sent to you via email once the conference has ended.

Conference dinner

The conference dinner will be held at the Guinness storehouse on Tuesday 8 November at 20:00. A 3-course dinner will be served along with drinks, followed by tea and coffee. As our conference dinner guest, you are welcome to visit the Guinness Experience between 19:00-20:00. Delegates who have purchased a dinner ticket will be collected from outside the AVIVA stadium at 18:15. If you have booked a dinner ticket, this will be indicated on your conference badge.

Conference evaluation

Your comments and views on the content and organisation of the conference are highly valued. An evaluation form will be available online after the conference and the link will be emailed to you.

Social media

Please follow us and share your experiences of the conference on Twitter, LinkedIn and Facebook. Make sure to use **#EFFoST** and tag us with **@EFFoST**.

Photography

No photography or video/sound recording of conference presentations or posters is allowed during the conference. We will be sharing photos taken by a professional photographer after the conference.

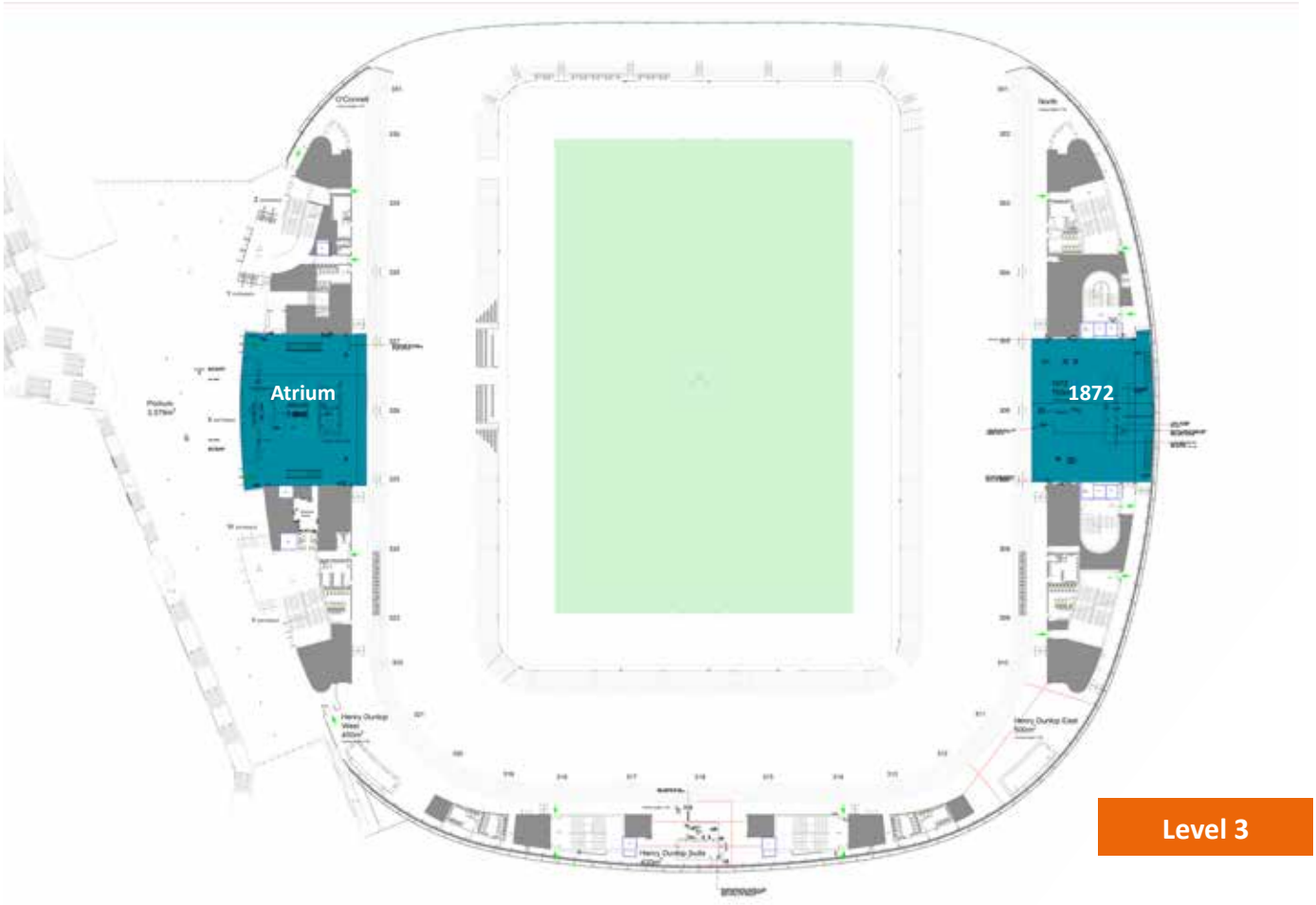
EFFoST 2022 Conference app

We have an app available for this conference, install it by using the following QR codes. The event code is **Effost2022** and your login details will be sent to you by email.

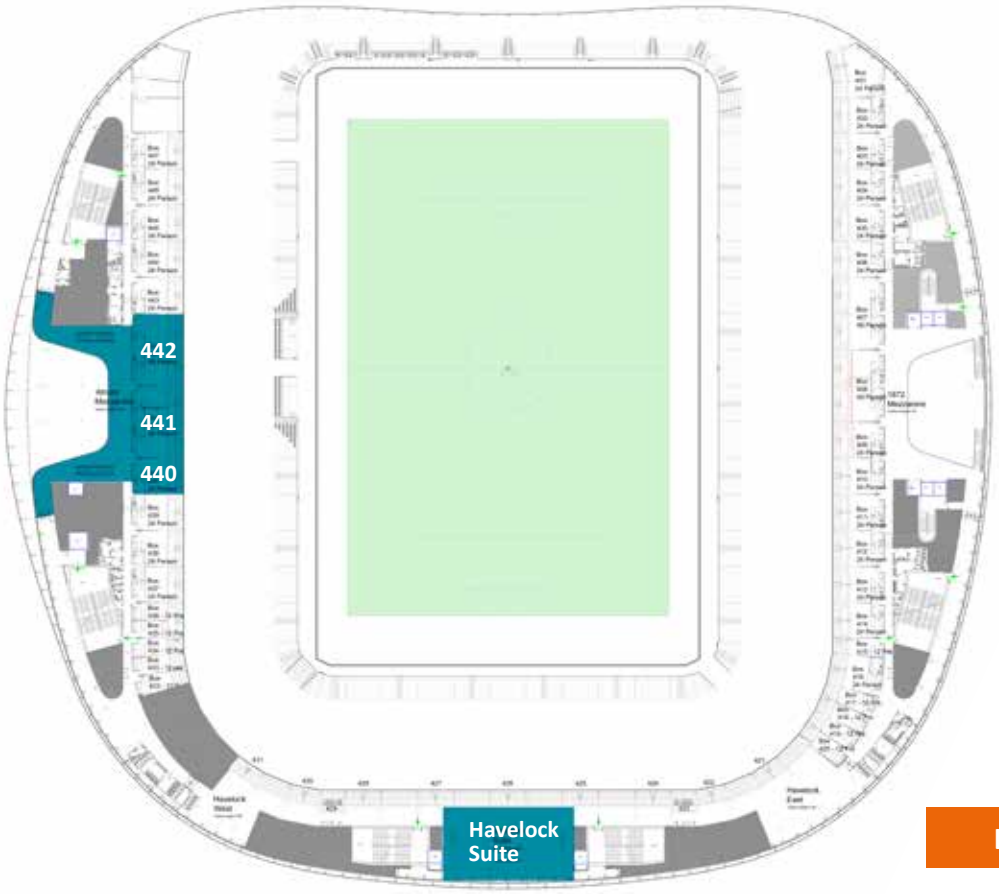
Android Apple

Social media share/no share sign

Floor plan

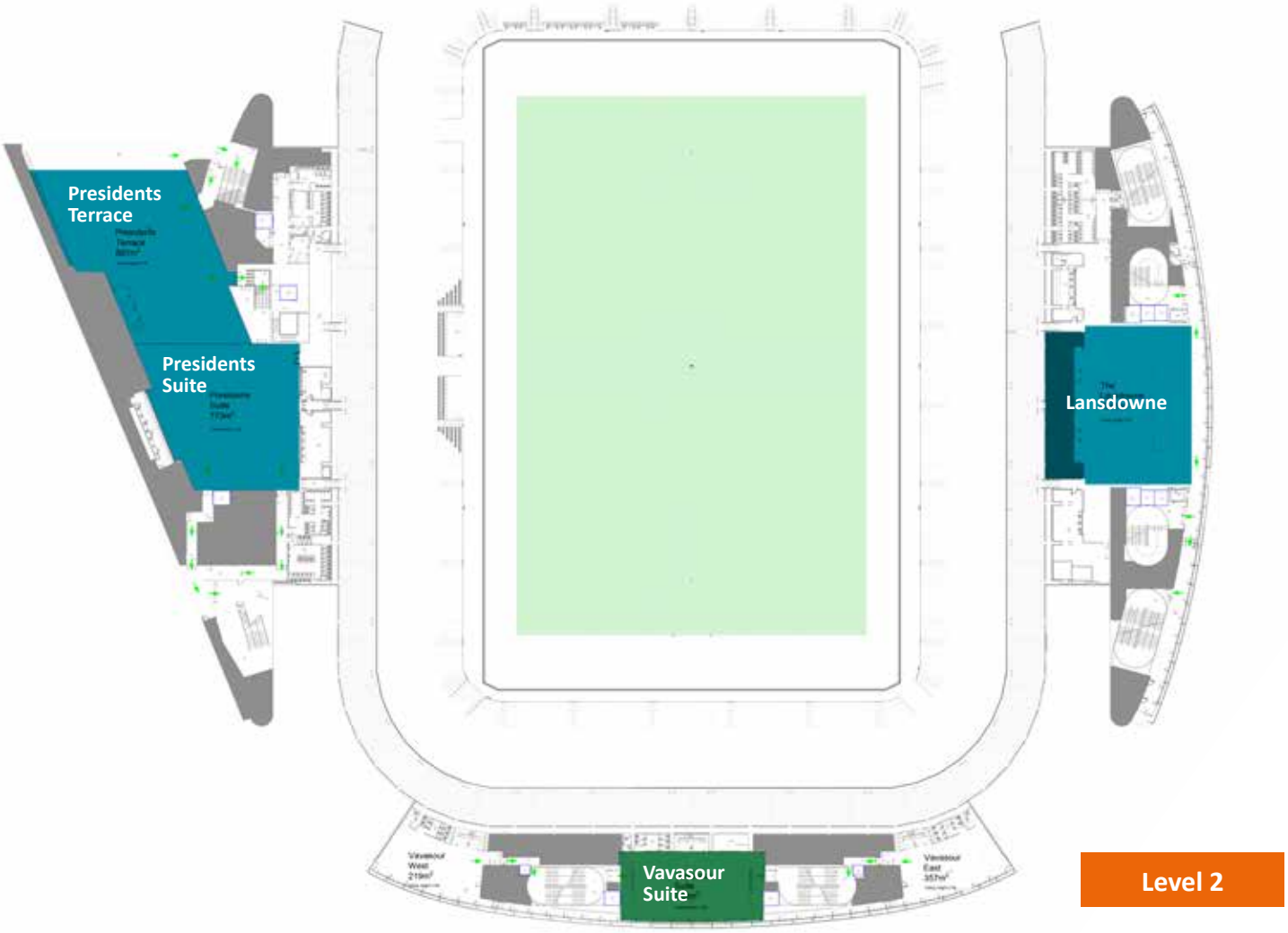


Level 3



Level 4

Floor plan



Level 2

EFFoST2022 Exhibitors and Sponsors

– SILVER SPONSOR –

Nestlé

Good food, good life – that is what we stand for. Every day we touch billions of lives. We want to help shape a better and healthier world for individuals and families, for our communities and for the planet. At Nestlé, we constantly explore and push the boundaries of what is possible with foods, beverages, and nutritional health solutions to enhance quality of life and contribute to a healthier future. We use our scientific expertise and unmatched capabilities to deliver on trend innovations. They're the result of quick ideation to meet consumer trends, then rapid product development and shop tests. We fast-track funding for promising ideas, work with external partners and incubate innovation through our R&D Accelerator platform. This brings together Nestlé scientists, students and startups to advance science and technology with the objective of accelerating the development of trend-based products and systems.
We believe in the power of food to enhance lives. Good food nourishes and delights the senses. It helps children grow healthy, pets thrive, parents age gracefully and everyone live life to the fullest. Good food brings us together.

www.nestle.com

– SPONSORS –

Cargill

Cargill's 160,000 employees across 70 countries work relentlessly to achieve their purpose of nourishing the world in a safe, responsible and sustainable way. Every day, Cargill connects farmers with markets, customers with ingredients, and people and animals with the food they need to thrive.
Cargill combines 153 years of experience with new technologies and insights to serve as a trusted partner for food, agriculture, financial and industrial customers in more than 125 countries. Side-by-side, they are building a stronger, sustainable future for agriculture.
Cargill is proud to work together with EFFoST to support and encourage the next generation of food scientists by sponsoring the EFFoST Student of the Year Awards.

www.cargill.com

Fáilte Ireland

As the National Tourism Development Authority, Fáilte Ireland's role is to support the long-term sustainable growth in the economic, social, cultural and environmental contribution of tourism to Ireland. Fáilte Ireland works in partnership with Government, State agencies, Local Authorities, representative groups and industry, to develop tourism across Ireland by creating destination development plans and networks, investing in infrastructure, activities, visitor attractions and festivals. Fáilte Ireland also provides consumer and buyer insights, mentoring, business support and training programmes and buyer platforms to help tourism businesses innovate and grow.

www.failteireland.ie

GNT Group

The GNT Group is a family-owned company pioneering in the creation of specialized, future-proof products from only natural ingredients. It is internationally renowned for its EXBERRY® portfolio, the leading global brand in Coloring Foods. Founded in 1978, the company offers unparalleled agricultural competence and process-engineering expertise in delivering solutions for fruit, vegetables and edible plants. GNT is headquartered in the Netherlands and has a global reach with customers in 75 countries and offices all over the world.

www.exberry.com

De Gruyter

De Gruyter was an early champion of open access and an advocate of opening content to all researchers. We published our first open access book in 2010 and launched our first fully gold open access journal in 2013. Today De Gruyter's open access portfolio comprises more than 2,000 open access books and around 90 fully open access journals – published in-house or on behalf of learned societies.

Open Agriculture is an open access journal from De Gruyter's Open Access portfolio, publishing original articles and reviews reflecting the latest achievements on agriculture and related topics. Its major goal is to spread up-to-date knowledge on Agriculture, along with maintaining the high quality of its published content. The journal accepts submissions of original scientific papers, short communications, review articles and case studies and offers an immediate publication upon completing the publishing process.

Visit our exhibition stand!

www.degruyter.com

Bord Bia

Bord Bia is the food marketing agency of the Irish Department of Agriculture, Food and Marine. With 15 office locations worldwide its purpose is to bring Ireland's outstanding food, drink and horticulture to the world, thus enabling growth and sustainability of producers.

This purpose is enacted through strategic priorities including building Ireland's reputation as a sustainable and innovative source of world-class food, developing better ways for Irish food companies to connect and build partnerships and championing insight-led innovation and brand development. Bord Bia welcomes queries or requests for introductions to Irish food companies via info@bordbia.ie.

www.degruyter.com

Food for Health Ireland

Food for Health Ireland is a collaborative model for functional and health food innovation and commercialisation. For more than a decade, we have provided a gateway for our industry partners to access world-class science and academic research through a collaborative, market-focussed functional food research programme. Our research addresses global food trends and challenges, providing results that can be translated into commercially viable products with clear market focus.

www.fhi.ie

– MEDIA PARTNERS –

Elsevier

Elsevier is a world-leading publisher of scientific, technical, and medical information products and services. Working in partnership with the global science and health communities, Elsevier's 7,000 employees in over 70 offices worldwide publish more than 2,000 journals and 1,900 new books per year. In addition to offering a suite of innovative electronic products, such as ScienceDirect, MD Consult, Scopus, bibliographic databases, and online reference works.

www.elsevier.com

New Food

For over two decades *New Food* has been the prominent thought leadership platform for the food and beverage industry. By providing an unrivalled resource for industry professionals to discuss the challenges and wider economic issues that currently face the international food and beverage supply chain, *New Food*'s overarching aim is to explore solutions and catalyse industry progress.

Through the maintenance of a close collaboration with the industry, regulators and academia in the areas of safety, quality control and scientific innovation, *New Food* understands the necessity of cooperation and collaboration between all parties to ensure that the global food and beverage community moves forward together. To achieve our goal, *New Food* provides a bi-monthly print publication, a digital platform that includes regular webinars, as well as a variety of events throughout the year.

www.newfoodmagazine.com

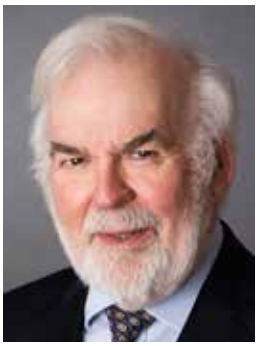
EHEDG – European Hygienic & Design Group

With a common goal to advance hygiene, improve food safety, and increase cleaning efficiency and effectiveness during the processing and packaging of food products, EHEDG brings together stakeholders in the food supply chain. Besides practical guidelines, test procedures and certification, training, and education, EHEDG offers an exchange platform for global food professionals to combine collective experience and improve hygienic design. Founded in 1989, EHEDG is a foundation that has led the way in guiding the food industry in hygienic design. The principal goal of EHEDG is the promotion of safe food by improving hygienic engineering and design in all aspects of food manufacturing.

EHEDG – Food safety through hygienic design.

www.ehedg.org

Plenary speakers



Prof. Tom Arnold (PL1.1)

Irish Government's Special Envoy for Food Systems, Ireland

Food Vision 2030: its development, conclusions and implementation in a fast-changing world

The presentation will trace the process through which the stakeholder-led strategy was developed, following on from the four earlier such processes dating back to 2000. Food Vision 2030 has continuities with the earlier strategies but in adopting a 'food systems' approach to its development, introduced a number of important innovations. Food Vision's central objective is that Ireland should become an international leader in Sustainable Food Systems over the coming decade. With the Irish Government's approval of the Strategy in August 2021, its implementation must take account of international and domestic events subsequent to its approval. In February 2022, the Russian invasion of Ukraine has had major consequences for the global food economy. In July 2022, the Government set challenging targets for emissions reduction by the agricultural sector as part of the national Climate Action Plan. The presentation will also link Food Vision's central objective on leadership in Sustainable Food Systems to developments in the global food economy and to the follow-up to the 2021 Food Systems Summit.

Biography

Tom Arnold is the Irish Government's Special Envoy for Food Systems and was Chair of the Agri-Food Strategy Committee which produced Food Vision 2030. He chaired the EU Commission's High Level Expert Group on Food Systems Science (IPFSS) and the Task Force for Rural Africa (TFRA). He served as Coordinator of the Scaling Up Nutrition (SUN) Movement; Chair of the OECD Committee of Agriculture; CEO of Concern Worldwide; Chief Economist and Assistant Secretary General with the Irish Department of Agriculture, Food and the Marine; and with the EU Commission in Brussels and in Africa. His primary degree is in agricultural economics from University College Dublin (UCD) and he has Master's degrees from the Catholic University of Leuven and Trinity College, Dublin.

Mark Christal (PL2.1)

Enterprise Ireland, Ireland

Meeting the future challenges of the food industry

The presentation will focus on the Food and Drink sector in Ireland and the companies leading in the provision of sustainable, high-quality, nutritious food to markets across the globe. He will highlight the work being done by Enterprise Ireland, in partnership with other organisations, to drive international competitiveness through increased innovation and market-leading sustainable practices.

Enterprise Ireland is the government organisation responsible for the development and growth of Irish enterprises in world markets. They work in partnership with Irish enterprises to help them start, grow, innovate and win export sales in global markets. In this way, Enterprise Ireland supports sustainable economic growth, regional development and secure employment.

Prof. Ciarán Forde **(PL2.2)**
Wageningen University & Research, the Netherlands

'Better Living through Sensory'; Using Sensory Cues to Moderate Eating Behaviour, Food Intake and Health

Food choice and energy intake are much influenced more by sensory and cognitive aspects of eating than the nutritive properties of the food being consumed, yet chronic disease and ill-health are the result of prolonged exposure to diets with poor nutritive properties and high energy-density. The role of dietary patterns in the development of diet-related conditions is undisputed, but this knowledge is of little value if we do not understand the reasons why people continue to choose and consume unhealthy foods. Today we know much more about what a food does to the body once consumed, than we do about why a food is chosen and eaten, or why it can be easy overconsume certain foods and not others.
The sensory properties of foods play an important role in shaping 'what', 'how much' and 'why' we eat, and the dietary patterns that influence health and well-being across the lifespan. Not all calories are created equal and food texture, taste and aroma are influential before and during meals to direct food choice, inform portion selection and drive our eating behaviours. Our research has demonstrated the joint impact of eating at a faster rate and consuming higher energy dense foods in promoting greater intake, and we have extended this to explore the sensory and eating rate properties of (ultra)processed foods. By including 'sensory' ratings in population dietary epidemiology studies, we have pioneered the development of 'Sensory Epidemiology' to make novel connections between the sensory properties of habitual diets and the intake patterns that influence body composition and health. Sensory Scientists are uniquely positioned at the cross-roads of food science, nutrition and consumer behaviour to understand how food perception can be used to influence the transition to healthier and more sustainable diets. The sensory properties of foods offer opportunities to moderate the flow of energy and nutrients through our diets, yet are currently an under-utilized tool in public health nutrition. Addressing the serious public health challenges posed by the modern food environment will require changes in food formulation and intake behaviour. Using a foods sensory properties makes it possible to support healthier eating behaviours and can inform the development of successful dietary strategies that keep food enjoyment and satisfaction at the heart of healthy eating.

Biography

Ciarán Forde is Professor and Chair of the Sensory Science and Eating Behavior group in the Division of Human Nutrition and Health, at Wageningen University and Research. He leads research on how the sensory properties of foods influence calorie selection, eating behaviors and energy intake and metabolism across the life-span. Prof. Forde has published >120 scientific articles and book chapters, and his research has been presented at over 200 national and international meetings. He is an Executive Editor for the journal *Appetite*, Section Editor in 'Nutrition Behavior and Food Intake Regulation' for the *European Journal of Nutrition*, and an editorial board member for *Nutrition Bulletin*, *Journal of Future Food* and *Journal of Texture Studies.*

Prof. Colin Hill (PL3.1)

University College Cork, Ireland

Bringing molecular methods to bear on food safety

Molecular biology and food microbiology have not always been comfortable bedfellows but that needs to change, and quickly. We all understand the role of molecular biology in unravelling virulence mechanism of microbial pathogens, or in dissecting the host response. The role of molecular methods in pathogen detection and in molecular epidemiology has also been widely appreciated and accepted. However, the idea of genetically manipulating food-related organisms destined for the supermarket shelves has been more controversial. There are many GM plants grown worldwide, and many ingredients derived from these find their way into our diet, but this has not always resonated with consumers. What about manipulating bacteria used in the production of fermented foods, or using genetically modified bacteria to produce food ingredients. Is this an idea whose time has arrived? I will present some examples from our own laboratory where we have used molecular techniques to produce improved food ingredients and additives to improve food safety and animal welfare.

Biography

Colin Hill has a Ph.D in molecular microbiology and is a Professor of Microbial Food Safety in the School of Microbiology at University College Cork, Ireland. He is also a founding Principal Investigator in APC Microbiome Ireland, a large research centre devoted to the study of the role of the gut microbiota in health and disease. His main interests lie in the role of the microbiome in human and animal health. He is particularly interested in the effects of probiotics, bacteriocins, and bacteriophage. In 2005 Prof. Hill was awarded a D.Sc by the National University of Ireland in recognition of his contributions to research. In 2009 he was elected to the Royal Irish Academy and in 2010 he received the Metchnikoff Prize in Microbiology and was elected to the American Academy of Microbiology. He has published more than 650 papers and holds 25 patents. He was president of ISAPP from 2012-2015. More than 80 PhD students have been trained in his laboratory.

Prof. Jennie Macdiarmid (PL2.3)

University of Aberdeen, United Kingdom

Future of healthy, environmentally sustainable and desirable diets: guidelines, industry and consumers

Poor diets, poverty and climate change are some of the global challenges facing us today. Healthy and sustainable diets can play an important part in addressing these issues. In 2010, the FAO published a comprehensive definition of sustainable diets and many countries revised their dietary guidelines to incorporate environmental sustainability. One dominant, but often contentious, recommendation is reducing consumption of animal products since the production of livestock has a much greater environmental impact than production of plant-based commodities. In 2019, the FAO and WHO published a joint report 'Sustainable, Healthy Diets – Guiding Principles' grouping the guidance into health, environmental impacts and sociocultural aspects (e.g. affordability, access and desirability). In much of early research, the sociocultural aspects were overlooked with health and environment the focus, which was reflected in some of the example diets. However, research consistently shows sociocultural aspects, including price, pleasure and social norms, are primary drivers of decision making among consumers, while health is a bigger driver than environment. To tackle global warming and limit climate change diets must change and this means reducing consumption of meat and dairy and a shift to more plant-based diets. The challenge is putting this into practice. The recent rapid increase in availability of processed plant-based alternatives to meat (e.g. burgers, sausage rolls, ready meals) could help with the transition to plant-based diets by addressing some of the barriers consumers have expressed, such as not knowing what to eat, the perception of

the difficultly and time it takes to make plant-based meals. However, many of the processed plant-based convenience foods are high in fat, salt and sugar and use commodities that can have negative impact on the environment. Going forward sociocultural aspects must be integrated in sustainable healthy diets but this must be alongside health and environment.

Biography
Jennie Macdiarmid is a Professor of Sustainable Nutrition and Health and Director of the Interdisciplinary Centre for Health, Nutrition and Wellbeing at the University of Aberdeen in the UK. Jennie gained a BSc (Hons) in Food Science and Nutrition from the University of Surrey, followed by a PhD in Psychology from the University of Leeds. Her current research on nutrition security and sustainable diets is truly interdisciplinary bring together nutrition, health, climate change and environment with social and behaviours aspects of eating and she has published over 80 research papers. She published one of the first studies testing the compatibility of achieving nutritional requirements with reducing greenhouse gas emissions to create healthy, sustainable diets, which was influential in stimulating national and international debates on this topic.

Podium discussions

Podium discussions: The role of food processing in achieving healthy and sustainable diets

Joint Viewpoint for discussion at the 36th EFFoST International Conference between the European Federation of Food Science and Technology and the European Technology Platform 'Food for Life'.

The EU Farm to Fork Strategy (2020) for a fair, healthy, and environmentally friendly food system asks to accelerate the transition to a sustainable food system seeking to ensure food security, nutrition, and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food. Food processing is essential in this transition. Growing, manufacturing, transporting, and eating food has a significant impact on the planet. The food sector will have to reduce those impacts and use food innovation to lessen the load on the environment, based on science and evidence. Continued research into the relationship between food processing and potential impacts on our health and the environment is essential to bring forward positive innovations, blaming the processing per se is counterproductive. The food sector will have to provide more transparency on food formulation and food processing to restore consumer trust. New technologies and scientific discoveries, combined with increasing public awareness and demand for food that fits in healthy and sustainable diets, will benefit all stakeholders.

Gert Meijer
Nestle, Switzerland

Ciarán Forde
Wageningen University, the Netherlands

Liisa Lahteenmak
Aarhus University, Denmark

Eileen Gibney
University College Dublin, Ireland

Lilia Ahrné
University of Copenhagen, Denmark

Realising the True Potential of Non-Thermal Processing Technologies in Future Food Production

Non-Thermal Processing workshop 2022

The NTP2022 will explore the theme: ***Realising the True Potential of Non-thermal Processing Technologies in Future Food Production.*** This year the EFFoST / IFT-NPD Workshop on Non-Thermal Processing of Foods is hosted by University College Dublin and held during EFFoST2022.

The food industry is currently facing many major challenges including a growing global population that is also aging, the need for improved sustainability in food supply, and increasing consumer demands for greater product choice and confidence. All in a market where diet and health are increasingly coming to the fore as consumer priorities.

Non-thermal processing technologies offer processors a set of new innovative processing 'tools' which find 'niche' applications either as alternative unit operations to conventional methods or are retrofitted into existing manufacturing lines for process intensification purposes. These technologies can and will make a very valuable contribution towards each of the challenges faced by the industry mentioned above.

The Non-Thermal Processing workshop consists of more than 50 speakers that will be held in the Vavasour Suite. The NTP poster presentations will be held together with the EFFoST2022 poster session in the President Terrace.
The NTP2022 Workshop focusses on the role of Innovative Non-Thermal Processes, sessions include:

- **NTP Session 1:** Opening Session EFFoST / IFT-NPD & Sustainability of Food Supply for the future through Innovative Non-thermal Technologies
- **NTP Session 2:** Sustainability of Food Supply for the future through Innovative Non-thermal Technologies (continued)
- **NTP Session 3:** Special Session: Emerging Non-thermal Processing Technology - Case Studies
- **NTP Session 4:** Role of non-thermal technologies in future foods from alternative sources for an increasing global population
- **NTP Session 5:** Special Session: Consumer perception and regulatory considerations in relation to non-thermal technologies
- **NTP Session 6:** Special Session: Emerged Non-thermal Processing Technology - Commercial Case studies
- **NTP Session 7:** How will nonthermal technologies play a part in future local and global food safety and security
- **NTP Session 8:** Special Session: Scaleup, Digital Twins and Modelling of Non-thermal Processing Technologies
- **NTP Session 9:** Meeting future consumer demands for quality, nutritious and healthy foods with non-thermal processing technologies
- **NTP Session 10:** Special Session: Panel Discussion on Future of non-thermal technologies & Closing Address

Each year, the European Federation of Food Science and Technology (EFFoST) and the Nonthermal Processing Division of the Institute of Food Technologists (IFT-NPD) organise a workshop on non-thermal processing technologies to process foods. The EFFoST / IFT-NPD Workshop on Non-Thermal Processing of Foods is the leading international forum for professionals from academia, industry, and government agencies to share the latest developments on non-thermal processing technologies and their applications in the food industry.

All NTP sessions will be held in the Vavasour Suite!

– NTP2022 SPONSORS –

Elea Gmbh – Gold partner
Elea is the world's leading provider of Pulsed Electric Field Systems (PEF) to the food, beverage & scientific sectors. Eleaporation, developed over many years, is rapidly transforming food and beverage manufacturing around the world. PEF changes the physical structure of fresh produce resulting in significant increases in yield, freshness, flavour and nutritional preservation – plus savings in time and energy.

Visit our exhibition stand!
www.elea-technology.com

BiOrbic
BiOrbic, Bioeconomy SFI Research Centre is Ireland's national bioeconomy research centre. We work with food producers and industry to create valuable and sustainable bio-based products and services from natural resources. Our 100+ researchers from across Ireland's leading universities and research organisations work on selectively separating and extracting valued compounds from renewable materials, converting those resources into novel bio-based products and processes, delivering market and industry- scalable resources as part of a sustainable circular bioeconomy.

Visit our exhibition stand!
www.biorbic.com

Hiperbaric – Silver partner
Hiperbaric designs, develops, produces and markets High-Pressure Processing (HPP) equipment internationally. With more than 350 machines installed, the company is the global leader in HPP technology with the most reliable and economic machines on the market. Hundreds of companies worldwide use Hiperbaric equipment to process juices and beverages, meats, fish and seafood, fruits and vegetables, dairy and ready-to-eat meals. In addition, Hiperbaric's food science team brings support for product development to HPP users.

Visit our exhibition stand!
www.hiperbaric.com

EnergyPulse Systems
EnergyPulse Systems is a Portuguese company that designs, develops, and builds Pulse Electric Field Equipment for the Food industry. EnergyPulse Systems is committed to improving industrial food processes with Pulsed Electric Fields (PEF) a nonthermal food process.
We believe that PEF is and will take part on the future of food processing. Contributing for an optimization of resources, such as, reduction of water use, increased energy efficiency, reduction of food waste, valorization of by-products and last but not least increased food quality.

Visit our exhibition stand!
www.energypulsesystems.pt

Uhde High Pressure Technologies GmbH – Silver Partner
Uhde High Pressure Technologies GmbH (thyssenkrupp) specializes in high-pressure technologies for applications up to 14,000 bar. Uhde partners with its customers to support them in all project stages; from feasibility study, design, manufacturing to installation and service. High-pressure components (valves, pumps, vessels, reactors, etc.) and turnkey solutions for sustainable food and pharmaceutical processing at high pressure, like supercritical fluid extraction (SCF) and high-pressure processing (HPP) units, are manufactured in Germany to meet relevant international standards. Uhde's global supplier and service network delivers quick responses and cost-effective solutions for chemical, material, pharmaceutical, and food & beverage industries.

Visit our exhibition stand!
www.thyssenkrupp-industrial-solutions.com

SAIREM
SAIREM is the global supplier of microwave and radiofrequency equipment for food industry. The company provides its customer with different applications such as tempering, defrosting, heating, cooking, drying, pasteurizing, sanitisation and disinfestation.
We treat products like herbs and spices, vegetables, fruits, meats, fish, seafood, essential oils, seeds and insects.

We currently have a partners and agents network covering more than 70 countries.

Visit our exhibition stand!
www.sairem.com

Hosted by:

Organised by:

NTP 7-9 November Dublin, Ireland
2022 WORKSHOP
www.ntpworkshop.eu

Young EFFoST Day

The fifth edition of Young EFFoST Day is an exciting opportunity for students and young food scientists from academia, industry, and start-ups to expand their professional network!

The day consists of interactive activities including inspiring talks and networking. It will be held on Monday morning before the official start of the 36th EFFoST International Conference.

The day will start with an inspiring talk based around the theme of ***Shaping the Production of Sustainable, Healthy Foods for the Future.*** Representatives from industry, academia and non-profit organizations will then give insights into their personal career paths and share their key learnings.

Throughout the event, talks will alternate with time for discussion and exchanges to make the Young EFFoST Day a unique opportunity to build your network and connect with more experienced food professionals before we move on to the EFFoST2022 conference together.

Programme

Sunday 6 November 2022

19:30 Informal Young EFFoST Day kick-off, venue Slattery's D4
Open to attendees of Young EFFoST, EFFoST2022, and NTP2022

Monday 7 November 2022

08:00 Registration
08:45 Welcome & Introduction of Young EFFoST Day programme
09:00 Opening session: Shaping the Production of Sustainable, Healthy Foods for the Future Session chair: Prof. Kevin O'Connor - Dr Pamela Byrne, Chief Executive Officer at Food Safety Authority Ireland
10:00 Networking activity: "Speed dating" to get to know other researchers
10:30 Refreshments break
10:45 Job reality & career path insights:
- Aoife Marie Murphy, Sustainable Nutrition Manager at Kerry, Ireland
- Nessa Noronha, Centre Director of Food for Health Ireland, Ireland
- Alan Kelly, Vice-Dean for External Engagement, College of Science, Engineering and Food Science at University College Cork, Ireland
- Ciarán Forde, Professor of Sensory Science and Eating Behavior at Wageningen University & Research, the Netherlands

11:30 Panel discussion with representatives from industry, academia and non-profit organisations
12:00 Close of Young EFFoST Day 2022
12:10 Lunch

Organisers of Young EFFoST Day 2022

Ajay Menon
UCD School of Agriculture and Food Science, Ireland

Kim Millar
Technological University Dublin, Ireland

Steven Mulrooney
UCD Institute of Food and Health, Ireland

Special Sessions

Find the complete session description in the abstract book

Monday 7 November 2022
14:00 - 15:45
Room 442

FNS-Cloud

Workshop: Upload your scientific work to an open repository

During this 2-hour hands-on and interactive workshop, we will guide you through the world of Open Science and, specifically, how to upload your research to an open repository (Zenodo). The workshop will cover

- the basics of Open and FAIR principles
- how to upload your piece of work on Zenodo, step by step
- how to publicize, advertise and raise awareness about your work.

This workshop is organized in the frame of the EU Funded project FNS-Cloud.

Tuesday 8 November 2022
10:30 - 12:35
Room 442

Filling knowledge gaps on alternative proteins to accelerate the dietary shift

A transition from animal-based to alternative protein diets is key to reducing environmental impacts and improving human health. It has been estimated that food systems are responsible for 11.3% of total EU GHG emissions and replacing the use of animal-based proteins will significantly reduce the dietary CO_2-equivalent impact of the European diet. The major impacts of the current food system on biodiversity, land and water use, and animal welfare, could be mitigated by a shift from traditional animal-based towards more sustainable protein sources.

GIANT LEAPS NEXTGEN PROTEINS PRO FUTURE SUSINCHAIN smart protein

Tuesday 8 November 2022
10:30 - 12:35
Room 441

mefproc

Improving Sustainability in Food Processing using Moderate Electric Fields (MEF) for Process Intensification – MEFPROC

This special session aims to present and discuss recent results from MEFPROC, an ERA-NET Susfood2-funded project, on the application of moderate electric fields (MEF) assisted by ultrasound (US) in various food processing operations. MEFPROC was aimed at bridging the gap in scientific and technical knowledge that is currently preventing the uptake of MEF (and US) by the food industry. It also aimed at investigating the impact of MEF (and US) on yield gain and energy consumption compared to existing conventional processing

Tuesday 8 November 2022
13:45 - 15:50
Room 442

INGREEN

The INGREEN journey from agrifood sidestream to sustainable biobased products

Find out how tailor-made sustainable biotechnologies transformed waste and low-value agrifood side streams into higher-value functional and bioactive ingredients for use in **food, feed, pharmaceuticals, nutraceuticals, cosmetics and biodegradable packaging**, using a circular bioeconomy approach. In real operational environments, sustainable and efficient tailor-made biotechnologies and eco-friendly approaches to produce safe and/or health-promoting microbial biomasses and biochemicals have been demonstrated, as well as functional ingredients of interest for several industrial sectors.

Tuesday 8 November 2022
13:45 - 15:50
Room 441

Global Harmonization Initiative

Global Harmonization Initiative - available, sustainable, healthy food for the future through networking sound science

The Global Harmonization Initiative (GHI) is a non-profit, impartial organisation consisting of a network of individual scientists from across industry and academia; all working together to harmonise global food safety regulations and legislation based on sound science. GHI was founded in 2004 as a joint activity between the Institute of Food Technologists (IFT) International Division and the European Federation of Food Science and Technology (EFFoST). Our overall mission is to achieve consensus on the science that underlies food regulations and legislation to ensure the global availability of safe and wholesome food products for all consumers.

Tuesday
8 November 2022

16:20 - 18:05
Room 442

Aquaculture and Fisheries side stream proteins and bioactives as ingredients for nutritional supplements: the AQUABIOPRO-FIT project

AQUABIOPRO-FIT is a Biobased Industries Joint undertake (BBI JU) Horizon 2020 project aiming to explore opportunities in lifting the value of marine biomass, currently either wasted or used in animal feeds, by transforming aquaculture and fisheries side stream materials into ingredients for human consumption. Refined fish oil and different protein concentrates with unique chemical and sensory properties, have been developed using heads, backbones, skins and trimmings from farmed salmon, cod, and pelagic fish species, such as mackerel and blue whiting, and tested for safety and bioactivity in model systems.

Tuesday
8 November 2022

16:20 - 18:05
Room 441

Creating transparency from farm to fork to strengthen trust and create a healthier food system

Food goes through many hands before it reaches our plate, from grower, processor, transporter, wholesaler, and finally to the retailer. Processed food has longer and more opaque chains, with more opportunities for a breakdown of trust. Creating transparency from farm to fork can strengthen trust and create a healthier food system. Trust is an essential ingredient in a well-functioning food system. To trust the food on our plate, we need to know that it's safe to eat, its origin, the quality of its ingredients, its nutritional value, and whether its production has harmed people, animals, or the environment. A food system where every link of the chain is in the open would create transparency and trust and help avoid abuses and risks.

Wednesday
9 November

08:30 - 10:35
Room 442

How to make food nutrition security data FAIRer: an introduction to FNS-Cloud

Existing food nutrition security data, knowledge, and tools for health and agri-food sciences although widespread are fragmented, lack critical mass, and access is 'unevenly' distributed for users. This means data are not readily found, accessible, interoperable or reusable (FAIR), and existing services focus on clinical, molecular or biological sciences. Food Nutrition Security Cloud (FNS-Cloud) will bring about change through standards, demon-strators, services and FAIRer food nutrition security data

Wednesday
9 November

08:30 - 10:35
Room 441

Predictive modelling tools to evaluate the effects of climate change on food safety (PROTECT)

Climate change and food safety have become interdependent worldwide research priorities. In order to meet the EU challenge of doubling food production by 2050 (to meet population demands) while dealing with the impact of climate change on food safety, investment in research to address this issue is required. The overarching aim of this Innovative Training Network (ITN) is to provide high-level training in Predictive mOdelling Tools to evaluate the Effects of Climate change on food safeTy (PROTECT) to a new generation of high achieving early-stage researchers. PROTECT provides them with the transferable skills necessary for thriving careers in a burgeoning area that underpins innovative technological development across a range of diverse disciplines.

Wednesday
9 November

11:05 - 12:50
Room 442

Shaping our Future Sustainable Food Systems

The new European framework program for research and innovation is called Horizon Europe. Herein, a new instrument is launched, called 'Partnerships', which are foreseen to play a crucial role in the Green Deal, Farm-to-Fork Objectives, and, overall, the transition towards sustainable societies. One of the Partnerships is called Sustainable Food Systems, providing interesting, new research topics for the food communities. In this session we will present how European Partnerships in Food may contribute to the Green Deal and Farm-to-Fork objectives and the recently started FOODPathS project will be introduced that will develop a prototype of the European "Partnership for Sustainable Food Systems (SFS).

Wednesday
9 November

11:05 - 12:50
Room 441

Innovations for food producers and food SMEs: How to encourage putting innovations into practice

The transition towards a more sustainable food system requires that small and mid-sized enterprises increase their economic competitiveness and resilience and strengthen their innovation capacity. However, their specific needs are often neglected, especially in innovation processes that focus on large and expensive improvements. In this session, we will present technical and technological innovations demonstrated in several current European projects, innovations devoted to SMEs and producers which may increase food sustainability. Challenges, supporting and hindering factors for putting innovations into practice will be discussed and possible solutions for their successful implementation.

EFFoST Student of the Year Awards

The European Federation of Food Science and Technology and our sponsor **Cargill** are dedicated to fostering the next generation of food scientists and professionals by acknowledging their academic achievements with the **Student of the Year Awards**.

Please find below the abstracts of MSc and PhD students of food science, food technology and related studies, who have been nominated for the awards. The winners will receive an award and prize money, have their travel expenses and conference registration fees covered, and have the opportunity to visit Cargill's European R&D Centre to present their research.

Join us at the awards ceremony on Wednesday 9 November 14:30 - 15:10

Nominees for PhD Student of the Year Award 2022

Daniel Golodnizky

Technion - Israel Institute of Technology, Israel

New insights into the thermodynamics and kinetics of triacylglycerols crystallization

Julia Matysek

Technische Universität Berlin, Germany

Effects of ultrasound on off-flavour-related aroma compounds in a pea protein-based yoghurt alternative

Ecaterina Stribiţcaia

University of Leeds, United Kingdom

Oral lubrication performance of food – a new textural manipulation to enhance satiety

Byron Perez Simba

ETH Zurich, Switzerland

Leveraging heterotrophic microalgae eco-efficiency through novel nanosecond pulsed electric fields for more sustainable food production

Elena Zand

University of Natural Resources and Life Sciences, BOKU, Austria

Innovative pulsed electric fields assisted flow cytometry for rapid microbial detection

EFFoST Popular Vote Award

The top applicants of the EFFoST Student of the Year competition have the opportunity to compete for the Popular Vote Award for the best student poster presentation. The delegates of the 36th EFFoST International Conference will chose the winner of this award. Their posters can be found on the exhibition floor in the Atrium. Please choose your favourite poster presentation and drop your ballot in the ballot box at the EFFoST Stand.

Support these young food scientists and vote!

Popular Vote Candidates 2022:

P.01	**Design of oat fermentation processes to improve texture and quality of 100% oat bread** Silvia Cera, *University of Helsinki*
P.02	**Study of the protein quality and digestibility of plant-based burgers compared to meat ones** Sara Cutroneo, *University of Parma*
P.03	**Modeling of perceived sweetness in biscuits to evaluate reformulation performance in sugar reduction studies** Naz Erdem, *Hacettepe University*
P.04	**Future cheeses produced by extrusion of renneted curds** Ran Feng, *University of Copenhagen*
P.05	**Improving lubrication and functionality of plant proteins by microgelation for optimal sensory and fat-replacement applications** Ben Kew, *University of Leeds*
P.06	**Mathematical models to predict spoilage of non-refrigerated food products due to growth of thermophilic spore-forming bacteria** Ourania Misiou, *Aristotle University of Thessaloniki*
P.07	**Ultrasound-assisted extraction and polymer-based encapsulation of phycoerythrin from Phorphyridium purpureum** Shaaba Noore, *University College Dublin*
P.08	**Isolation of casein for stable isotope ratio analysis of butter, cheese, and milk powder** Roisin O' Sullivan, *University College Dublin*
P.09	**Split-stream processing of asparagus side-streams improves the flavour of dried asparagus food ingredients** Eirini Pegiou, *Wageningen University and Research*
P.10	**Bacillus subtilis endospores inactivation under hyperbaric-storage – a novel nonthermal strategy to inactivate spores at room-temperature?** Carlos Pinto, *University of Aveiro*
P.11	**Capillary suspensions for oil structuring with agri-food residues micronized via high-pressure homogenization in oil** Annachiara Pirozzi, *University of Salerno*
P.12	**Contactless characterization of potato drying by using air-coupled ultrasound** Virginia Sánchez Jiménez, *Universitat Politècnica de València*
P.13	**Dunaliella Salina-based nanoemulsions to increase the retinol and β-carotene bioavailability in rats after oral administration** Júlia Teixé-Roig, *University of Lleida*
P.14	**How food processing can alter the texturizing potential of fruit and vegetable cell wall material** Jelle Van Audenhove, *KU Leuven*

Poster Programme

Poster Session 1
Tuesday 8 November 2022

P1.1.01 **Dairy industry surfaces disinfection using b-PAW**
Fernando Alba-Elías[1]*, María López[2], Beatriz Rojo-Bezares[2], Ana Sainz-García[1], Elisa Sainz-García[1], Félix Gallarta-González[3], Márcia Oliveira[4], Paula Fernández-Gómez[4], Mercedes López[4], Yolanda Sáenz[2], *[1]University of La Rioja, Spain, [2]Center for Biomedical Research of La Rioja (CIBIR), Spain, [3]University of La Rioja, Spain, [4]University of León, Spain*

P1.1.03 **Batch Baking of Pound Cake using Ohmic Heating for 3D Printing Applications**
Eugenia Ayebea Asamoah[1,2]*, Alain Le-Bail[1], Olivier Rouaud[1], Anthony Oge[1], Delphine Queveau[1], Mamadou Lamine Niane[1], Patricia Le-Bail[2], *[1]Nantes Université, France, [2]INRAE, Biopolymères Interactions Assemblages, France*

P1.1.05 **Combined Effect of Plasma Functionalized Water, In-package Cold-Plasma, and Green Chemicals towards poultry related pathogens**
Soukaina Barroug[1]*, Mingming Yem[1,2], Ruichao Lil[1,2], Lisa L'hote[3], Sonal Chaple[1], Paula Bourke[1], *[1]University College Dublin, Ireland, [2]KU Leuven, Belgium, [3]UniLaSalle Beauvais Earth and Sciences, France*

P1.1.07 **A novel strategy to enhance bioaccessible lipids and antioxidants in hetero/mixotrophic Chlorella as functional ingredient**
Greta Canelli[1,2]*, Sabrina Tevere[3], Luc Jaquenod [2], Fabiola Dionisi[1], Zhen Rohfritsch [1], Christoph J. Bolten[1], Lukas Neutsch[3], Alexander Mathys[2], *[1]Nestlé Research, Switzerland, [2]ETH Zürich, Switzerland, [3]Institute of Chemistry and Biotechnology, Switzerland*

P1.1.09 **Biofortified cowpea beans cultivars: Centesimal Composition**
Lucia Maria Jaeger Carvalho[1]*, Ana Claudia Teixeira, Paulo Bastos, Mirian Moura, Maurisrael Rocha, Jose Luiz Carvalho, Osman Silva, Alison Esmerino, *[1]UFRJ, Brazil, [2]UFRJ, Brasil, [3]UFRJ, Brasil, [4]UFRJ, Brasil, [5]Embrapa Midle North, Brasil, [6]Embrapa Food Technology, Brasil, [7]UFRJ, Brasil, [8]UFRJ, Brasil*

P1.1.11 **Development of sausages using edible insects as a source of alternative protein**
Irina-Elena Chiriac[1]*, Alvar Gracia[1], Montse Jorba[1], *[1]Leitat Technological Center, Spain*

P1.1.13 **Monodisperse bubble formation and coalescence tuned with liquid phase properties** Boxin Deng[1]*, Karin Schroën[1], Jolet de Ruiter[1], *[1]Wageningen University & Research, Netherlands*

P1.1.15 **Determination the Parameters for Chicken Meat Thawing by Radio Frequency and Process Effect on Quality**
Eda Demirok Soncu, Ozge Erke, Zeynep Bacin, Eda Coskun, Nuray Kolsarici, Huseyn Huseynli, Ferruh Erdogdu*, *Ankara University, Turkey*

P1.1.17 **Green Options to Substitute Nitrate in Cured Meat Products**
Maria João Fraqueza[1]*, Patrícia Bernardo, Maria Helena Fernandes, Maria José Fernandes, Maria Pedro Teixeira, *[1]CIISA, Centre for Interdisciplinary Research in Animal Health, Portugal*

P1.1.19 **Impact of pulsed electric fields (PEF) on the peeling ability of tomatoes and kiwis** Marianna Giancaterino[1,2]*, Henry Jaeger[1], *[1]University of Natural Resources and Life Sciences, Austria, [2]FFoQSI - Austrian Competence Centre for Feed and Food Quality, Austria,*

P1.1.21 **Effect of novel deep eutectic solvent extraction on structure-functional properties of fava bean protein isolates**
Anuruddika Hetti Hewage[1,2]*, Nandika Bandara[1,2], *[1]University of Manitoba, Canada, [2]Richardson Centre for Food Technology & Research, Canada*

P1.1.23 **Development of an innovative-novel process approach for reduced oil fried products** Ozan Karatas[1,2]*, Ozan Altin[1], Predrag Kojić[3], Lato Pezo[4], Ferruh Erdogdu[1], *[1]Ankara University, Turkey, [2]IFTECH Food R&D Consultancy Company, Turkey, [3]Novi Sad University, Serbia, [4]Institute for General and Physical Chemistry, Serbia*

P1.1.25 **Synthesis and characterization of erythorbyl fatty acid esters and their derivatives**
Jihoon Kim[1]*, Eunhye Yang[1], Yoonseok Choi[1], Juno Lee[1], Hyunjong Yu[2], Pahn-Shick Chang[1,2,3], *[1]Seoul National University, South Korea, [2]Seoul National University, South Korea, [3]Center for Food and Bioconvergence, South Korea*

P1.1.27 **The influence of high-pressure processing (HPP) on rheology and colour of strawberry nectar**
Karen Louise Lacey[1]*, Dario Javier Pavon Vargas[2], Andres Felipe Moreno Barreto[3], Massimiliano Rinaldi[1], Luca Cattani[1], *[1]University of Parma, Italy, [2]CFT Group , Italy, [3]Stazione Sperimentale Per L'Industria Conserve Alimentari, Italy*

P1.1.29 **The quality of frozen-thawed salmon fillets as affected by sub-chilling prior to freezing** Jørgen Lerfall*, Emma Vangen[1], Bjørn Tore Rotabakk, *[1]NTNU-Norwegian University Of Science And Technology, Norway*

P1.1.31 **Assessment of MEF processing potentiality in vegetable based dressing sauce**
Francesco Marra*, Aldo Romano, Matteo d'Amore, *University of Salerno, Italy*

P1.1.33 **Physical properties and sensory perception of active sodium caseinate-guar gum coating enriched with essential oils**
Nicoletta Antonella Miele*, Stefania Volpe, Silvana Cavella, Rossella Di Monaco, Elena Torrieri, *University of Naples Federico II, Italy*

P1.1.35 **Impact of pulsed electric fields as pre-treatment of fermentation process during yogurt production**
Graciela Alejandra Miranda Mejía*, Viridiana Tejada-Ortigoza, Mariana Morales-de la Peña, *Tecnológico de Monterrey, Mexico*

P1.1.37 **Nanostructured cellulose particles for O/W Pickering emulsions stabilization**
Annachiara Pirozzi[1]*, Marina Scarpa[2], Patrizia Contursi[3], Giovanna Ferrari[1,4], Francesco Donsì[1], *[1]University of Salerno, Italy, [2]University of Trento, Italy, [3]University of Naples, Italy, [4]Prodal S.c.a.r.l., Italy*

P1.1.39 **PAW decontamination for materials used in beverages industry**
Ana Sainz-García[1]*, Elisa Sainz-García[1], Ignacio Muro-Fraguas[1], Rodolfo Múgica-Vidal[1], Félix Gallarta-González[2], Isabel López-Alfaro[1,3], Lucía González-Arenzana[1,3], Rocío Escribano-Viana[1,3], Ana González-Marcos[1], Fernando Alba-Elías[1], *[1]University of La Rioja, Spain, [2]University of La Rioja, Spain, [3]Institute of Grapevine and Wine Sciences, Spain*

P1.1.41 **Understanding the release of proteins from Arthrospira platensis after Pulsed-Electric-Field treatment for sustainable food systems**
Justus Knappert, Christopher McHardy, Cornelia Rauh, Robert Sevenich*, *Technische Universität Berlin, Germany*

P1.1.43 **Gas Hydrate Formation in a Stirred Tank Reactor**
Robyn Megan Sutter[1]*, Christoph Hartmann[1,2], Vincent Meunier[1], Cornelia Rauh[2], *[1]Institute of Material Sciences, Nestlé Research, Switzerland, [2]Institute of Food Technology and Food Chemistry TU Berlin, Germany*

P1.1.45 **Impact of varying pasture allowances on the compositional, quality and nutritional properties of milk**
Mark Timlin[1,2,3]*, John T. Tobin[2], Eoin G. Murphy[2], Karina M. Pierce[1,3], John P. Murphy[4], Deirdre Hennessy[4], Michael O'Donovan[4], Niamh Harbourne[1], Andre Brodkorb[2,3], Tom F. O'Callaghan[5], *[1]University College Dublin, Ireland, [2]Teagasc Moorepark Food Research Centre, Ireland, [3]Food for Health Ireland, University College Dublin, Ireland, [4]Teagasc Animal and Grassland Research and Innovation Centre, Ireland, [5]University College Cork, Ireland*

P1.2.01 **Fluid bed drying of dairy gel granules supported by in-line monitoring of the water content**
Jennifer Frank[1]*, Jörg Hinrichs[2], Reinhard Kohlus[1], *[1]Department of Process Engineering and Food Powders, University of Hohenheim, Germany, [2]Department of Soft Matter Science and Dairy Technology, University of Hohenheim, Germany,*

P1.2.03 **Evaluation of sensor performance for smart home applications to analyze bakery products**
Katrin Mathmann*, Luise Dauwa, Rene Schalk, Reinhard Gahleitner, *University of Applied Sciences Upper Austria, Austria*

P1.2.05 **Detection of mushroom browning using RGB image segmentation approaches combined with hyperspectral image analysis**
Ming Zhao, Kai Yang*, Dimitrios Argyropoulos, *University College Dublin, Ireland*

P1.3.01 **Automized Optimization of Food Formulations using Machine Learning**
Deborah Becker[1]*, Cornelia Rauh[2], Christopher McHardy[2], Christoph Hartmann[1], *[1]Nestlé Research Center, Switzerland, [2]Technische Universität Berlin, Germany*

P1.3.03 **A review on machine learning techniques in controlled environment food production systems**
Christos Charisis*, Dimitrios Argyropoulos, *University College Dublin, Ireland*

P1.3.05 **Image Analysis for Sediment Quantification in Rehydrated Infant Formula**
Behrad Mozafari[1]*, Rudi Villing[2], Mark Fenelon[3], Norah O'Shea[1], *[1]Teagasc, Moorepark, Ireland, [2]Maynooth University, Ireland, [3]Food Research Programme, Teagasc, Ireland*

P1.4.01 **Development of a mathematical model for the drying process of Spanish cured ham** Rafael López[1], Raúl Anso Blanco[1]*, Héctor Castro[2], *[1]Ctic Cita, Spain, [2]Dinámica Ingeniería Spa, Chile*

P1.4.03 **Pressure Effect on Microwave Heating and Development of Innovative Sterilization Process for Canning**
Ozan Altin[1], Dagbjorn Skipnes[2], Torstein Skara[2], Ferruh Erdogdu[1]*, *[1]Ankara University, Turkey, [2]Nofima, Norway*

P1.4.05 **Kinetic modelling of dispersion of baby biscuits in liquid as a quality assessment tool** Tolgahan Kocadagli*, Sırma Çelik, Naz Erdem, Neslihan Göncüoğlu Taş, Vural Gökmen, *Hacettepe University, Turkey*

P1.4.07 **Effects of microwave radiation on the bioactive properties in selected vegetable species**
Remigiusz Oledzki*, Joanna Harasym, *Wroclaw University Of Economics and Business, Poland*

P1.4.09 **Probability of germination of Botrytis cinerea using an acid-based model system of strawberry**
Laura Rabasco-Vílchez[1]*, Esther Porras-Pérez[2], Arícia Possas[1], Ramón Morcillo-Martín[3], Fernando Pérez-Rodríguez[1], *[1]Universidad de Córdoba, [2]IMIBIC. Instituto Maimónides de Investigación Biomédica de Córdoba, Spain, [3]Universidad de Córdoba*

P1.4.11 **Development of a method for measuring the electrical conductivity of cake batter**
Olivier Rouaud[1]*, Mamadou Lamine Niane[1], Anthony Ogé[1], Alain Le-Bail[1], Patricia Le-Bail[2], *[1]Nantes Université, CNRS, France, [2]INRAE, BIA, France*

P1.4.13 **Preventing the waste of animal-source foods by predicting the kinetics of oxidation reactions**
Jason Sicard*, Alain Kondjoyan, INRAE, France

P2.1.01 **Nutritional, Physicochemical and Microbiological Quality of Selected South African and Russian Dairy Fermented Beverages**
Betty Ajibade[1]*, Kimeshni Rungan[1], Betty Ajibade[1], Titilayo Ajayeoba[1], Konstantin V. Moiseenko[2], Tatyana V. Fedorova[2], *[1]Durban University Of Technology, South Africa, [2]Russian Academy of Sciences, Russia*

P2.1.03 **Comparison of the frictional properties of plant and dairy proteins**
Fran Brown[1]*, Alan Mackie[2], Qi He[2], Jochen Pfeifer[2], Anwesha Sarkar[1], *[1]University of Leeds, United Kingdom, [2]Mondelez International, United Kingdom*

P2.1.05 **How to ensure the printability of a food matrix ? From formulation to consumer appreciation**
Valérie Guénard-Lampron[1,2,3]*, Cassandre Leverrier[1,2,3], Giana Almeida[1,2,3], *[1]Université Paris-Saclay, France, [2]AgroParisTech, France, [3]INRAE, France*

P2.1.07 **Phenotypic Enhancement of Chlorella vulgaris for Food Applications**
Ivan Ivanov*, Kateřina Bišová, *Institute of Microbiology of the Czech Academy of Sciences, Czech Republic*

P2.1.09 **Optimal germination condition for increased antioxidant activities of chickpea (Cicer arietinum) using Box-Behnken Design**
Sung Mi Kim*, Thinzar Aung, Mi Jeong Kim, *Changwon National University, South Korea*

P2.1.11 **Antioxidant, anti-inflammatory and anti-proliferative effects of artichoke and ginger extract and improvement of gastrointestinal disorders**
Hui Jeong Lee*, Ju Eun Lee, Mi Jeong Kim, *Changwon National University, South Korea*

P2.1.13 **Formulation of astringency solutions for plant-based beverages assisted by multi-sip sensory evaluation and mixture design**
Julie Deviers[1], Roxanne Dewulf[2], Cecile Masson[2], Lydie Rouyer[1], Laurent Lethuaut[2,3], Lizeth Lopez Torrez[1]*, *[1]MANE, France, [2]ONIRIS National College of Veterinary Medicine, Food Science and Engineering, France, [3]FLAVOR Research Team, MAPS², UMR CNRS [6144] GEPEA, France*

P2.1.15 **Discovery of taste modulating peptides in soy sauce using the Sensoproteomics approach**
Verena Mittermeier-Klessinger*, Manon Juenger, Anastasia Farrenkopf, Corinna Dawid, Thomas Hofmann, *Technical University of Munich, Germany*

P2.1.17 **The effect of eliminating nitrite from a cured pork "salpicão" evaluated by a CATA test** Luis Patarata*, Filipa Carvalho, *CECAV – Veterinary and Animal Research Centre, Portugal*

P2.1.19 **Lipidomic insights into the textural impact of baking lipases on fine bakery goods** Charlotte Dorothea Stemler[1]*, Adele Cutignano[2], Katharina Anne Scherf[1], *[1]Karlsruhe Institute of Technology (KIT), Germany, [2]Istituto di Chimica Biomolecolare (ICB), Consiglio Nazionale delle Ricerche (CNR), Italy*

P2.1.21 **Effect of artisanal or industrial fermentation process on the sensory qualities of traditional French bread**
Romane Troadec*, Sofia Nestora, Céline Niquet-Léridon, Philippe Jacolot, Stéphanie Regnault, Pauline M. Anton, Céline Jouquand, *Université d'Artois, France*

P2.2.01 **Development of sorghum-based food products: Current knowledge and future prospects**
Etiene Aguiar[1]*, Valéria Queiroz[2], Cícero Menezes[2], Vanessa Capriles[1], *[1]Unifesp, Brazil, [2]Embrapa Milho e Sorgo, Brasil*

P2.2.03 **How to cook sorghum? Results from empirical tests and from a literature review**
Etiene Aguiar[1]*, Valéria Queiroz[2], Cícero Menezes[2], Vanessa Capriles[1], *[1]Unifesp, Brazil, [2]Embrapa Milho e Sorgo, Brasil*

P2.2.05 **Effect of polygalacturonic acid derivatives from fractionation and acidic hydrolysis on in vitro α-amylase activity**
Yeming Bai[1,2]*, Ziyi Wang[2,3], Sharat Atluri[3], Xin Liu[2,3], Enpeng Li[2], Robert Gilbert[2,3], *[1]KU Leuven, Belgium, [2]Jiangsu Key Laboratory of Crop Genetics and Physiology/State Key Laboratory of Hybrid Rice, China, [3]The University of Queensland, Australia*

P2.2.07 **Development of a new dehydrated black olive product**
Pedro García-Serrano[1], Concepción Romero[2], Pedro García[3], Eduardo Medina[4], Manuel Brenes[5]*, *[1]Instituto de la Grasa (CSIC), Spain, [2]Instituto de la Grasa (CSIC), Spain, [3]Instituto de la Grasa (CSIC), Spain, [4]Instituto de la Grasa (CSIC), Spain, [5]Instituto de la Grasa (CSIC), Spain*

P2.2.09 **Characterization of orange juice co-product for its valorisation as a food ingredient**
María del Mar Camacho*, Julian Villena, Nuria Martínez-Navarrete, *Universitat Politècnica De València, Spain*

P2.2.11 **3D Printing of A Spinach Pasta Enriched with Chicken Meat**
İlayda İŞLEYEN, Hilal Sena YILDIRIM, Pınar KADIOĞLU ŞENTÜRK, Kezban Candoğan*, *Ankara University, Turkey*

P2.2.13 **Gelatinization properties of sprouted sorghum flours over a wide range of water contents**
Miriam Chiodetti, Eleonora Carini*, *University of Parma, Italy*

P2.2.15 **Effect of raw materials and processing parameters on the digestibility of sourdough bread**
Alice Costantini[1]*, Alessio Da Ros[1], Olga Nikoloudaki[1], Marco Montemurro[2], Raffaella Di Cagno[1], Bernard Genot[3], Marco Gobbetti[1], Carlo Giuseppe Rizzello[4], *[1]Libera Universitá di Bolzano, Italy, [2]University of Bari Aldo Moro, Italy, [3]Puratos NV, Belgium, [4]"Sapienza" University of Rome, Italy*

P2.2.17 **Assessing the use of wild Beta vulgaris in reinforcing nutritional features of bakers' wheat flour**
Manel Issaoui[1,2], Samia Oueslati[3], Amélia Delgado[4]*, Anabela Romano[4], Guido Flamini[5], *[1]University of Monastir, Tunisia, [2]University of Kairouan, Tunisia, [3]The Center of Biotechnology of Borj Cedria, Tunisia, [4]Universidade do Algarve, Portugal, [5]University of Pisa, Italy*

P2.2.19 **Novel Protein Phase: Plant protein coacervation**
Nirzar Doshi*, Renko De Vries, Paul Venema, *Wageningen University & Research, Netherlands*

P2.2.21 **3D-Printing of probiotic enriched cookies made from confectionary's waste**
Mahsa Sayadi[2], Zeinabossadat Ebrahimzadeh Mousavi[1,2]*, Seyed Hadi Razavi[2], *[1]School of biosystems and food engineering, University College Dublin, Ireland, [2]University of Tehran, Iran*

P2.2.23 **The quality of sucrose-reduced cakes is improved by altering the batter mixing atmosphere**
Thibault Godefroidt[1]*, Nand Ooms[1], Geertrui Bosmans[2], Kristof Brijs[1], Jan Delcour[1], *[1]KU Leuven, Belgium, [2]Puratos NV, Belgium*

P2.2.25 **Application of almond milk residue in the development of a functional almond cream spread**
Catarina Vil Real, Marcia Barbosa, Dina Rodrigues, Ana Freitas, Ana Gomes*, *Universidade Católica Portuguesa, Portugal*

P2.2.27 **Calcium ions impact properties of potato starch gels and (deep-fried) potato** mashes Kathleen Hooyberghs*, Lennert Noens, Stijn Reyniers, Yeming Bai, Kristof Brijs, Jan Delcour, *Ku Leuven, Belgium*

P2.2.29 **Effect of High pressure debittered green table olives on the fermentation process**
George Katsaros*, Varvara Andreou, Sofia Chanioti, Panagiota Stergiou, *Institute Of Technology Of Agricultural Products Elgo-demeter, Greece*

P2.2.31 **Designing and Developing Health Promoting and Sustainable Meat-based Comminuted Products**
Ciara Kenny[1]*, Roisin Burke [1], Catherine Barry-Ryan[2], *[1]Kepak Group, Ireland, [2]Technological University Dublin, Ireland*

P2.2.33 **Antimicrobial activities of selected lactic acid bacteria in egg products**
Insa Mannott[1]*, Tinting Chu[1], Daniela Marino-Gonzales[1], Gunnar Bosse[1], Victoria Kiehne[2], Anne Rehkamp[2], Clemens Bertram[3], Bernhard Schneppe[2], Ramona Bosse[1], *[1]University of Applied Sciences Bremerhaven, Germany, [2]Ovobest Eiprodukte GmbH & Co. KG, Germany, [3]Hebold Systems, Germany*

P2.2.35 **Quality of gluten-free breads formulated with apple pomace and psyllium as affected by frozen storage**
Leire Cantero[1], Jesús Salmerón[1,2,3], Itziar Txurruka[1,2,3], Silvia Matias[1], Virginia Navarro[1,2,3], Idoia Larretxi[1,2,3], Arrate Lasa[1,2,3], Jon Esparta[1], Gesala Pérez-Junquera[1], Olaia Martinez[1,2,3]*, *[1]University of The Basque Country, Spain, [2]University of the Basque Country, Spain, [3]Bioaraba Health Research Institute, Spain*

P2.2.37 **Effect of olive leaf grinding on the content of biocompounds and color in their infusions** Eduardo Medina Pradas*, Eva María Ramírez Castro, Manuel Brenes Balbuena, Concepción Romero Barranco, Pedro García García, *Instituto de la Grasa - CSIC, Spain*

P2.2.39 **D-optimal mixture design to develop novel W/O food emulsions**
Nicoletta Antonella Miele*, Angela Borriello, Paolo Masi, Silvana Cavella, *University of Naples Federico II, Italy*

P2.2.41 **Production of high-functional fruits snacks by combination of mild technologies**
Joel Armando Njieukam[1]*, Giacomo Braschi[1], Jessica Genovese[1], Francesca Patrignani[1,2], Urszula Tylewicz[1,2], Pietro Rocculi[1,2], *[1]University of Bologna, Italy, [2]University of Bologna, Italy*

P2.2.43 **Development of innovative added-value baked products based on substitution of wheat flour with seaweed powder**
Vasiliki Oikonomopoulou*, Margarita Panagiotopoulou, Sofia Papadaki, Magdalini Krokida, *National Technical University Of Athens, Greece,*

P2.2.45 **The Effect of Mondora myristica Extract on the Oxidative Stability of Cashew Nut Spread**
Hannah Olaleye*, Tolulope Oresanya, Enitan Jubril, *Yaba College Of Technology, Nigeria*

P2.2.47 **Vegetable by-products as a source of bioactive compounds in beer brewing**
Oghenetega Lois Orhotohwo[1]*, Ancuta Nartea[1], Benedetta Fanesi[1], Anastasiya Kuhalskaya[1], Paolo Lucci[2], Natale G. Frega[1], Deborah Pacetti[1], *[1]University of Marche, Italy, [2]University of Udine, Italy*

P2.2.49 **Microencapsulation of probiotic cells enhances their survival under conditions simulating the human gastrointestinal system**
Chrysoula Tassou[1], Stamatia Vitsou-Anastasiou[1,2], Olga Papadopoulou[1]*, Apostolos Karkos[1,2], Anthoula Argyri[1], Agapi Doulgeraki[1], George-John Nychas[2], *[1]Institute of Technology of Agricultural Products, Hellenic Agricultural Organisation DIMITRA, Greece, [2]Agricultural University of Athens, Greece*

P2.2.51 **Use of faba flour to develop a more sustainable and nutritious sliced bread**
Jane Parker*, M Oruna Concha, S Lignou, D Balagiannis, J Whitehead, K Symmons, J Rodriguez Garcia, *University of Reading, United Kingdom*

P2.2.53 **Date-palm coproducts (Oriol cv) as a new ingredient for dry-cured sausages: Technological and physicochemical properties**
José Angel Perez-Alvarez*, Clara Muñoz-Bas, Laura Candela-Salvador, Carmen María Botella-Martinez, María Estrella Sayas-Barberá, Javier Andreu-Rodriguez, Casilda Navarro-Rodríguez de Vera, Manuel Viuda-Martos, Juana Fernández-López, *Miguel Hernández University, Elche, Spain*

P2.2.55 **Combination of green and gentle technologies for the development of innovative hop-based powder ingredients**
Lilia Neri, Simona Tatasciore, Veronica Santarelli, Marco Faieta, Carla Di Mattia, Paola Pittia*, *University of Teramo, Italy*

P2.2.57 **Essential Fatty Acids of Multispecies Swards Grown in Ireland – Possible sustainability and environmental implications**
Samuel Rapisarda*, Graham O'Neill, Nissreen Abu-Ghannam, *Technological University Dublin, Ireland*

P2.2.59 **Crystallization behavior of emulsified triglycerides and their stability as a function of emulsion-stabilizing excipients**
Jasmin Reiner*, Heike Petra Karbstein, *Karlsruhe Institute of Technology, Germany*

P2.2.61 **Impact of culinary practices on microconstituents' bioaccessibility : the example of a model tomato sauce**
Jiahao Yu[2,3], Catherine Renard[1,3]*, Béatrice GLize[3], *[1]INRAE, France, [2]Zhejiang University of Technology, China, [3]SQPOV, France*

P2.2.63 **Sustainable fish products enriched with protein from fish and pea side streams**
Jan Thomas Rosnes[1]*, Aase Vorre Skuland[1], Ingvild Gundersen[2], *[1]Nofima, Norway, [2]University of Stavanger, Norge*

P2.2.65 **The effect of saturated and monounsaturated fatty acids on the thermo-oxidative stability of stigmasterol-modified acylglycerols**
Magdalena Rudzinska*, Anna Grygier, Aleksandra Grudniewska, *Poznań University of Life Sciences, Poland*

P2.2.67 **Pulsed electric fields impacts the stability and bioaccessibility of phenolic compounds in carrot purees**
Gloria López-Gámez, Pedro Elez-Martínez, Olga Martín-Belloso, Robert Soliva-Fortuny*, *University of Lleida, Spain*

P2.2.69 **Desirability-based optimization of bakery products containing pea, hemp and insect flours using mixture design methodology**
Clara Talens[1]*, Maider Lago[1], Laura Simó-Boyle[2], Isabel Odriozola-Serrano[2], Mónica Ibargüen[1], *[1]AZTI, Food Research, Basque Research and Technology Alliance (BRTA), Spain, [2]University of Lleida, Spain*

P2.2.71 **Impact of adding wheat arabinoxylan to gluten-starch dough on its rheological properties**
Sara A.K.B. Petit-Jean[1,2], Femke Vandenbroucke[1], Julie Van de Vondel[1]*, Kurt Gebruers[1], Paula Moldenaers[2], Jan A. Delcour[1], *[1]KU Leuven, Belgium, [2]KU Leuven, Soft Matter, Rheology and Technology (SMaRT), Belgium*

P2.2.73 **Impact of fiber-enriched wheat flour on the technological quality of wheat bread doughs**
Celeste Verbeke*, Els Debonne, Filip Van Bockstaele, Mia Eeckhout, *Ghent University, Belgium*

P2.2.75 **Development of a functional snack for gut-brain axis health**
Elena Vittadini[1]*, Oscar Moreno-Araiza[1], Laura Bonfili[1], Anna Maria Eleuteri[1], Nicoletta Pellegrini[2], *[1]University of Camerino, Italy, [2]University of Udine, Italy*

P2.2.77 **Stability of bioactive crocins during loading into solid lipid nanoparticles and production of protein gels**
Verena Wiedenmann*, Esther Mayer-Miebach, Elke Walz, Volker Gräf, Kathleen Oehlke, *Max Rubner-Institut, Federal Research Institute of Nutrition and Food, Germany*

P2.2.79 **Wheat flour substitution by fava bean flour for whole wheat bread**
Leah Simon, Maya Vögel, Viktoria Zettel*, *University Of Hohenheim, Germany*

P2.3.01 **Ultra-high-pressure homogenization (UHPH) in the preparation of spray-dried functional emulsion: application in dairy-based products**
Fatemeh Aghababaei*, Victoria Ferragut, *Universitat Autonoma Barcelona (UAB), Spain*

P2.3.03 **Investigation of the 3D bread dough structure using complementary approaches: label-free multiphoton and confocal microscopies**
Nanci Castanha[1]*, Sylvain Challois[1], Elysa Le Corre[1], Héliciane Clément[1], Patricia Le Bail[2], David Grenier[1], Laurence Dubreil[3], Tiphaine Lucas[1], *[1]INRAE UR OPAALE, France, [2]INRAE UR BIA, France, [3]INRAE, ONIRIS, APEX UMR PAnTher, France*

P2.3.05 **Development of new foods rich in animal proteins adapted to the masticatory capacity of seniors**
Anne Duconseille*, Stephane Portanguen, Pascal Tournayre, Thierry Astruc, Pierre-Sylvain Mirade, *INRAE, France*

P2.3.07 **Impacts of ionic calcium fiber supplementation on preserving bone health in C57/BL6 mice**
Hugo Espinosa[1]*, Esristeo García-Marquez[2], Sara Herrera-Rodríguez [3], *[1]CIATEJ, Mexico, [2]CIATEJ-Northwest, Mexico, [3]CIATEJ-Southwest, Mexico*

P2.3.09 **Water-in-linseed oil Pickering emulsions stabilized with surface-functionalized silica nanoparticles with tocopherol succinate or myristic acid**
Begoña Gimenez[1]*, Javier Paredes-Toledo[1], Javier Herrera[1], Paz Robert[2], Javier Morales-Valenzuela[2], *[1]Universidad De Santiago De Chile, Chile, [2]Universidad de Chile, Chile*

P2.3.11 **Process for a low molecular mass beta-glucan recovery from oat**
Joanna Harasym[1]*, Joanna Gromadzka-Ostrowska[2], *[1]Wroclaw University of Economics And Business, Poland, [2]Warsaw University of Life Sciences, Poland*

P2.3.13 **Use of rainbow trout (Oncorhynchus mykiss) hydrolysate as a valuable source of multifunctional bioactive peptides**
Kristine Kvangarsnes[1]*, Janna Cropotova[1], Egidijus Dauksas[1], Turid Rustad[1], Carlotta Bollati[2], Martina Bartolomei[2], Ruoxian Xu[2], Giovanna Boschin[2], Carmen Lammi[2], *[1]Norwegian University of Science And Technology, Norway, [2]Università degli Studi di Milano, Italy*

P2.3.15 **In vitro digestion of chlorophyllin-loaded W1/O/W2 emulsions with different lipid phase compositions into whole milk**
Anna Molet-Rodríguez*, Mohsen Ramezani, Laura Salvia-Trujillo, Olga Martín-Belloso, *University of Lleida, Spain*

P2.3.17 **Development of bioactive feed extrudates containing encapsulated phytogenic compounds**
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P2.3.19 **Rheological properties of liposomal nanosuspensions that encapsulate grape seed tannins**
Fernando Osorio*, Angela Monasterio, Emerson Nuñez, *Universidad de Santiago de Chile, Chile*

P2.3.21 **Physical and antioxidant properties of a yogurt containing liposomal nanosuspensions with encapsulated tannins**
Fernando Osorio[1]*, Angela Monasterio[1], Natalia Brossard[2], Marcela Zamorano[1], *[1]Universidad de Santiago de Chile, Chile, [2]Pontificia Universidad Católica de Chile, Chile*

P2.3.23 **Digestive fate of protein amyloid structures: A case study on α-lactalbumin, β-lactoglobulin and ovalbumin**
Gil Refael*, Alon Romano, Yizhaq Engelberg, Meytal Landau, Uri Lesmes, *Technion - Israel Institute of Technology, Israel, Universidad de Granada*

P2.3.25 **Gentiana Lutea microencapsulation in alginate microbeads using air assisted extrusion: process parameters effects on bioavalability**
Fabrizio Sarghini*, Angela De Vivo , Emanuele Elefante, *University Of Naples Federico Ii, Italy*

P2.4.01 **Effect of gastrointestinal digestion on the lactoferrin antibacterial activity in dairy formulas against Listeria monocytogenes**
Inés Abad[1,2]*, Laura Pemán[1], Aroa Bailac[1], Dimitra Graikini[1,2], Juan José Carramiñana[1,2], Dolores Pérez[1,2], Laura Grasa[2,3], Lourdes Sánchez[1,2], *[1]Universidad de Zaragoza, Spain, [2]Instituto Agroalimentario de Aragón IA[2] (UNIZAR-CITA), Spain, [3]Universidad de Zaragoza, Spain*

P2.4.03 **Targeted and semi-untargeted UHPLC-qTOF-MS determination of polyphenols in five indegenous fruits of South Africa**
Tonna Ashim Anyasi*, Karen de Jager, Lerato Grace Malesa, Rosemary du Preez, *Agricultural Research Council - Tropical and Subtropical Crops, South Africa*

P2.4.05 **Free and bound phenolic profile in the orange juice co-product. Contribution to its antioxidant activity**
María del Mar Camacho*, Mónica Zago, Eva García-Martínez, Nuria Martínez-Navarrete, *Universitat Politècnica De València, Spain*

P2.4.07 **Toxicity Assessment of Catechin on Aquatic Organism and Terrestrial Plant**
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P2.4.09 **Mediterranean Diet: the role of phenolic compounds from Mediterranean plant foods** Amélia Delgado*, Sandra Gonçalves, Anabela Romano, *University of Algarve, Portugal*

P2.4.11 **In vitro digestion effect on DPP-IV inhibitory activity of protein hydrolysates obtained from plant by-products**
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P2.4.13 **Upgrading Horse mackerel discards and chia cake by obtaining a microencapsulated anti-hypertensive food ingredient**
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P2.4.15 **Comparative investigation of anti-cancer potential in collagen hydrolysate fractions extracted from Alaska Pollack skin**
Thinzar Aung, Ju Eun Lee, Mi Jeong Kim*, *[1]Changwon National University, South Korea*

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P2.5.01 **IPSUS: Climate smart food innovation using plant and seaweed proteins from upcycled sources**
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P2.5.03 **Influence of processing paramters on the quality of defatted T. molitor**
Lisa Fahrner*, René Rehorska, Johann Tiefenbacher, Simon Berner, *University of Applied Sciences - FH Joanneum, Austria*

P2.5.05 **Impact of growth conditions on protein content and profile of the cultured macroalga, *Palmaria palmata***
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P2.5.09 **Effect of pH on heat-induced gelation properties of plant and whey proteins**
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P2.5.15 **How do plant proteins and flavours interact?**
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P2.6.01 **High-moisture Mozzarella cheese freezing: physico-chemical and sensory modifications during processing and shelf-life**
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P2.6.03 **Ensuring product stability, quality, and safety while introducing novel sustainable packaging solutions**
Linda Brütsch*, Vincent Meunier, Reinhard Behringer, *Nestle Institute of Material Sciences, Switzerland*

P2.6.05 **ENHANCEMICROALGAE PROJECT: Stimulating Microalgae Research, Industrial Development and Transnational Cooperation in Europe**
María-José Chapela*, *EnhanceMicroAlgae partnership, Anfaco-Cecopesca, Spain*

P2.6.07 **Multicriteria assessment tool to support design of food products integrating environmental, nutritional and sensorial dimensions**
Adeline Cortesi*, Gwenola Yannou-Le Bris, Caroline Pénicaud, *Université Paris-Saclay, INRAE, AgroParisTech, UMR SayFood, France*

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P2.6.11 **Spray-dried kefir powder and reconstitution properties as affected by storage temperature and thermoprotectant carrier addition**
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P2.6.15 **Statistical models describing the effect of protein addition on the physicochemical properties of fortified soup**
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P2.6.17 **Effect of cattle grazing botanically diverse pasture on the sensory quality of beef**
Michelle Kearns[1]*, Jean-Christophe Jacquier [1], Simona Grasso[1], Emily Crofton[2], Tommy M Boland[1], Helen Sheridan[1], Frank J Monahan[1], *[1]University College Dublin, Ireland, [2]Teagasc Food Research Centre, Ireland*

P2.6.19 **Evaluation of the mechanical properties towards the design of 3D printed food**
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P2.6.23 **Two-spotted cricket (Gryllus bimaculatus) powder addition impact on hydration properties of blends with rice flour**
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P2.6.25 **Mathematical modeling for furan estimation during thermal sterilization process of jarred carrot**
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P2.6.27 **Potential of Debaryomyces hansenii SP6L12 to produce cricket powder-based innovative breads**
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P3.1.01 **Microbial diversity of Amasi, traditionally produced using metagenomic sequencing techniques (16S rRNA and ITS 1&2)**
Betty Ajibade*, *Durban University Of Technology, South Africa*

P3.2.01 **Monitoring of temperature changes affected by different types of cod fillet packaging** Klara Bartakova[1]*, Sarka Bursova[1], Alena Skockova[1], Lenka Necidova[1], Danka Harustiakova[2], Marcela Klimesova[3], *[1]University of Veterinary Sciences, Czech Republic, [2]Masaryk University, Czech Republic, [3]Dairy Research Institute, Czech Republic*

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Rachel Louise Gomes[1]*, Andrea-Lorena Garduño-Jiménez[2], Juan Carlos Durán-Álvarez[3], *[1]University of Nottingham, United Kingdom, [2]University of Nottingham, United Kingdom, [3]National Autonomous University of Mexico, Mexico*

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Lenka Necidová[1]*, Šárka Bursová[1], Danka Haruštiaková[2], Alena Skočková[1], Klára Bartáková[1], Marcela Klimešová[3], *[1]University of Veterinary Sciences, Czech Republic, [2]Masaryk University, Czech Republic, [3]Dairy Research Institute, Czech Republic*

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Revathy Gurusamy*, Jørgen Lerfall, John-Kristian Jameson, Anita Nordeng Jakobsen, *Norwegian University of Science and Technology, Norway*

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Zhujun Gao, Rohan Tikekar*, *University of Maryland, United States*

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P4.1.01 **Production of fish sauce based on herring (*Clupea harengus*) and blue whiting (*Micromesistius poutassou*)**
Tone Aspevik[1]*, Gro H. Kleiberg[2], Ingunn Berget[3], Birthe Vang[4], Mari Ø. Gaarder[3], *[1]Nofima AS, Norway, [2]Nofima AS, Norway, [3]Nofima AS, Norway, [4]Nofima AS, Norway*

P4.1.03 **Effects of thermal stabilization and enzyme-assisted hydrolysis on cocoa fruit pulp for food applications**
Thomas Bickel Haase[1,2]*, Ute Schweiggert-Weisz[1,3], Eva Ortner[1], Holger Zorn[2,4], Susanne Naumann[1], *[1]Fraunhofer Institute for Process Engineering and Packaging IVV, Germany, [2]Justus Liebig University Gießen,, Germany, [3]University of Bonn, Germany, [4]Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Germany*

P4.1.05 **Extraction of Pectin From Apple Pomace Using Environmentally Friendly Processes For Circular Economy Initiative**
Ian Butler[1,2]*, Russell Banta[1,2], Andrey Tiuftin[1], Joe Kerry[1], *[1]Food Packaging Group, School of Food & Nutritional Sciences, UCC, Ireland, [2]Environmental Research Institute, Ireland*

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P4.1.13 **Revalorization of cocoa by-products through enzymatic hydrolysis and gastronomic applications** Sandra García Rodríguez*, Pía León, Virgilio Martínez, Malena Martínez, *Mater Iniciative, Research centre for territorial development, Perú*

P4.1.15 **Tomato pomace as a bio-energy source in a circular economy: methane production intensification using ultrasounds** Francesca Girotto[1]*, Maria Cristina Lavagnolo[2], Gulgun Acar[2], Laura Piazza[1], *[1]Università degli Studi di Milano, Italy, [2]Università degli Studi di Padova, Italy*

P4.1.17 **Effect of chitin nanowhiskers on chitosan films prepared at different viscosity film forming solutions** Iranzu Zalba[2], Mikel Apesteguía[2], Carmen Barba[2], Juan I. Maté[2], Joaquín Gómez-Estaca[1]*, *[1]ICTAN-CSIC, Spain, [2]UPNA, Spain*

P4.1.19 **Replacing egg yolk in homemade mayonnaise by food by-products: effect of formulation and process parameters** Charlotte Hollestelle[1]*, Faidat MZE Hamadi[2], Camille Michon[3], Nathalie Fayolle[4], Delphine Huc-Mathis[1], *[1]Université Paris-Saclay, INRAE, AgroParisTech, UMR SayFood, France, [2]Université Paris-Saclay, France, [3]INRAE, France, [4]JRS Rettenmaier, France*

P4.1.21 **Up-cycling and valorisation of European plaice by-products originating from Norway** Sophie Kendler*, Sine Marie Moen Kobbenes, Anita Nordeng Jakobsen, Jørgen Lerfall, *Norwegian University of Science and Technology, Norway*

P4.1.23 **Application of flowcytometry to characterize Tetradesmus obloquus and Nonnochlropsis ocenica growth on casein whey permeate** Hossein Kiani[1,2]*, Kelly Noble[1], Yeganeh Azimi [2], Ronald Halim[1], *[1]University College Dublin, Ireland, [2]University of Tehran, Iran*

P4.1.25 **Investigation of lactose assimilation by microalgae for bioremediation of dairy waste** Yuchen Li[1]*, Hossien Kiani[1,2], Brijesh K. Tiwari[3], Ronald Halim[1,2], *[1]University College Dublin, Ireland, [2]University College Dublin, Ireland, [3]Ashtown Teagasc Food Research Centre, Ireland*

P4.1.27 **Bread losses and surplus in French bakeries: what place for repurposing as food?** Tiphaine Lucas*, Chloé Roy, Marie-Line Daumer, Lynda Aissani, *INRAE, OPAALE Research Unit, France*

P4.1.29 **Chitosan/LCNF/Gallic-acid films for active food packaging** Ramón Morcillo-Martín[1]*, Laura Rabasco-Vílchez[2], Eduardo Espinosa[3], Fernando Pérez-Rodríguez[4], Alejandro Rodríguez[4], *[1]University Institute of Nanochemistry, Spain, [2]Universidad de Córdoba, Spain, [3]Universidad de Córdoba, Spain, [4]Universidad de Córdoba, Spain*

P4.1.31 **Alternative legume proteins in the biorefinery process** Nora Pap*, Eila Järvenpää, Jarkko Hellström, Pertti Marnila, Santeri Kankaanpää, Juha-Matti Pihlava, Tomasz Stefanski, Marcia Franco, Marketta Rinne, *Natural Resources Institute Finland, Finland*

P4.1.33 **Sustainable pathways for delignification of barley straw for nanocellulose production** Dileswar Pradhan[1,2]*, Brijesh Tiwari[2], Swarna Jaiswal[1], Amit Jaiswal[1], *[1]Technological University Dublin, Ireland, [2]Teagasc Ashtown Food Research Centre, Ireland*

P4.1.35 **Sequential batches strategy for the enhancement of protein recovery from salmon frames by proteolysis** Pedro Valencia, Silvana Valdivia, Suleivys Nuñez, Cristian Ramirez*, Marlene Pinto, Sergio Almonacid, *Technical University Federico Santa Maria, Chile*

P4.1.37 **Valorization of whey protein fraction by High Pressure Processing** María Romo*, Massimo Castellari, Xavier Felipe, *IRTA (Institute of Agrifood Research and Technology), Spain*

P4.1.39 **Modification of technological properties of apple bagasse through the application of enzymatic treatments** Alba Díaz-Núñez, Gloria López-Gámez, Robert Soliva-Fortuny*, Olga Martín-Belloso, Pedro Elez-Martínez, *University of Lleida, Agrotecnio CERCA Centre, Spain*

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P4.1.43 **Stabilisation of potato trimmings for protein extraction by lactic acid fermentation** Baptiste Vanleenhove*, Ellen Verwee, Els Van Damme, Andre Skirtach, Koen Dewettinck[1], Davy Van de Walle, Steven De Meester, Katleen Raes, *Ghent University, Belgium*

P4.3.01 **Influence of different packaging strategies on the quality and shelf life of tomatoes** Claire-Lucie Tschentscher, Claudia Waldhans, Antonia Albrecht*, *Rheinische Friedrich-Wilhelms-Universität Bonn, Germany*

P4.3.03 **Rationalized use of functional barriers to promote recycled materials for food contact** Natacha Daoud[1,2]*, Colette Breysse[2], Sandra Domenek[1], Olivier Vitrac[1], *[1]INRAE, AgroParisTech, Paris-Saclay University , France, [2]IPC , France*

P4.3.05 **Antimicrobial properties of nanoprinted PLA-based films with embeded antimicrobials and use in meat preservation** Ioannis Giavasis[1]*, Chrysanthi Mitsagga[1], Paraskevi Bouki[1], Stefanos Zaoutsos[1], Konstantinos Petrotos[1], Emmanouel Koudoumas[2], Nikos Kehagias[3], *[1]University of Thessaly, Greece, [2]Hellenic Meditteranean University, Greece, [3]Institute of Nanoscience & Nanotechnology, NCSR "Demokritos", Greece*

P4.3.07 **Lemongrass Oil-based Nanocomposite: An Active Material of Biobased Food Packaging Film** Shipra Pandey*, Venkat Gundabala, *Indian Institute of Technology Bombay, India*

P4.3.09 **Evaluation of different factors affecting the antifungal activity of chitosan** Paul Alexandru Popescu*, Ioana Catalina Nicolae, Elena Elisabeta Popa, Mihaela Cristina Draghici, Amalia Carmen Mitelut, Florentina Matei, Mona Elena Popa, *University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania*

P4.3.11 **The exploration of microbial profiles in blue mussels (Mytilus edulis) stored under different modified atmospheres** Susana Endah Ratnawati[1,4]*, Lotta Kuuliala[1], Nele Verschuere[2], Margo Cnockaert[3], Peter Vandamme[3], Peter Ragaert[1], Frank Devlieghere[1], *[1]Ghent University, Belgium, [2]Biomedical Laboratory Technology, Hogeschool, Belgium, [3]Ghent University, Belgium, [4]Universitas Gadjah Mada, Indonesia*

P4.3.13 **Polyphenol-rich grape seed extract towards bioactive and visually responsive smart food packaging systems**
Akvile Pazarauskaite, Estefanía Noriega Fernández, Izumi Sone, Leena Prabhu, Morten Sivertsvik, Nusrat Sharmin*, *Nofima AS, Norway*

P4.3.15 **Bioplastic material based on ethyl-cellulose**
Eden Shlush*, Maya Davidovich-Pinhas, *Technion – Israel Institute of Technology, Israel*

P4.3.17 **Application of an app-based intelligent packaging system for the shelf life prediction of ready-to-eat salad**
Claudia Waldhans[1]*, Antonia Albrecht[1], Rolf Ibald[2], Dirk Wollenweber[2], Judith Kreyenschmidt[3], *[1]University of Bonn, Institute of Animal Sciences, Germany, [2]CBS International Business School, Logistics Management, Germany, [3]Geisenheim University, Germany*

P4.4.01 *In Silico modelling of the salmon salting process to reduce saline effluent*
Jason Sicard*, Sylvie Clerjon, Stéphane Portanguen, Raphaël Favier, Pierre-Sylvain Mirade, *Qualité des Produits Animaux, INRAE, France*

P4.5.01 **Food loss and waste case study: Economical and environmental impact on apple supply chain**
Patricia Burzaco[1]*, Sofía Barrios[1], María José Crosa[1], María Noel Ackermann[2], Natalia Barboza [2], Ángela Cortelezzi[2], Gabriel Camaño[3], Vivian Severino[2], Patricia Lema [1], *[1]Universidad De La República, Uruguay, [2]Consultancy services, Uruguay, [3]Universidad de la República, Uruguay*

P4.5.03 **Mash Process Optimization for Rice Adjuncts**
Alexander Jahn[1]*, Juyeong Kim[2], Man-Gi Cho[1,2], *[1]German Engineering Research and Development Center LSTME Busan, South Korea, [2]Dongseo University, South Korea*

P4.5.05 **Quality of farmed Atlantic Halibut chilled in refrigerated seawater versus on ice**
Trond Løvdal[1]*, Frida Bårdsen[1,2], Bjørn Tore Rotabakk[1], Atle Foss[3], Bjørn Roth[1], *[1]Nofima, Norway, [2]University of Stavanger, Norway*

P4.5.07 **Characterization of an oven dedicated to Lebanese bread baking**
Yves Mansour[1,2,3], Olivier Rouaud[1]*, Rayan Slim[2], Pierre Rahmé[2], *[1]Université de Nantes, France, [2]Lebanese University, Lebanon, [3]Farhat Bakery Equipment, Lebanon*

P5.2.01 **Gastronomy to engage citizens for a more sustainable future: Espelette pepper as a case study**
Paula Toran-Pereg[1,2], Stéfani Novoa[1], María Mora[1,2], Ziortza Agirrezabala[1]*, Laura Vázquez-Araújo[1,2], *[1]BCC Innovation, Technological Center in Gastronomy, Basque Culinary Center, Spain, [2]Basque Culinary Center, Spain*

P5.2.03 **Cross-cultural conceptualization of high-end pastry cakes based on visual stimulus**
Pedro Manuel Sousa[1]*, José Alba-Martínez[2], Javier Martínez-Monzó[2], Luís Miguel Cunha[1], Purificación García-Segovia[2], *[1]University of Porto, Portugal, [2]Universitat Politècnica de València, Spain*

P5.5.01 **A dialysis membrane process for simulating bile acids absorption during in vitro digestion**
Sotiria Gaspari*, Theodora Akritidou, Simen Akkermans, Jewel Ann Joseph, Cindy Smet, Jan Van Impe, *KU Leuven, Belgium*

P6.0.01 **Physical-chemical changes in caseins induced by pulsed electric field (PEF) as non-thermal processing**
Aline T. B. Morais[1,2], Markus Ribeiro[2], Daniel Cardoso[1], Lilia Ahrné[2]*, *[1]University of Sao Paulo, Brazil, [2]University of Copenhagen, Denmark*

P6.0.03 **Effect of PEF treatment on water retention capacity and shearing force of butternut squash**
Juan A. Cárcel[1]*, Beatriz Llavata[1], José Benedito[1], Francico Mas[1], James Lyng[2], *[1]Universitat Politècnica De València, Spain, [2]University College of Dublin, Ireland*

P6.0.07 **The impact of PEF and hybrid drying on the bioactive components of apples**
Magdalena Dadan*, Katarzyna Rybak, Artur Wiktor, Dorota Witrowa-Rajchert, Malgorzata Nowacka, *Warsaw University of Life Sciences, Poland*

P6.0.09 **Impact of high-pressure processing on qualitative and quantitative attributes of fresh pumpkin**
Rohini Dhenge[1]*, Irene Ferrarese[2], Paolo Langialonga[1], Stefano Dall'Acqua[2], Tommaso Ganino[1], Davide Barbanti[1], Massimiliano Rinaldi[1], *[1]University of Parma , Italy, [2]University of Padova, Italy*

P6.0.11 **Effect of Pulsed Electric Pulse Processing pretreatment on osmotic dehydration of fresh-cut potatoes**
Efimia Dermesonlouoglou*, Maria Katsouli, George Dimopoulos, Petros Taoukis, *National Technical University of Athens, Greece*

P6.0.13 **Plasma Activated Water and Computer Vision System application to control and evaluate melanosis in crustaceans**
Federico Drudi[1]*, Jessica Genovese[1], Silvia Tappi[1,2], Ana Cristina De Aguiar Saldanha Pinheiro[1], Santina Romani[1,2], Urszula Tylewicz[1,2], Pietro Rocculi[1,2], *[1]University of Bologna, Italy, [2]University of Bologna, Italy*

P6.0.15 **Influence of static electric field on the surface tension of aqueous solution**
Adrien Garcia*, Michel Havet, Tzvetelin Dessev, Alain Le Bail, *Gepea, France*

P6.0.17 **Effect of pulsed electric fields pre-treatment on the debittering process of cherry kernels**
Marianna Giancaterino[1,2]*, Henry Jaeger[1], Thomas Fauster[1], Anna Krottenthaler[1], *[1]University of Natural Resources and Life Sciences, Austria, [2]FFoQSI - Austrian Competence Centre for Feed and Food Quality, Safety & Innovation, Austria*

P6.0.19 **Ultrasounds processing of buckwheat whole-grain modifies the rheological characteristics of obtained flour**
Joanna Harasym*, Agnieszka Orkusz, Remigiusz Olędzki, *[1]Wroclaw University of Economics and Business, Poland*

P6.0.21 **Enhancement of biomethane potential of brown sludge by pre-treatment using vortex based hydrodynamic cavitation**
Md Saiful Islam*, Vivek V. Ranade, *Bernal Institute, University Of Limerick, Ireland*

P6.0.23 **Ultrafiltration of skim milk: analysis of the streams, retentate and permeate, and membrane fouling**
Yuan Jiang*, Sara Guadagnucci, Giovanni Barone, Lilia Arhné, *University of Copenhagen, Denmark,*

P6.0.25 **Application of cold plasma technology for the shelf-life extension of fish fillets: industrial scale validation**
George Katsaros[1]*, Sofia Chanioti[1], Marianna Giannoglou[1], Panagiota Stergiou[1], Dimitris Passaras[2], George Kokkoris[2], Evangelos Gogolides[2], *[1]Institute Of Technology Of Agricultural Products Elgo-demeter, Greece, [2]Institute of Nanoscience and Nanotechnology, NCSR "Demokritos", Greece*

P6.0.27 **Storage temperature and pH-value effect on C-phycocyanin stability extracted by freeze-thaw and high pressure techniques**
George Katsaros*, Marianna Giannoglou, Varvara Andreou, Ioanna Thanou, Giorgos Markou, *Institute of Technology of Agricultural Products ELGO-Demeter, Greece*

P6.0.29 **Application of semidirect and indirect cold atmospheric plasma treatment on gilthead sea bream fillets**
George Katsaros[1]*, Sofia Chanioti[1], Marianna Giannoglou[1], Panagiota Stergiou[1], Dimitris Passaras[2], George Kokkoris[2], Evangelos Gogolides[2], *[1]Institute of Technology of Agricultural Products ELGO-Demeter, Greece, [2]Institute of Nanoscience and Nanotechnology, NCSR "Demokritos, Greece*

P6.0.31 **Enhancement of wheat dough functional properties by non-thermal plasma treatment of wheat flour**
Muhammad Jehanzaib Khan[1]*, Vojislav Jovicic[1], Ana Zbogar-Rasic[1], Antonio Delgado[1,2], *[1]Friedrich-Alexander University Erlangen-Nuremberg, Institute of Fluid Mechanics, Germany, [2]German Engineering Research and Development Center LSTME Busan, Republic of Korea*

P6.0.33 **Effect of the pulsed electric field on olive enzyme activity – a model system experiment** Klara Kraljić*, Mia Ivanov, Zoran Herceg, Sandra Balbino, Niko Jakoliš, Dubravka Škevin, *University Of Zagreb, Croatia*

P6.0.35 **Mycotoxins degradation by cold atmospheric plasma: kinetic study varying parameters of the SBDB device**
Jessica Laika*, Antonella Ricci, Junior Bernardo Molina Hernandez, Eduardo Viteritti, Manuel Sergi, Clemencia Chaves Lopez, *University of Teramo, Italy*

P6.0.37 **Influence of PEF pretreatment, temperature and ultrasound application in kiwifruit drying trough a Box-Behnken Design**
Beatriz Llavata Cabrero[1]*, José Vicente García Pérez[1], Susana Simal Florindo[2], Juan Andrés Cárcel Carrión[1], *[1]Universitat Politècnica De València, Spain, [2]University of the Basic Islands, Spain*

P6.0.39 **The impact of pulsed electric field pretreatment on convective and vacuum drying of strawberries**
Aleksandra Matys*, Dorota Witrowa-Rajchert, Artur Wiktor, *Warsaw University of Life Sciences, Poland*

P6.0.41 **Plasma for food application: opportunities and challenges**
Masja Nierop Groot*, Lucienne Berendsen, Bert Dijkink, *Wageningen Food & Biobased Research, Netherlands*

P6.0.43 **Enhanced seed germination by atmospheric-pressure plasma: effect on germination rate and nutritional value**
Patricia Martínez-Cuervo, Montserrat Montserrat González-Raurich, Mercedes López, Márcia Oliveira*, *University Of León, Spain*

P6.0.45 **Meta-analysis on decontamination efficacy of non-thermal plasma (NTP)**
George Pampoukis*, Vaiva Mikalkenaite, M.H. Zwietering, H.M.W. den Besten, *Wageningen University & Research*

P6.0.47 **Modelling approach on the improvement of the sustainability of tomato processing industry**
Gianpiero Pataro[1,2]*, Emad Abdurrahman[1,2], Giovanna Ferrari[1,2], *[1]University of Salerno, Italy, [2]ProdAl scarl, Italia*

P6.0.49 **Nonthermal germination-activation strategies of *A. acidoterrestris* endospores for subsequent inactivation by moderate-pressure (150-250MPa) at 20ºC**
Carlos Pinto[1]*, Vasco Lima[1], Maria Holovicova[2], Miroslav Habán[2], Marta Habanova[2], Jorge Saraiva[1], Francisco Barba[3], *[1]University of Aveiro, Portugal, [2]Slovak University of Agriculture, Slovakia, [3]Universitat de València, Spain*

P6.0.51 **Nonthermal processing of plant-based dairy alternatives**
Yamuna Devi Ranganathan[1,2]*, Chaitanya Krishna Sarangapani[1,2], Daniela Boehm[1,2], Catherine Barry-Ryan[1,2], *[1]Technological University Dublin, Ireland, [2]Environmental Sustainability and Health Institute (ESHI), TU Dublin, Ireland*

P6.0.53 **High pressure and pressure assisted thermal processing for developing gluten-free buckwheat flours with antioxidant properties**
Ángel L. Gutiérrez[1], Felicidad Ronda[1], Daniel Rico[2]*, Pedro A. Caballero[1], Ana Belén Martin-Diana[2], *[1]University of Valladolid, Spain, [2]Agrarian Technological Institute of Castilla and Leon (ITACyL), Spain*

P6.0.55 **The effect of ultrasound and pulsed electric field on bioactive compounds of red bell** pepper Katarzyna Rybak*, Artur Wiktor, Małgorzata Nowacka, Warsaw University of Life Sciences, Poland

P6.0.57 **Non-thermal extraction processing via PEF of essential compounds from by-products of orange and olive processing**
Robert Sevenich[1]*, María del Carmen Razola Díaz[2], Oliver Schlüter[1], Vito Verardo[2], *[1]Leibniz-institut für Agrartechnik und Bioökonomie e.V., Germany, [2]University of Granada, Spain*

P6.0.59 **Thermosonication applied to blueberry juice – Impact on quality properties**
Cristina L.M. Silva*, Laurie Favieres, Fátima A. Miller, *Universidade Católica Portuguesa, Portugal*

P6.0.61 **Pulsed light treatments to maintain physical properties and nutritional quality of fresh foods**
Maria Elena Sosa-Morales[1]*, Cristina García-Mosqueda[1], Aurelio López-Malo[2], *[1]Universidad de Guanajuato, Mexico, [2]Universidad de las Américas Puebla, Mexico*

P6.0.63 **Plasma activated water to develop functional edible coating: effect on the quality of fresh-cut apples**
Marika Valentino[1]*, Oliver Schlüter[2], Elena Torrieri[1], *[1]Università Degli Studi Di Napoli, Federico II, Italy, [2]Leibniz Institute of Agricultural Engineering and Bio-economy e.V. (ATB), Germany*

P6.0.65 **Sensitive multi-vitamin analysis method for fruit juices to assess the influence of non-thermal food processing**
Hassan Zia[1,2]*, Nadine Fischbach[1], Mikko Hofsommer[1], Ana Slatnar[2], *[1]Gesellschaft für Lebensmittel-Forschung mbH, Germany, [2]University of Ljubljana, Slovenia*

Poster Session 2
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P1.1.02 **Proteomics for quality&safety and shelf life evaluation of high-pressure (HP) processed european sea bass fillets**
Liliana Anjos[1]*, Cármen Sousa[1], Arsenius Loukissas[1], Theofania Tsironi[2], Elsa Couto[1], George Dimopolous[3], Petros Taoukis[3], Adelino Canário[1], Deborah Power[1], *[1]Centro de Ciências do Mar (CCMAR), Portugal, [2]Agricultural University of Athens, Greece, [3]National Technical University of Athens (NTUA), Greece*

P1.1.04 **Investigation on the role of drying air humidity in shaping the conditions of spray drying**
Alicja Barańska[1]*, Aleksandra Jedlińska[1], Katarzyna Samborska[1], *[1]Warsaw University of Life Sciences, Poland*

P1.1.06 **Evaluation of Moderate Electric Field (MEF) for pasteurization of pork sausages in a conductive casing**
Tesfaye Bedane*, James Lyng, *University College Dublin, Ireland*

P1.1.08 **Moderate Electric Fields (MEF) application during the extraction of oleuropein from olive leaves**
Malikeh Khanlar, José V. García-Pérez, José Benedito, Juan A. Cárcel*, *Universitat Politècnica De València, Spain*

P1.1.10 **Subchilled storage of Atlantic salmon fillets initially stored in refrigerated seawater for 7 days**
Sherry Stephanie Chan*, Bjørn Roth, Bjørn Tore Rotabakk, *Nofima, Norway*

P1.1.12 **Effects of abiotic factors on the callus induction of Ecklonia cava for sustainable food production**
Gabriel Tirtawijaya[1,2], Bertoka Fajar Surya Perwira Negara[1,2], Jin-Hwa Lee[1,2], Jae-Suk Choi[1,2]*, *[1]Silla University, South Korea, [2]Seafood Research Center, South Korea*

P1.1.14 **Microwave processing of tahini pasteurization: Computational study for industrial system design**
Huseyin Topcam[1], Dilay Kutuk Ayhan[2], Eda Coskun[1], Ezgi Son[1], S. Aykut Aytac[2], Behic Mert[3], Samet Ozturk[4], Ferruh Erdogdu[1]*, *[1]Ankara University, Turkey, [2]Department of Food Engineering, Hacettepe University, [3]Middle East Technical University, Turkey, [4]Gumushane University, Turkey*

P1.1.16 **Designing Continuous Flow Microwave System for Milk Pasteurization: A Computational Study with Experimental Validation**
Kubra Polat, Caner Tasci, Ozan Karatas, Ozan Altin, Ferruh Erdogdu*, *Ankara University, Turkey*

P1.1.18 **Extraction of Raffinose Family Oligosaccharides from Pulse derived fractions and their Application in Fermentations**
Philipp Garbers[1]*, Sara Gaber[2], Catrin Tyl[1], Svein Halvor Knutsen[2], Bjørge Westereng[1], *[1]Norwegian University of Life Science, Norway, [2]Nofima AS, Norwegian Institute of Food, Norway*

P1.1.20 **Application of young bamboo culm for the bioproduction of prebiotics, nanocellulose and bioethanol**
Marcos F. da Silva, Maria Teresa P. Silva Clerici, Rosana Goldbeck*, *University of Campinas, Brazil*

P1.1.22 **Germination as green biotechnological process to enhance the nutritional and bioactive profile of oat grains**
Iván Jesús Jiménez-Pulido[1]*, Daniel Rico[1], Jara Pérez-Jiménez[2], Daniel de Luis[3], Elena Peñas[2], Cristina Martínez-Villaluenga[2], Ana Belén Martín-Diana[1], *[1]Agricultural Technological Institute of Castile and Leon (ITACyL), Spain, [2]Institute of Food Science, Technology and Nutrition (ICTAN-CSIC), Spain, [3]University of Valladolid, Spain*

P1.1.24 **Effect of High Pressure Homogenization on recovery kinetics of proteins from Chlorella pyrenoidosa**
Alexandros Katsimichas*, Ioulia Karveli, George Dimopoulos, Petros Taoukis, *National Technical University of Athens, Greece*

P1.1.26 **Milling: a tool for changing the mechanical properties and structure of lentil heat-induced gels**
Alexandra Kremmyda*, Vincenzo Di Bari, Jo Gould, *University Of Nottingham, United Kingdom*

P1.1.28 **Effect of N-glycosylation on catalytic properties of recombinant lipase from Cordyceps militaris**
Juno Lee[1]*, Namhyun Kim[1], Yoonseok Choi[1], Inwoo Park[1], Jihoon Kim[1], Pahn-Shick Chang[1,2], *[1]Seoul National University, South Korea, [2]Seoul National University, South Korea*

P1.1.30 **CO_2 gas hydrate technology as innovative, high energetic efficient process for fruit juices concentration process**
Soebiakto Loekman[1]*, Timo Claßen[2], Bernhard Gatternig[1,3], Antonio Delgado[1,2], *[1]German Engineering Research And Development Center, South Korea, [2]Institute of Fluid Mechanics, FAU Erlangen-Nürnberg, Germany, [3]Hochschule Weihenstephan-Triesdorf, Germany*

P1.1.32 **Trans-anethol-loaded nanoemulsions and their stability during storage**
Erika Kamila Méndez Calderón[1]*, Ana Isabel Bourbon[1], Rui Pereira[1], Pablo Fuciños[1], Lorenzo Pastrana[1], Miguel Cerqueira [1], Vitor Alves[2], Diogo Figueira[3], *[1]International Iberian Nanotechnology Laboratory, Portugal, [2]Frulact, Portugal, [3]Mendes Gonçalves S.A, Portugal*

P1.1.34 **Effect of ultrasound disruption on lipid extraction from the microalga *Nannochloropsis sp.***
Esther Mienis[1]*, Dries Vandamme[2], Imogen Foubert[1], *[1]KU Leuven , Belgium, [2]Hasselt University, Belgium*

P1.1.36 **Optimizing the formation of CO_2 hydrate on a laboratory scale**
Eric Morelle*, Alexander Rudolph, Christopher McHardy, Cornelia Rauh, *Technische Universität Berlin, Germany*

P1.1.38 **Antioxidant profile and redox status of fresh-cut Eruca sativa treated with plasma activated water (PAW)**
Ileana Ramazzina[1], Silvia Tappi[2], Veronica Lolli[1], Pietro Rocculi[2], Massimiliano Rinaldi[1]*, *[1]Università Di Parma, Italy, [2]Università di Bologna, Italy*

P1.1.40 **Extended raw milk shelf-life and safety by hyperbaric storage at room temperature during 60 days**
Jorge Saraiva[1]*, Ricardo Duarte[1], Carlos Pinto[1], Susana Casal[2], José Lopes-da-Silva[1], Ana Gomes[3], Ivonne Delgadillo[1], *[1]University of Aveiro, Portugal, [2]University of Porto, REQUIMTE Porto, Portugal, [3]Portuguese Catholic University, Portugal*

P1.1.42 **Effect of frozen storage time and thawing rate on thaw-rigor and quality of salmon fillets**
Bjørn Tore Rotabakk[1], Lars Helge Stien[2], Torstein Skåra[1]*, *[1]Nofima, Norway, [2]Institute of Marine Research, Norway*

P1.1.44 **Antimicrobial compounds-assisted thermal treatment in low moisture food matrices and the corresponding bacterial resistance mechanism**
Qiao Ding[1], Chongtao Ge[2], Robert Baker[2], Robert Buchanan[1], Rohan Tikekar[1]*, *[1]University of Maryland, United States, [2]The Mars Global Food Safety Center, China*

P1.1.46 **Modelling the Radio Frequency inactivation of Salmonella Typhimurium in Skimmed and Whole Milk Powder**
Maria Tonti[1]*, Davy Verheyen[1], Dmytro Kozak[1], Torstein Skåra[2], Jan Van Impe[1], *[1]KU Leuven, Belgium, [2]NOFIMA, Norway*

P1.2.02 **Phenolic compound profiles and antioxidant concentrations in Lettuce grown under AI developed LED light recipes**
Gultekin Hasanaliyeva*, Gadelhag Mohmed, Chungui Lu, *Nottingham Trent University, United Kingdom*

P1.2.04 **Gloss estimation of chocolate sprinkles with hyperspectral imaging**
Pedro Ródenas-Perez[1]*, Carolina Blanch-Perez-del-Notario[2], Eric López-López[1], Roi Méndez-Rial[1], *[1]AIMEN Technology Centre, Spain, [2]IMEC, Belgium*

P1.3.02 **Complete mechanical characterization of meat samples using shear wave elasgography: preliminary results**
Eliana Budelli[1]*, Javier Brum[2], Patricia Lema[1], Carlos Negreira[2], *[1]Instituto de Ingeniería Química, Uruguay, [2]Universidad de la República, Uruguay*

P1.3.04 **Development of antioxidant-rich sweet potato yoghurt using the orange-fleshed 'Bophelo' sweet potato (*Impomea batatas*)**
Yvonne Maila*, Mildred Raphalalani, Samuel Mphosi, *University Of Limpopo, South Africa*

P1.3.06 **Model validation, design, implementation and real-time process control of a continuous flow ohmic heater**
Oluwaloba Oluwole-Ojo[1,2]*, Hongwei Zhang[1,2], Martin Howarth[1,2], Xu Xu[1,2], *[1]Sheffield Hallam University, United Kingdom, [2]National Center of Excellence for Food Engineering, United Kingdom*

P1.4.02 **Computational Approach for Radio Frequency Pasteurization Process of Peanut Butter with an Improved Temperature Uniformity**
Eda Coskun[1], Samet Ozturk[2], Kubra Polat[1], Caner Tasci[1], Rui Li[3], Shaojin Wang[3], Shuxiang Liu[4], Ferruh Erdogdu[1]*, *[1]Ankara University, Turkey, [2]Gumushane University, Turkey, [3]College of Mechanical and Electronic Eng. Northwest A&F University, China, [4]Sichuan Agricultural University, China*

P1.4.04 **Food loss and waste in seafood value chains: causes, volumes and environmental cost** Sepideh Jafarzadeh*, Shraddha Mehta, Magnus Stoud Myhre , Maitri Thakur , Ana Carvajal, Andrea Viken Strand, *Sintef Ocean, Norway*

P1.4.06 **Simplified heat transfer modelling for temperature prediction in an insulated box equipped with PCM**
Tanathep Leungtongkum[1,2]*, Onrawee Laguerre[1], Denis Flick[2], *[1]Université Paris-Saclay, INRAE, FRISE, France, [2]Université Paris-Saclay, INRAE, AgroParisTech, UMR SayFood, France*

P1.4.08 **A Simple Mathematical Model on Continuous Ohmic Heating Systems for Strawberry Nectar**
Dario Javier Pavon-Vargas[1,2]*, Karen Louise Lacey[1], Andres Felipe Moreno Barreto[3], Mario Gozzi[2], Luca Cattani[1], Massimiliano Rinaldi[1], Sara Rainieri[1], *[1]Università degli Studi di Parma, Italy, [2]CFT S.P.A, Italy, [3]Experimental Station for Food Preserving Industry, Italy*

P1.4.10 **Kinetic study of quality indices modification of chicken breast during cooking**
Giulia Romano[1,2]*, Maria Cristina Nicoli[1], Arianna Bozzato[2], Daniele Turrin[2], Monica Anese[1], *[1]University Of Udine, Italy, [2]Electrolux Professional SPA, Italy*

P1.4.12 **Simultaneous parameter estimation in primary stage of freeze drying of bulk blueberries**
Sylvia Schenck*, Adrián Ferrari, Sofía Barrios, Patricia Lema, *Universidad De La Republica, Uruguay*

P1.4.14 **Toolbox for coupling structure modification with physicochemical characteristics and functional properties**
Yuqi Zhang*, Åsmund Rinnan, Vibeke Orlien, *University of Copenhagen, Denmark*

P2.1.02 **Understanding flavor release and perception of meat analogs in relation to structure and oral breakdown**
Rutger Brouwer*, Elke Scholten, Ciarán Forde, Markus Stieger, *Wageningen University & Research, Netherlands*

P2.1.04 **Can flavor-imparting (bio)chemical reactions in vegetables be steered by targeted processing steps?**
Sophie Delbaere*, *KU Leuven, Belgium*

P2.1.06 **Spray drying of herbs with basil as model system**
Julia Heimbach[1]*, Yanyan Zhang[2], Reinhard Kohlus[1], *[1]University of Hohenheim, Germany, [2]Department of Flavor Chemistry, University of Hohenheim, Germany*

P2.1.08 **Accelerated micro-oxygenation aging of balsamic vinegar – A kinetic study**
George Katsaros*, Varvara Andreou, Marianna Giannoglou, Zacharoula Maria Xanthou, Maria Metafa[1], *Institute Of Technology Of Agricultural Products Elgo-demeter, Greece*

P2.1.10 **Decrypting phenomena and transfers involved in the transformation of kidney beans to drive their processing**
Emilie Korbel*, Villamarin-Spataro Alejandro, Benoit Jaillais, Jean-Yves Monteau, Alain Le Bail, *UMR GEPEA-ONIRIS, France*

P2.1.12 **How preservatives affect exopolysaccharide formation of starter cultures in food matrices: Lauric arginate (LAE)**
Myriam Loeffler[1]*, Sabine Koumarasy[2], Jochen Weiss[2], Sophie Libberecht[1], *[1]KU Leuven, Belgium, [2]University of Hohenheim, Germany*

P2.1.14 **Trained Panel Descriptive Analysis of Dairy Products from Different Feeding Regimes and Lactation Stages**
Lauren Mcguinness[1,2]*, Mark Timlin[1,3,4], Andre Brodkorb[1,3], Dolores O'Riordan[1,2], Emma Feeney[1,2], *[1]Food For Health Ireland, Ireland, [2]UCD Institute of Food and Health, Ireland, [3]Teagasc Food Research Centre, Ireland, [4]UCD School of Agriculture and Food Science, Ireland*

P2.1.16 **Development and characterization of imitation yoghurt from blends of pigeon pea and almond seed milks**
Tolulope Oresanya*, Hannah Olaleye, Femi Akinwande, Nofisat Adewale, *Yaba College of Technology, Nigeria*

P2.1.18 **Use of sensors and models for the prediction of meat colour**
Jason Sicard[1]*, Alain Kondjoyan[1], Fabrice Audonnet[2], Valérie Scislowski[3], *[1]INRAE, France, [2]Institut Pascal, Université Clermont Auvergne, CNRS, France, [3]ADIV, France*

P2.1.20 **Double emulsions stabilized with cocoa butter fat crystals as Pickering particles** Elizabeth Tenorio Garcia[1]*, Anwesha Sarkar[1], Elena Simone[2], Michael Rappolt[1], *[1]University Of Leeds, United Kingdom, [2]Politecnico di Torino, Italy*

P2.2.02 **Potential of sorghum in gluten-containing and gluten-free products: Effects on the thermomechanical properties of dough**
Etiene Aguiar[1]*, Valéria Queiroz[2], Cícero Menezes[2], Vanessa Capriles[1], *[1]Universidade Federal de São Paulo, Brazil, [2]Embrapa Milho e Sorgo, Brazil*

P2.2.04 **Enrichment Of Model-Cheeses With Blackcurrant Or Cornelian Cherry Increases The Total Amount Of Polyphenols**
Jonas Andersen[1]*, Andrea Mancini[1], Maddalena Bosetti[1], Tiziana Nardin[2], Roberto Larcher[2], Elena Franciosi[1], *[1]Research and Innovation Centre, Fondazione Edmund Mach (FEM), Italy, [2]Technology Transfer Centre, Fondazione Edmund Mach (FEM), Italy*

P2.2.06 **Lactoferrin – one of the natural inhibitory substances in milk and whey**
Klara Bartakova[1]*, Lenka Vorlova[1], Ivana Borkovcova[1], Pavlina Navratilova[1], Oto Hanus[2], Hana Nejeschlebova[2], *[1]University of Veterinary Sciences, Czech Republic, [2]Dairy Research Institute, Czech Republic*

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Nigel Brunton*, Ronan Gormley, Sabine Harrison, Mark Long, *UCD, Ireland*

P2.2.10 **Potential of orange juice co-product as a regulator of postprandial glycaemia**
Juan José Martínez-Lahuerta[2], Isabel Ustero[1], Eva García-Martínez[1], María del Mar Camacho[1]*, Nuria Martínez-Navarrete[1], *[1]Universitat Politècnica De València, Spain, [2]Consellería de Sanitat Universal i Salud Pública. Generalitat Valencian., Spain*

P2.2.12 **Effects of Cooking Methods on 3D Printed Gluten-Free Chips Enriched with Beef Broth** Hilal Sena YILDIRIM[1], İlayda İŞLEYEN[1], Pınar KADIOĞLU ŞENTÜRK, Kezban Candoğan*, *Ankara University, Turkey,*

P2.2.14 **Development of healthy and personalized food solutions for 3D printing from fish by-products and microalgae**
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P2.2.16 **Understanding the effects of phenolic-starch interactions on phenolic acids inhibitory properties of alpha-amylase**
Adrian Samuel D'Costa*, Nicolas Bordenave, *University Of Ottawa, Canada*

P2.2.18 **Does lower salt content affect the shelf life of meat products?**
Kateřina Dorotíková[1]*, Marta Dušková[1], Josef Kameník[1], *[1]University Of Veterinary Sciences, Czech Republic*

P2.2.20 *Impact of acid chemical properties on Bacillus weihenstephanensis germination and outgrowth inhibition in oil-in-water emulsion*
Agathe Dutoit*, Nicolas Decourcelle, Anne-Gabrielle Mathot, Louis Coroller, *[1]Université de Brest, INRAE, France*

P2.2.22 **Hemp seed milk sonication for enhanced beverage quality**
Laura Piazza, Francesca Girotto*, Elisa Masseroni, Ivan Testa, *Università degli Studi di Milano, Italy*

P2.2.24 **Bi-functional chimeric enzyme for prebiotic xylo-oligosaccharides production from agricultural wastes**
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P2.2.30 **Yoghurt acid whey marinating for improving tenderness and quality of beef chuck roast: process optimization**
George Katsaros[1]*, Dimitris Petropoulos[2], Varvara Andreou[1], George Theodorou[2], *[1]Institute Of Technology Of Agricultural Products Elgo-demeter, Greece, [2]Agricultural University of Athens, Greece*

P2.2.32 **Thermal stability of new vegetable oils with a programmed ratio of ω6/ω3 fatty acids** Dominik Kmiecik*, Magdalena Rudzińska, Aleksander Siger, Monika Fedko, Anna Grygier, *Poznań University of Life Sciences, Poland*

P2.2.34 **Psyllium effect on physic-chemical characteristics of gluten free bread including apple pomace powder**
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P2.2.36 **Elaboration of dried olive leaves for the preparation of healthy infusions**
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Anita E. Furey, Ulrich Hoeche, Ciaran McLaughlin, Francesco Noci*, *Atlantic Technological University, Ireland*

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P2.2.46 **Nutritional profile and sensory quality of snack bars from oat, sesame seed and coconut flours**
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P2.2.48 **Enhancing the functionality of iron-fortified Hibiscus sabdariffa beverage: the potential role of liposomes**
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P2.2.52 **Optimization of an olive oil emulsion for meat products fat replacement**
Luis Patarata[1]*, José-António Silva[1], Emilie Santos[2], *[1]CECAV – Veterinary and Animal Research Centre, Portugal, [2]Universidade de Trás-os-Montes e Alto Douro, Portugal*

P2.2.54 **Influence of a data-rich fiber extract on a dry-cured sausages snack model system**
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P2.2.56 **Gastronomic plan to valorize date seeds as a functional ingredient of bread**
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Cristina L.M. Silva*, Akshita Gupta, Sérgio Sousa, *Universidade Católica Portuguesa, Portugal*

P2.2.68 **Combination of proteins to improve the chemical score in vegan food**
Alexander Stephan*, VAN HEES GmbH, Germany,

P2.2.70 **Liquid infant formula based on o/w emulsions formulated with buttermilk and processed by high-pressure homogenization**
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P2.2.72 **Interest of malted flour for flat bread application: impact of heating-rate on staling** Alejandra Velasquez Barillas*, Alain Le-Bail, Luc Saulnier, Eve-Anne Norwood, *Oniris, France*

P2.2.74 **Microencapsulation improves probiotic survival under harsh conditions during model food storage**
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P2.2.78 **Design and evaluation of novel bigel systems with coconut and olive oil blends**
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P2.2.80 **Incorporation of natural antioxidants as ingredients in aquatic biomass powders**
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P2.3.02 **Development of β-sitosterol and γ-oryzanol oleogel-based emulsions for enhancement of oral bioavailability of hydrophobic molecules**
Areen Ashkar[1]*, Maya Davidovich-Pinhas[1,2], *[1]Faculty of Biotechnology and Food Engineering, Technion, Israel, [2]Russell-Berrie Nanotechnology Institute, Technion, Israel*

P2.3.04 **Influence of chewing on in vitro and vivo starch digestion of brown rice and chickpeas**
Yao Chen[1]*, Markus Stieger[1], Edoardo Capuano[1], Ciarán Forde[1], Rene de Wijk[1], *Wageningen University & Research, Netherlands*

P2.3.06 **From processing to digestion- polyphenol's interactions and bioaccessibility in model systems**
Eden Eran Nagar[1]*, Avi Shpigelman[1], *[1]Technion IIT, Israel*

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P2.3.10 **Soybean oil organogelled emulsions as oral delivery systems of hydroxytyrosol and hydroxytyrosol alkyl esters**
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P2.3.12 **Textural properties, microstructure and spectroscopic characterization of edible gelled systems**
Eugenios Katsanidis*, Konstantina Zampouni, *Aristotle University of Thessaloniki, Greece*

P2.3.14 **Folic acid-loaded Hydroxypropyl methylcellulose micro and nanoparticles produced by electrospray**
Arlete Marques[1,2]*, Luís Abrunhosa[1], José Teixeira[1], Lorenzo Pastrana[2], Miguel A. Cerqueira[2], *[1]University of Minho, Portugal, [2]International Iberian Nanotechnology Laboratory, Portugal*

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P2.3.24 **Delivering nutraceutical flours through valorization of fruit peels using extrusion technology**
Ana Belén Martín-Diana[1], María J. García Casas[1], Jara Pérez-Jiménez[2], María I. Abadías[3], Ingrid Aguiló-Aguayo[3], Daniel Rico[1]*, *[1]Agrarian Technological Institute Of Castilla And Leon (itacyl), Spain, [2]Institute of Food Science, Technology and Nutrition (ICTAN-CSIC), Spain, [3]IRTA, Parc Científic i Tecnològic Agroalimentari de Lleida, Spain*

P2.3.26 **Effect of heating on textural and temperature sensitivity of casein gels**
Bo Yuan*, Elke Scholten, Guido Sala, *Wageningen University & Research, Netherlands*

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Agnes Aba Abakah[1]*, Johana Rondevaldova[1], Samuel Kwasi Boateng[2], Ebenezer Adu Yeboah[2], Katerina Vihanova[1], Ladislav Kokoska[1], *[1]Czech University of Life Sciences, Czech Republic, [2]CSIR-Plant Genetic Resources Research Institute, Ghana*

P2.4.04 **Determination of the potential health benefits of seaweed-derived oligosaccharides and polyphenols: Generation and characterisation strategies**
Dolly Bhati[1]*, Dilip K. Rai[1], Noel McCarthy[2], Maria Hyaes[1], *[1]Teagasc Food Research Centre, Ireland, [2]Teagasc Moorepark Food Research Centre, Ireland*

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Bertoka Fajar Surya Perwira Negara[1,2], Dicky Harwanto[3], Gabriel Tirtawijaya[1], Maria Dyah Nur Meinita[4], Jae-Suk Choi[1,2]*, *[1]Silla University, South Korea, [2]Seafood Research Center, South Korea, [3]Diponegoro University, Indonesia, [4]Jenderal Soedirman University, Indonesia*

P2.4.08 **Let's get Freekeh! The flavor profiles of Freekeh, a toasted, green Durum wheat Mediterranean product**
Alon Cna'ani*, Anna Balsby, Michael Bom Frøst, *University Of Copenhagen, Denmark*

P2.4.10 **GABA-enriched synbiotic fermented milks: physicochemical, biological, structural, and sensory attributes**
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P2.4.14 **Evaluation of the antirotaviral activity of milk extracellular vesicles using a human intestinal model**
Dimitra Graikini[1,3]*, Caroline Vangsøe[2], Ines Abad[1,3], Lourdes Sánchez[1,3], Jan Trige Rasmussen[2], *[1]University of Zaragoza, Spain, [2]Aarhus University, Denmark , [3]AgriFood Institute of Aragon (IA[2]), Spain*

P2.4.16 **Antimicrobial activities of polysaccharide-rich extracts from the Irish seaweed Alaria esculenta against foodborne pathogens**
Ailbhe McGurrin[1]*, Julie Maguire[2], Rahel Suchintita Das[1], Brijesh K. Tiwari[3], Marco Garcia Vaquero[1], *[1]University College Dublin, Ireland, [2]Bantry Marine Research Station Ltd, Ireland, [3]Teagasc Ashtown Food Research Centre, Ireland*

P2.4.18 **Bioactive Fucoxanthin from Edible Marine Algae: An Update on Biofunctional Evidence for Healthy Diet**
Md. Mohibbullah[1,2]*, Jae-Suk Choi[2], *[1]Sher-e-Bangla Agricultural University, Bangladesh, [2]Seafood Research Center, Silla University, South Korea,*

P2.4.20 **Comparative metabolite profile and antioxidant potential of germinated wheat (Triticum aestivum L.) beverage during preparation**
Sewon Park[1]*, Bo ram Kim[1], Mi Jeong Kim[1,2], *[1]Interdisciplinary Program in Senior Human Ecology, South Korea, [2]Changwon National University, South Korea*

P2.4.22 **ACE inhibitory peptides from sustainable protein sources**
Lizeth Ospina Quiroga, Raúl Pérez Gálvez*, M.Carmen Almécija Rodríguez, Pedro J. García Moreno, F. Javier Espejo Carpio, Antonio Guadix, Emilia M. Guadix, *University Of Granada, Spain*

P2.4.24 **Glucosinolates and potential antioxidant of broccoli (Brassica oleracea) as affected by different vacuum drying temperatures**
Antonio Vega-Galvez*, Elsa Uribe, Alexis Pastén, Luis Gómez-Pérez, Nicol Mejias, Javiera Camus, Michelle Rojas, *Universidad De La Serena, Chile*

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P2.5.04 **Mechanistic understanding of food protein fibrils: laying the groundwork towards their usage as techno-functional enhancers**
Joelle Housmans[1,2]*, Bert Houben[1,2], Jan A. Delcour[2], Joost Schymkowitz[1,2], Frederic Rousseau[1,2], *[1]VIB-KU Leuven Center for Brain & Disease Research, Belgium, [2]KU Leuven, Belgium*

P2.5.06 **Comparison of protein quality of insect powders obtained by thermomechanical or by CO_2 supercritical processes**
Vanessa Jury[1]*, Sophie Laurent[1], Danneyvis Niyeldi Alarcon Gerdel[1], Marie de-Lamballerie[1], Francine Fayolle[1], *[1]Université de Nantes, France*

P2.5.08 **Understanding plant – salivary protein interactions to reduce astringency perception** Hanna Lesme[1]*, Max Jansen [2], Bruno Correia[2], Francesco Stellacci[1], *[1]Institue of Materials, EPFL, Switzerland, [2]Institute of Bioengineering, EPFL, Switzerland*

P2.5.10 **Egg white amyloid fibrillation in the presence of sugars and its potencial for protein fucntionality**
Margarita Monge-Morera[1]*, Frederic Rousseau[2], Joost Schymkowitz[2], Paula Moldenaers[3], Jan A. Delcour[1], *[1]KU Leuven, Belgium, [2]VIB Switch Laboratory, KU Leuven, Belgium , [3]Soft Matter, Rheology and Technology, KU Leuven, Belgium*

P2.5.12 **Evaluation of quinoa leaves as a protein source**
Sara Pérez-Vila[1,4]*, Francisca Acevedo[2,3], André Brodkorb[1], Monica Rubilar[3,5], Eduardo Morales[3,5], Sofia González[3,5], Mark A. Fenelon[3,5], James A. O'Mahony[1,4], Laura G. Gómez-Mascaraque[1], *[1]Teagasc Food Research Centre, Moorepark, Ireland, [2]Universidad de La Frontera, Chile, [3]Universidad de La Frontera, Chile, [4]University College Cork, Ireland, [5]Universidad de La Frontera, Chile,*

P2.5.14 **Thiamin, riboflavin, and folate retention in faba bean and lupine extrudates**
Aino Siitonen*, Minnamari Edelmann, Veronika Kallio, Katja Kantanen, Jose Martin Ramos Diaz, Kirsi Jouppila, Susanna Kariluoto, Vieno Piironen, *[1]University of Helsinki, Finland*

P2.5.16 **Heat Gelation of Commercial Pea Protein Isolates**
Alice Tiong*, Warren Batchelor, Leonie van't Hag, *Monash University, Australia*

P2.6.02 **Kelp on the menu: reduction of the high iodine content in brown seaweeds**
Cecilie Bay Wirenfeldt[1,2]*, Maria Stavnes Sletta[2], Maren Sæther[3], Øystein Arlov[4], Inga Marie Aasen[4], Susan Løvstad Holdt[1], Turid Rustad[2], *[1]DTU Food, Denmark, [2]NTNU, Department of Biotechnology and Food Science, Norway, [3]Seaweed Solutions, Norway, [4]SINTEF Industry, Norway*

P2.6.04 **Developing Tasty and Nutritious Sustainable Foods Using Note by Note Cooking and 3D Food Printing**
Róisín Burke*, Pauline Danaher, Maria Peña Niebuhr, *[1]TU Dublin, Ireland*

P2.6.06 **A Bicelle Nanocarrier for Improving Transmucosal Delivery of Non-water-soluble Compounds**
Sunghak Choi[1]*, Juchan Lee[1], Pahn-Shick Chang[1], Ho-sup Jung[1], *[1]Seoul National University, South Korea*

P2.6.08 **Development of soy-yoghurts, containing functional vaginal lactobacilli and their investigation after digestion using postmenopausal donors**
Margherita D'Alessandro[1]*, Guadalupe Monserrat Alvarado-Jasso[2], Carola Parolin[3], Beatrice Vitali[1], Rosalba Lanciotti[1], Miguel Gueimonde[2], Francesca Patrignani[1], *[1]University of Bologna, Italy, [2]Instituto de Productos Lácteos de Asturias-Consejo Superior de Investigaciones Científicas (IPLA-CSIC), Spain*

P2.6.10 **Effect of kefiran, carrageenan, milk protein addition on the rheological properties of reconstituted kefir powder**
Stylianos Exarhopoulos*, Olga Groztidou, Despoina Georgiou, Athanasios Goulas, Georgia Dimitreli, *International Hellenic University, Greece*

P2.6.12 **Functional properties of African oil bean (Pentaclethra macrophylla) and melon (Citrullus colocynthis) seed protein isolates**
Blessing Nwokocha, Afroditi Chatzifragkou, Colette Catherine Fagan*, *University Of Reading, United Kingdom*

P2.6.14 **Impact of different plant or microbial enzymes on cheese analog production from soy milk**
Ana Gomes[1]*, Catarina Vila Real[1], Bruna Figueiredo[2], Sergio Sousa[1], *[1]Universidade Católica Portuguesa - Escola Superior de Biotecnologia, Portugal, [2]White and Green Natural S.A., Portugal*

P2.6.16 **Application of bigels for fat reduction and delivery of essential oils in fermented sausages**
Georgios Kasiouras*, Konstantina Zampouni, Eugenios Katsanidis, *Aristotle University Of Thessaloniki, Greece*

P2.6.18 **The removal of cholesterol content from milk and the production of low-cholesterol dairy products**
Lukáš Kolarič*, Peter Šimko, *Slovak University of Technology, Slovakia*

P2.6.20 **Tailoring an extruded plant-based cereal product for seniors and studying its in vitro digestibility**
Leehen Mashiah*, Uri Lesmes, Carmit Shani-Levi, Omer Medini, *Technion Israel Institute of Technology, Israel*

P2.6.22 **Hiding edible insects in wheat bread matrix – the acceptance case**
Agnieszka Orkusz[1,2]*, Joanna Harasym[1,2], *[1]Wroclaw University of Economics and Business, Poland, [2]Wroclaw University of Economics and Business, Poland*

P2.6.24 **Taste components in plant-based cheese alternatives**
Maria Jose Oruna-Concha*, Zoe Davis, Colette Fagan, *University of Reading, United Kingdom*

P2.6.26 **Development and characterization of mixture of plant-based beverage**
Aline Rolim Alves Da Silva[1,2,3]*, Marselle Marmo do Nascimento Silva [3,5], Ricardo Erthal Santelli [3], Bernardo Ferreira Braz[3], Bernardo Dias Ribeiro[4], *[1]Sense Test, Portugal, [2]University of Reading, United Kingdom, [3]Chemistry Institute, Federal University of Rio de Janeiro , Brazil, [4]Federal University of Rio de Janeiro , Brazil, [5]Advanced Food Technology Center, Brazil*

P2.6.28 **3D-bioprinting: the development of plant-based protein bioinks for the creation of sustainable, cultivated meat structures**
Lisa Franke, Jens Kurreck, Cornelia Rauh, Robert Sevenich*, *Technische Universität Berlin, Germany*

P2.6.30 **DIY protein fortification: what foods are suitable for UK older adults to fortify at home?**
Rachel Smith[1]*, Lisa Methven[1], Miriam Clegg[1], Alexia Geny[2], Øydis Ueland[3], Guro Helgesdotter Rognså[3], Ida Synnøve Grini[3], Claire Sulmont-Rossé[2], *[1]University Of Reading, United Kingdom, [2]INRAE, France, [3]Nofima, Norway*

P2.6.32 **Development and evaluation of an instrumental test to emulate the IDDSI testing method**
Nelum Pematilleke, Mandeep Kaur, Benu Adhikari, Peter Torley*, *[1]RMIT University, Australia*

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EFFoST2022 Conference - Oral Programme

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09:00 - 10:30			**Young EFFoST Day 2022**		**NTP Session 1: Opening Session EFFoST / IFT-NPD & Sustainability of Food Supply for the future through Innovative Non-thermal Technologies** Chairs: James Lyng and Dolores O'Riordan		
09:00 - 09:25			08:45 - 09:00 **Welcome & Introduction of Young EFFoST Day programme**		**(N1.1)** **Opening Address** J. Antonio Torres, 2021-22 Chair of Nonthermal Processing Division & School of Engineering and Sciences, Tecnologico de Monterrey, México		
09:25 - 09:50			09:00 - 10:00 **Opening session: Shaping the Production of Sustainable, Healthy Foods for the Future** Chair: Prof. Kevin O'Connor Dr Pamela Byrne, Chief Executive Officer at *Food Safety Authority Ireland*		**(N1.2)** **Sustainability of Food Supply for the future through Innovative Non-thermal Technologies** Anet Režek Jambrak, *University of Zagreb, Croatia*		
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In this programme, only the presenters of the abstracts are mentioned.
The online book of abstracts acknowledges all authors.

SCAN ME

10:30 - 11:00			**10.30-10.45 Refreshment Break**		**Refreshment Break**		
11:00 - 12:00			**Young EFFoST Day 2022, continued**		**NTP Session 2: Sustainability of Food Supply for the future through Innovative Non-thermal Technologies (continued)** Chairs: Uta Schnabel and J. Antonio Torres		
11:00 - 11:15			10:45 - 11:30 **Job reality & career path insights: Talks by representatives from industry, academia and non-profit organizations on their career path and advice to young researchers.** Chair: Tara Hughes Speakers: - Aoife Marie Murphy, *Kerry, Ireland* - Nessa Noronha, *Food for Health Ireland, Ireland* - Alan Kelly, *University College Cork, Ireland* - Ciarán Forde, *Wageningen University & Research, the Netherlands* 11:30 - 12:00 **Panel discussion with representatives from industry, academia and non-profit organisations** 12:00 - 12:10 **Close of Young EFFoST Day 2022**		**(N2.1) The impact of pulsed electric field pre-treatment on convective and vacuum drying of strawberries** Aleksandra Matys, *University of Life Sciences, Poland*		
11:15 - 11:30					**(N2.2) Effect of cold plasma on physicochemical properties of gum arabic and its microencapsulation with oil** Sonal Chaple, *University College Dublin, Ireland*		
11:30 - 11:45					**(N2.3) Impact of high-pressure processing on qualitative and quantitative attributes of fresh pumpkin** Rohini Dhenge, *University di Parma, Italy*		
11:45 - 12:00					**(N2.4) Ultrasound-assisted extraction and polymer-based encapsulation of phycoerythrin from Phorphyridium purpureum** Shaba Noore, *University College Dublin, Ireland*		
12:00 - 13:00			**12.10-13.00 Lunch**		**Lunch**		

EFFoST2022 Conference - Oral Programme

Monday 7 November 2022

Room	President Suite | Level 2	Vavasour Suite | Level 2		
13:00 - 14:00	**EFFoST Welcome & Opening Session** Chairs: Dolores O'Riordan and James Lyng	**NTP Special Session 3: Emerging Non-thermal Processing Technology - Case Studies** Chair: Paula Bourke and Juan A. Cárcel		
13:00 - 13:15	**Welcome to the 36th EFFoST International Conference** • Hugo de Vries, President of the EFFoST Board • Dolores O'Riordan and James Lyng, Conference Chairs, *University College Dublin, Ireland* • Orla Feely, Vice-President for Research, Innovation and Impact, *University College Dublin, Ireland*	13:00 - 13:30 **(N3.1)** **Plasma** Masja Nierop Groot, *Wageningen Food & Biobased Research, the Netherlands* Uta Schnabel, *Leibniz Institute Plasma Science and Technology, Germany*		
13:15 - 13:30	**Welcome to Dublin, Ireland** Minister Martin Heydon, *Minister of State with responsibility for Research and Development, Farm Safety, and New Market Development*			
13:30 - 14:00	**Plenary Session 1: Future proofing the agri-food industry** Chairs: Dolores O'Riordan and James Lyng			
13:30 - 14:00	**(PL1.1)** **Food Vision 2030: its development, conclusions and implementation in a fast changing world** Tom Arnold, *Irish Government's Special Envoy for Food Systems, Ireland*	13:30 - 14:00 **(N3.2)** **Ultrasound** Gállego-Juarez, *Pusonics, Spain* Jose Garcia Perez, *Universitat Politècnica de València, Spain*		

Room	President Suite | Level 2	1872 Room | Level 3	Lansdowne Room | Level 2	Havelock Suite | Level 4	Vavasour Suite | Level 2	Special session room 442 | Level 4	
14:00 - 15:45	**Session 1: Enhancing the sensory appeal of food** Chairs: Verena Mittermeier-Klessinger and Ciarán Forde	**Session 2: The role of the Internet of Things in the food chain** Chairs: Peter Fryer and Gianpiero Pataro	**Session 3: Sensor technology to enhance food quality** Chairs: Nora O'Shea and Colm O'Donnell	**Session 4: Supporting consumer choices and preferences: technologies to help consumers make informed decisions** Chairs: Klaus Grunert and Maeve Henchion	**NTP Session 4: Role of non-thermal technologies in future foods from alternative sources for an increasing global population** Chairs: Marco Faieta and Lilia Neri	**Workshop: Upload your scientific work to an open repository** Chair: Edward Sliwinski	
14:00 - 14:25	**(KN1.1)** **The role of sensory consumer and community research in designing foods for healthy sustainable diets** Lisa Methven, *University of Reading, United Kingdom*	**(KN2.1)** **The Internet of Things for Food** Sjaak Wolfert, *Wageningen University, Netherlands*	**(KN3.1)** **Development of process analytical technology (PAT) tools for enhanced quality and safety in food processing** Colm O'Donnell, *University College Dublin, Ireland*	**(KN4.1)** **Consumer interest in healthy sustainable diets and the role of tools supporting food choice** Wim Verbeke, *Universiteit Gent, Belgium*	**(N4.1)** **Role of non-thermal technologies in future foods from alternative sources for an increasing global population** Jan Van Impe, *KU Leuven, Belgium*	During this 2-hour hands-on and interactive workshop, we will guide you through the world of Open Science and, specifically, how to upload your research to an open repository (Zenodo). The work shop will cover: - the basics of Open and FAIR principles - how to upload your work on Zenodo, step by step - how to publicize, advertise and raise awareness about your work. Presentations by Edward Sliwinski, Katherine Flynn, Emilie Weynants, and Luis Mayor	
14:25 - 14:45	**(O1.2)** **High Molecular Weight Polymers as Natural Aroma Modulators in Red Wine** Anna Maria Gabler, *Technical University of Munich, Germany*	**(O2.2)** **A first approach to the modelling of Cleaning-In-Place processes using Machine Learning methods** Estefania Lopez-Quiroga, *University of Birmingham, United Kingdom*	**(O3.2)** **Contactless characterization of potato drying by using air-coupled ultrasound** Virginia Sánchez Jiménez, *Universitat Politècnica de València, Spain*	**(O4.2)** **Social Media and Social Amplification of Risk – Consumer Reactions to Food Recall Reporting** Sean Tanner, *University College Cork, Ireland*	**(N4.2)** **Nonthermal processes for the valorisation of yeast biomass** George Dimopoulos, *National Technical University Of Athens, Greece*		
14:45 - 15:05	**(O1.3)** **Neuroscience tools to predict more appealing forms for senior population** Ana Baranda Gonzalez, *Basque Research and Technological Alliance, Spain*	**(O2.3)** **Simulating a part of the industrial chain in VR** Russell Galea, *University of Malta, Malta*	**(O3.3)** **Chemometric models for rice sourdough fermentations based on fluorescence spectroscopy** Viktoria Zettel, *University Of Hohenheim, Germany*	**(O4.3)** **Transformative change towards more sustainable and healthy diets for all-An outline of the SusHealth project** Vasilis Grigoriadis, *Queen's University Belfast, United Kingdom*	**(N4.3)** **Recovery of bioactive compounds from fruit juice waste streams by industrial Ultrasound Assisted Extraction** Loic Carvalho, *Abertay University, United Kingdom*		
15:05 - 15:25	**(O1.4)** **Lactic acid bacteria fermentation of chickpeas flour for gluten-free breadmaking: sensory and physico-chemical modifications** Marcello Alinovi, *Università di Parma, Italy*	**(O2.4)** **Real Time Anomaly Detection in Cold Chain Transportation using IoT Technology** James Gillespie, *Ulster University, United Kingdom*	**(O3.4)** **Evaluation of sensor performance for smart home applications to analyze bakery products** Katrin Mathmann, *University of Applied Sciences, Austria*	**(O4.4)** **Using Near Infrared Spectroscopy (NIRs) to Help Consumer's Food Choices** Zeyneb Guneysu, *Hacettepe University, Turkey*	**(N4.4)** **Continuous recovery of valuable ingredients from microbial production systems by pulsed electric fields** Felix Schottroff, *University of Natural Resources and Life Sciences (BOKU), Austria*		
15:25 - 15:45	**(O1.5)** **Dynamic sensory, emotional and rheological characterization of a functional vanilla ice cream** Ricardo Isaías, *University of Porto, Portugal*	**(O2.5)** **Development of intelligent packaging to monitor food degradation and reduce food waste.** Laura Carballido, *Institut Agro, France*	**(O3.5)** **Quality evaluation of processed meats using rapid and/or non-invasive sensors and machine learning algorithms** Ahmed Rady, *Teagasc, Ireland*	**(O4.5)** **Decarbonisation in food supply chain: a review of current European initiatives** Sepideh Jafarzadeh, *Sintef Ocean, Norway*	**(N4.5)** **Optimization of bioactive compounds from marigold flower using ultrasound-assisted extraction by response surface methodology** Kitipong Assatarakul, *Chulalongkorn University, Thailand*		

15:45 - 16:15	Refreshment Break | Atrium and Presidents Terrace						
Room	**President Suite | Level 2**	**1872 Room | Level 3**	**Lansdowne Room | Level 2**	**Havelock Suite | Level 4**	**Vavasour Suite | Level 2**		
16:15 - 18:00	**Session 5: Food toxicology and allergenicity** Chairs: Gemma Kinsella and Kim Miller	**Session 6: Techniques to enhance energy efficiency & minimise environmental impact** Chairs: Brijesh Tiwari and Ajay Menon	**Session 7: Modelling, its role in quality by design** Chairs: Ferruh Erdoğdu and Catherine Renard	**Session 8: Bioactives and secondary metabolites: generation and characterisation** Chairs: Nessa Noronha and Jesus Frias	**NTP Special Session 5: Consumer perception and regulatory considerations in relation to non-thermal technologies** Chair: Alan Kelly and Fiona Lalor		
16:15 - 16:40	**(KN5.1)** **From mice to mouse: Developments in toxicological and allergenicity risk assessments** Rhodri Evans, *Exponent, United Kingdom*	**(KN6.1)** **Defining what type of industry will provide sustainable and healthy future foods** Wayne Martindale, *University of Lincoln, United Kingdom*	**(KN7.1)** **The role of digital tools in quality food design and sustainability** Francesco Marra, *Universita Degli Studi Di Salerno, Italy*	**(KN8.1)** **The potential of protein hydrolysates to support immune health** Christine Loscher, *Dublin City University, Ireland*	16:15 - 17:15 **(N5.1)** **Consumer perception of non thermal technologies** • Mary McCarthy, University College Cork, Ireland • Maeve Henchion, Teagasc, Ireland • Klaus Grunert, Aarhus University, Denmark • Diána Bánáti, University of Szeged, Hungary • John Casey, Donworth Capital Foods		
16:40 - 17:00	**(O5.2)** **Occurrence of regulated and emerging mycotoxins in raw milk: a Portuguese case-study** Marta Leite, *University Of Coimbra, Portugal*	**(O6.2)** **Process Development for Biofilm-Based Production of Nutraceuticals from Microalgae** Gamze Er, *LSTME Busan, South Korea*	**(O7.2)** **A multidimensional heat and mass transfer study of coffee roasting in spouted bed roasters** Mark Al-Shemmeri, *University Of Birmingham, United Kingdom*	**(KN8.2)** **Metabolomics – how it can contribute to developments to underpin a healthy, sustainable diet** Lorraine Brennan *University College Dublin, Ireland*			
17:00 - 17:20	**(O5.3)** **Tracing radiolabeled pesticides to investigate their fate during food processing** Mark Buecking, *Fraunhofer IME, Germany*	**(O6.3)** **Eat the box too... insects biomass growth and plastic biodegradation** Emmanouil Tsochatzis, *Aarhus University, Denmark*	**(O7.3)** **Bread baking modeling: towards the development of new baking strategies** Safia Bedre-dine, *Inrae, Ur Opaale, France*	**(O8.3)** **Enrichment of DPP-IV inhibitory peptides in quinoa for the treatment of type II diabetes mellitus** Magdalena Holzer, *Technical University of Munich, Germany*			
17:20 - 17:40	**(O5.4)** **Comparative risk assessment study on bisphenol A (BPA) through meat products** Xin Wang, *University College Dublin, Ireland*	**(O6.4)** **Driving towards net-zero carbon under climate change: Modelling energy use for dairy manufacturing and distribution** Maria Ioanna Malliaroudaki, *University of Nottingham, United Kingdom*	**(O7.4)** **Numerical modelling of soluble gas stabilization process as a tool toward full-scale industrialization** Sara Esmaeilian, *NTNU, Norway*	**(O8.4)** **Fish processing byproducts: A sustainable source of bioactive peptides** Khawaja Muhammad Imran Bashir, *German Engineering Research and Development Center, South Korea*	17:15 - 18:00 **(N5.2)** **Regulatory considerations of non thermal technologies** Pat O'Mahony, *FSAI, Ireland* Rhodri Evans, *Exponent, Ireland* Joe Dunne, *Food Safety Consultant, Ireland* Liam Murphy, *HPP Tolling, Ireland*		

17:40 - 18:00	(O5.5) **Safety Assessment of Novel Foods from the Biorefinery of Olive, Grape, and Nut By-products** Maame Ekua Manful, *Technological University Dublin, Ireland*	(O6.5) **Evaluation of meat industry's environmental impact via LCA: Current state and future/ alternative perspectives for sustainability** Vasiliki Oikonomopoulou, *National Technical University Of Athens, Greece*	(O7.5) **Investigation of integral stereoselectivity of lipase on triacylyglycerol of varying fatty acids** Yoonseok Choi, *Seoul National University, South Korea*	(O8.5) **How do phenolic compounds affect bioactive peptide formation from casein digestion in vitro?** Aytul Hamzalioglu, *Hacettepe University, Turkey*			
18:00 - 20:00	**Welcome Reception | Atrium and the Mezzanine**						

Tuesday 8 November 2022

Room	**President Suite | Level 2**
08:30 - 10:00	**Plenary Session 2: Meeting the future challenges of the food industry** Chairs: Dolores O'Riordan and James Lyng
08:30 - 09:00	(PL2.1) **Meeting the future challenges of the food industry** Mark Christal, *Enterprise Ireland, Ireland*
09:00 - 09:30	(PL2.2) **'Better Living through Sensory'; Using Sensory Cues to Moderate Eating Behaviour, Food Intake and Health** Ciarán Forde, *Wageningen University, the Netherlands*
09:30 - 10:00	(PL2.3) **Future of healthy, environmentally sustainable and desirable diets: guidelines, industry and consumers** Jennie Macdiarmid, *University of Aberdeen, United Kingdom*
10:00 - 10:30	**Refreshment Break | Poster Session 1 | Atrium and Presidents Terrace**

Room	**President Suite | Level 2**	**1872 Room | Level 3**	**Lansdowne Room | Level 2**	**Havelock Suite | Level 4**	**Vavasour Suite | Level 2**	**Special session room 442 | Level 4**	**Special session room 441 | Level 4**
10:30 - 12:35	**Session 9: Identifying and preparing for emerging food safety risks** Chairs: Enda Cummins and Elena Zand	**Session 10: Consumers' attitudes to processed foods and desire for clean labels** Chairs: Wim Verbeke and Diána Bánáti	**Session 11: Innovative and novel sustainable food processes** Chairs: Robert Sevenich and Lilia Ahrné	**Session 12: Formulation of foods to enhance their sustainability and/or nutritional value** Chair: Dolores O'Riordan and Christoph Hartmann	**NTP Special Session 6: Emerged Non-thermal Processing Technology - Commercial Case studies** Chairs: James Lyng and Carmen Moraru	**Special Session: Filling knowledge gaps on alternative proteins to accelerate the dietary shift** Chair: Paul Vos	**Special Session: Improving Sustainability in Food Processing using Moderate Electric Fields (MEF) for Process Intensification - MEFPROC** Chair: Juan A. Cárcel and Francesco Marra
10:30 - 10:55	(KN9.1) **Identifying and preparing for emerging food safety risks** Patrick Wall *University College Dublin, Ireland*	(KN10.1) **Consumer inferences from production and processing characteristics: A barrier to a more sustainable food production?** Klaus Grunert, *Aarhus University, Denmark*	(KN11.1) **Innovative and Novel Sustainable Food Processing and Challenges** Ferruh Erdoğdu, *Ankara University, Turkey*	(KN12.1) **Food design challenges: balancing sustainability, nutrition and circularity** Milena Corredig, *Aarhus University, Denmark*	10:30 - 11:05 (N6.1) **Ultraviolet** Robert Axon, *UVTGLOBAL, United Kingdom* Steve O'Brien, *UVTGLOBAL, United Kingdom* Jaromir Bilek, *Jenton International, United Kingdom*	(S01.1) **GIANT LEAPS towards healthy and sustainable future diets by filling knowledge gaps on alternative proteins** Paul Vos, *Wageningen University & Research, the Netherlands*	10:30 - 10:50 (S02.1) **Evaluation of Moderate Electric Field (MEF) for pasteurization of pork sausages in a conductive casing** Tesfaye Bedane, *University College Dublin, Ireland*

10:55 - 11:15	(O9.2) **Coagulase Negative Staphylococci: a Potential Reservoir of Antibiotic Resistant Genes in the Pork Meat Chain** Maria João Fraqueza, *Centre for Interdisciplinary Research in Animal Health, Portugal*	(O10.2) **The Interplay of Food Labels & Dietary Motivation on Product Health Ratings and Purchase Intentions** Paul Naughton, *Edinburgh Napier University, Untied Kingdom*	(O11.2) **Rotary drum heat pump drying as alternative to malt processing** Gisandro Carvalho, *Esalq-usp/oniris, France*	(O12.2) **Incorporating zinc into provitamin A, quality protein maize and normal maize hybrids** Maryke Labuschagne, *University of the Free State, South Africa*		(S01.2) **NextGenProteins: Bioconversion of Underutilized Resources into Next Generation of Proteins for Food and Feed** Marie Shrestha, *ttz Bremerhaven, Germany*	10:50 - 11:10 (S02.2) **Moderate Electric Fields (MEF) application during the extraction of oleuropein from olive leaves** Juan A. Cárcel, *Universitat Politècnica De València, Spain*
11:15 - 11:35	(O9.3) **A prospective study of antibiotic resistance in the food chain** Cristina Díaz-Martínez, *University Of Cordoba, Spain*	(O10.3) **Consumer perception and willingness to try new food products produced by new food technologies** Ana Frias, *University Of Port, Portugal*	(O11.3) **Ultra-high-pressure homogenization (UHPH) in the preparation of spray-dried functional emulsion: application in dairy-based products** Fatemeh Aghababaei, *Universitat Autonoma Barcelona (UAB), Spain*	(O12.3) **In vitro digestion/ fermentation of olive oil by-products debittered with lactobacilli and functionalized with Lactiplantibacillus plantarum** Andrea Gianotti, *Università di Bologna, Italy*	11:05 - 11:50 (N6.2) **High pressure processing** Mario Gonzalez, *Hiperbaric, Spain*	(S01.3) **PROFUTURE Project - Microalgae Protein Ingredients for the Food and Feed of the Future** Fabio Fanari, *Institute of Agrifood Research and Technology (IRTA), Spain*	11:10 - 11:30 (S02.3) **Improvement of ferrochelatase activity by using power ultrasound** Jose Vicente Garcia Perez, *Universitat Politècnica De València, Spain*
11:35 - 11:55	(O9.4) **Enhancing the safety and quality of marinated small pelagic fish** Boutheina Bessadok, *Institut National Des Sciences Et Technologies De La Mer, Tunisia*	(O10.4) **Impact of organic apple puree processing on consumer's perceived value and purchase intentions** University Angers, *Itab / Granem, France*	(O11.4) **Exploiting the potential of electrohydrodynamic drying as a green alternative for batch-mode drying of foods** Kamran Iranshahi, *ETH Zurich, Empa, Switzerland*	(O12.4) **Oleosomes: natural oil droplets for dairy alternatives - studied by lubrication behaviour (tribology)** Jack Yang, *Wageningen University & Research, the Netherlands*		(S01.4) **SUSINCHAIN: Sustainable Large-Scale Production and Consumption of Insect Proteins in Europe** Teun Veldkamp, *Wageningen University & Research, the Netherlands*	11:30 - 11:50 (S02.4) **Model validation, design, implementation and real-time process control of a continuous flow ohmic heater** Oluwaloba Oluwole-ojo, *Sheffield Hallam University, United Kingdom*
11:55 - 12:15	(O9.5) **A factory layout and associated food hazards in open food processing facilities, a review** Mahsa Pakdel, *Norwegian University of Science and Technology, Norway*	(O10.5) **Microbial cultures to extend the shelf-life of packaged fresh meat: the attitude of Australian consumers** Peter Torley, *RMIT University, Australia*	(O11.5) **Lipase-catalyzed synthesis of multi-functional erythorbyl ricinoleate with high emulsifying activity** Inwoo Park, *Seoul National University, South Korea*	(O12.5) **How does starch affect wheat bread crumb structure during baking and cooling?** Heliciane Clement, *Inrae, France*	11:50 - 12:35 (N6.3) **Pulsed Electric Fields** Stefan Toepfl, *ELEA Technology, Germany* Mike Kempkes, *Diversified Technologies, United States of America*	(S01.5) **Smart Protein for a Changing World. Emerging outcomes from an H2020 EU project** Theresa Böck, *University College Cork, Ireland*	11:50 - 12:10 (S02.5) **Assessment of MEF processing potentiality in vegetable based dressing sauce** Francesco Marra, *University of Salerno, Italy*
12:15 - 12:35	(O9.6) **Broad-spectrum antimicrobial coatings for food safety** Fiora Artusio, *École Polytechnique Fédérale de Lausanne, Switzerland*	(O10.6) **A consumer exploration of the awareness, understanding and perception of plant-based meat alternatives (PBMA)** Rebecca Murray, *Queen's University Belfast, United Kingdom*	(O11.6) **High-pressure-intensified pasteurization of orange juice to inactivate Alicyclobacillus acidoterrestris spores and investigation of quality changes.** Robert Sevenich, *Technische Universität Berlin, Germany*	(O12.6) **Increasing the fermentable dietary fibre content of bread by addition of accessible cellulose** Karel Thielemans, *KU Leuven, Belgium*		(S01.6) **U-Protein and ValPro Path** Ewen Mullins, *Teagasc Food Research Centre, Ireland*	12:10 - 12:30 **Panel Discussion**
12:35 - 13:45	**Lunch | Poster Session 1 |** Atrium and Presidents Terrace **Pop-up session: Are you aware of what you are eating?** | Atrium By the EFFoST Working group on Sustainable Food Systems					12:50 - 13:15 | Special session room 442 **Scientist careers in industry - How to be a subject matter expert in corporate organizations** Christoph Hartmann, *Nestlé, Switzerland* *Session sponsored by Nestlé*	

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13:45 - 15:50	**Session 13: Bioinformatics and its role in food safety, hygienic design & contamination control** Chairs: Hermien van Bokhorst-van de Veen and Aoife Gowan	**Session 14: Advances and challenges in alternative proteins** Chairs: Mark Fenlon and Jo Gould	**Session 15: Advances in food packaging to safeguard food and the environment** Chairs: Sharma Shubam and Song Miao	**Session 16: Consumer trends and responses to emerging and future foods** Chairs: Mary McCarthy and Roisin Burke or Lubna Ahmed	**NTP Session 7: How will nonthermal technologies play a part in future local and global food safety and security** Chairs: Maria Elena Sosa-Morales and Gustavo Barbosa Canovas	**Special session: The INGREEN journey from agrifood sidestream to sustainable biobased products** Chair: Narinder Bains	**Special Session: Global Harmonization Initiative - available, sustainable, healthy food for the future through networking sound science** Chair: Nicola Stanley and Hilde Wijngaard
13:45 - 14:10	**(KN13.1)** **Precision food safety - using DNA sequences to inform risk assessment** Séamus Fanning, *University College Dublin, Ireland*	**(KN14.1)** **Microalgae based production of single-cell protein** Maria Barbosa, *Wageningen University, the Netherlands*	**(KN15.1)** **Sustainable food systems: Role of food packaging** Begonya Marcos Muntal, *IRTA, Spain*	**(KN16.1)** **Understanding the individual in the food system, a science of consumers or citizens?** Monique Raats, *University of Surrey, United Kingdom*	**(N7.1)** **The past and future history of nonthermal processing of foods: fruit and vegetable based food systems** Marc Hendrickx, *KU Leuven, Belgium*	13:45 - 13:50 **Introduction to the INGREEN project** Narinder Bains, *INEUVO Ltd, United Kingdom* 13:50 - 14:10 **(S03.1)** **Innovative and sustainable cheeses obtained applying Yarrowia lipolytica previously produced using whey as substrate** Davide Gottardi, *University of Bologna, Italy*	13:45 - 13:50 **Introduction to the Global Harmonization Initiative** Nicola Stanley, *Global Harmonization Initiative, Austria* 13:50 - 14:10 **(S04.1)** **The complexity of regulations for human milk** John Points, *John Points Consulting Ltd., United Kingdom*
14:10 - 14:30	**(O13.2)** **Mechanistic modeling of the dynamics of phage attack in milk acidification for the cheese-making process** Michèle Bou Habib, *Inrae, France*	**(O14.2)** **Protein concentrates from edible insect Tenebrio molitor – development of extraction methods and techno-functional characterization** Luís M. Cunha, *University of Porto, Portugal*	**(O15.2)** **Carbon nanotube-based sensors for intelligent packaging** Niloufar Sharif *École Polytechnique Fédérale de, Lausanne, Switzerland*	**(O16.2)** **Plant-based protein: the road to sustainability? Says who?** Seamus O'Reilly, *University College Cork, Ireland*	**(N7.2)** **Non-thermal Plasma for Fresh Produce: Scaling Efficacy from Bench to Prototype/ Industry for gaseous/ liquid applications** Uta Schnabel, *Leibniz Institute for Plasma Science and Technology, Germany*	**(S03.2)** **Bio-based innovative bread obtained with pre-fermented ingredients from milling by-products** Lorenzo Siroli, *University of Bologna, Italy*	**(S04.2)** **Healthy nutrition based on food-omics data and meeting 3P (predictive, preventive and personalized) medicine expectations** Nadiya Boyko, *Uzhhorod National University, Ukraine*
14:30 - 14:50	**(O13.3)** **Characterization of Cronobacter sakazakii isolates from powdered infant formula manufacturing plants by Whole Genome Sequencing** Zeinabossadat Ebrahimzadeh Mousavi, *University College Dublin, Ireland*	**(O14.3)** **Effect of Salt Extraction on Structure and Functionality of Concentrate Pea Protein** Yi Zhang, *Aarhus University, Denmark*	**(O15.3)** **The systemic risk of contamination of recycled packaged food in circular economy** Hawraa Ayoub, *Université Paris-Saclay, France*	**(O16.3)** **Conscious and unconscious emotional perception of senior consumers towards dysphagia liquids** Noelia Da Quinta, AZTI, Spain	**(N7.3)** **Sublethal moderated pressure and ultrasound pre-treatments for subsequent shorter and improved whole egg pasteurization** Jorge Saraiva, *University Of Aveiro, Portugal*	**(S03.3)** **Impact of dairy by-product, cheese whey, on skin health** Aleksandra Augustyniak, *Munster Technological University, Ireland*	**(S04.3)** **Aflatoxin assessment in blood serum of rural households consuming mouldy grains in Ogun State, Nigeria** Eniola Oni, *Federal University of Agriculture, Nigeria*

14:50 - 15:10	(O13.4) **Transcriptomic response of Listeria monocytogenes planktonic and sessile cells to plasma-activated water** Paula Fernández Gómez, *Universidad De León, Spain*	(O14.4) **Comparing the techno-functional properties of plant-based proteins obtained by dry fractionation and wet extraction** Davide De Angelis, *University of Bari, Italy*	(O15.4) **Improving the quality of ready-to-eat Atlantic salmon fillets using soluble gas stabilization (SGS) technology** Anita Jakobsen, *Norwegian University Of Science And Technology, Norway*	(O16.4) **Consumer perception of plant-based cheese and yoghurt alternatives: Estonian consumers' perspective** Helen Saar, *Center of Food and Fermentation Technologies, Estonia*	(N7.4) **Ultrasound effect on the bioactive compounds and physicochemical properties of almond beverages** Maria Elena Sosa-Morales, *Universidad De Guanajuato, Mexico*	(S03.4) **Regulatory Aspects of Novel Bio-Based Ingredients for Use in Food, Feed, Pharma, Cosmetics and Packaging** Edward Sliwinski, *European Federation of Food Science and Technology, the Netherlands*	(S04.4) **Edible insects for human consumption** Diána Bánáti, *University of Szeged, Hungary*
15:10 - 15:30	(O13.5) **The investigation of sanitizer resistance genes in listeria monocytogenes Isolated from different food processing facilities** Yue Cheng, *University College Dublin, Ireland*	(O14.5) **Ball milling as a tool to alter the extractability and colloidal state of oat proteins** Frederik Janssen, *KU Leuven, Belgium*	(O15.5) **Optical Cleaning Assurance for Reusable PET (re-PET) Food Packaging** Samsun Nahar, *Loughborough University, United Kingdom*	(O16.5) **Nutrient-dense, texture-modified and portion-sized hybrid meat designed for senior consumers: perception and behaviour.** Clara Talens, *AZTI, Food Research, Basque Research and Technology Alliance (BRTA), Spain*	(N7.5) **Application of pulsed light in a hurdle approach in winemaking process** Gianpiero Pataro, *University of Salerno, Italy*	(S03.5) **Life cycle perspectives of bio-based products using biomass residues as feedstock** Dirk Hengevoss, *University of Applied Sciences and Arts Northwestern Switzerland, Switzerland*	(S04.5) **Food Waste Recovery: Microwave Assisted Extraction** Filiz, Hazal, *University of Gaziantep, Turkey*
15:30 - 15:50	(O13.6) **Simulation of Microbial Survival During Fermented Sausages Production to Assess Alternative Formulation** Victoria Caballero, *Technological University Of Dublin, Ireland*	(O14.6) **Contribution of plant proteins to structure and physical stability of lean meat analogue model systems** Quinten Masijn, *KU Leuven, Belgium*	(O15.6) **Development and characterization of active packaging containing TiO2 bio-nano-composite - cinnamon oil for cheese preservation** Shubham Sharma, *Technological University, Ireland*	(O16.6) **Australians perceptions towards edible insects as a future food** Jessica Danaher, *RMIT University, Australia*	(N7.6) **Application of cold plasma technology for the shelf-life extension of fish fillets: industrial scale validation** George Katsaros, *Institute Of Technology Of Agricultural, Greece*	**Panel discussion - Impact of key results of the INGREEN project in food, feed, pharmaceuticals, cosemetics, and packaging** Moderator: Helena McMahon	(S04.6) **Challenges in valorising food waste for small and medium-sized enterprises** Hilde, Wijngaard, *The Hague University of Applied Sciences, the Netherlands*
15:50 - 16:20	**Refreshment Break | Poster Session 1 | Atrium and Presidents Terrace** **GNT Young Scientist Competition | Nominees present their posters | Presidents Terrace**					15:55 - 16:15 | Special session room 442 **High-pressure technologies for sustainable food production** Jasna Ivanovic, *Uhde High Pressure Technologies, Germany* *Session sponsored by Uhde High Pressure Technologies*	

Room	President Suite | Level 2	1872 Room | Level 3	Lansdowne Room | Level 2	Havelock Suite | Level 4	Vavasour Suite | Level 2	Special session room 442 | Level 4	Special session room 441 | Level 4
16:20 - 18:05	**Session 17: Emerging technologies for the rapid detection of food safety issues** Chairs: Shea Fanning and Anet Rezek Jambrak	**Session 18: Designing and producing foods to meet future challenges** Chair: Maria Barbosa and Felix Schottroff	**Session 19: Approaches to minimise water use and water waste** Chairs: Rachel Louise Gomes and Vasilis Valdramidis	**Session 20: Robotics, automation and control of food processes** Chairs: Nora O'Shea and Verena Wiedenmann	**NTP Special Session 8: Scaleup, Digital Twins and Modelling of Non-thermal Processing Technologies** Chair: Jesus Frias and Brijesh Tiwari	**Special Session: Aquaculture and Fisheries sidestream proteins and bioactives as ingredients for nutritional supplements: the AQUABIOPRO-FIT project** Chair: Tone Aspevik	**Special Session: Creating transparency from farm to fork to strengthen trust and create a healthier food system** Chair: Edward Sliwinski
16:20 - 16:45	**(KN17.1)** **The Evolution of Food Fraud Vulnerabilities: Beyond Melamine to Infinity** John Spink, *Michigan State University, United States of Amercia*	**(KN18.1)** **Sustainable, healthy foods - an industry perspective on their production** Aoife Murphy, *Kerry, Ireland*	**(KN19.1)** **How can the wastewater treatment sector contribute for the sustainability of the agro-food industries?** Catarina Leite Amorim, *Universidade Catolica Portuguesa, Portugal*	**(KN20.1)** **Robots of the future – Collaborative Robotics & 3D Printing for Food Quality & Design** Norah O'Shea, *Teagasc, Ireland*	16:20 - 16:40 Introduction to Session and Ice breaker Brijesh Tiwari *Teagasc, Ireland* Jesus Frias, *Technological University Dublin, Ireland*	16:20 - 16:25 **Introduction to the AQUABIOPRO-FIT project** Tone Aspevik, *Nofima, Norway* 16:25 - 16:40 **(S05.1)** **Challenges related to the production of nutritional supplements from fish side streams** Silje Steinsholm, *Nofima, Norway*	**(S06.1)** **TITAN Transparency solutions for transforming the food system** Edward Sliwinski, *European Federation of Food Science and Technology, the Netherlands*
16:45 - 17:05	**(KN17.2)** **Spectral imaging in Food Safety: background, opportunities and limitations** Aoife Gowen, *University College Dublin, Ireland*	**(KN18.2)** Lorraine Moran, *Tirlán, Ireland*	**(O19.2)** **Mapping water use in food manufacture: trends and reduction opportunities** Peter Fryer, *University of Birmingham, United Kingdom*	**(O20.2)** **Towards Autonomous Bioprocess Control: Model-based Reinforcement Learning for the Determination of Control Policies** Eric Morelle, *Technische Universität Berlin, Germany*	16:40 - 17:00 **(N8.1)** **Open Science and Modelling** Francesco Marra, *Università degli Studi di Salerno, Italy*	16:40 - 16:55 **(S05.2)** **Fish side stream materials stimulate growth of in vitro cultured Atlantic salmon muscle cells** Tone-Kari K Østbye, *Nofima AS, Norway*	**(S06.2)** **Making Agritech sustainable – Agricolus for precision farming** Giada Mastandrea, *Agricolus s.r.l., Italy*
17:05 - 17:25	**(O17.3)** **Detection of almond traces in processed foods using electrochemical immunoplatforms** Alba Civera, *Universidad De Zaragoza, Spain*	**(O18.3)** **Designing plant-based protein oleogels as potential solid fat replacers in food products** Annika Feichtinger, *Wageningen University & Research, the Netherlands*	**(O19.3)** **On improving the sustainability tomato processing industry by minimization of water and energy consumption** Gianpiero Pataro, *University of Salerno, Italy*	**(O20.3)** **Development of antioxidant-rich sweet potato yoghurt using the orange-fleshed 'Bophelo' sweet potato (*Impomea batatas*)** Yvonne Maila, *University Of Limpopo, South Africa*	17:00 - 17:20 **(N8.2)** **Digital Twins** Ferruh Erdoğdu, *Ankara University, Turkey*	16:55 -17:10 **(S05.3)** **Evaluation of biological properties of extracts obtained from fish side streams by innovative non-thermal techniques** Min Wang, *University of Valencia, Spain*	**(S06.3)** **Food safety and transparency through cutting edge DNA-based analysis methods** Antonio Del Casale, *MicroBion s.r.l., Italy*

17:25 - 17:45	**(O17.4)** **From microscopic to macroscopic descriptions of the contamination of food by recycled papers and boards** Lucas Biant, *INRAE, France*	**(O18.4)** **Future cheeses produced by extrusion of renneted curds** Ran Feng, *University Of Copenhagen, Denmark*	**(O19.4)** **Artificial Intelligence (AI) based optimization of tank cleaning in food production** Tobias Beck, *Friedrich-Alexander-Universtiät, Germany*	**(O20.4)** **New methodological approaches to study anisotropic structures in foods using rheological and Raman spectroscopic fingerprints** Julie Frost Dahl, *Aarhus University, Denmark*	17:20 - 18:00 **Discussion Table** • Mario Gonzalez Angulo, Hiperbaric, Spain • Mike Kempkes, Diversified Technologies Inc., United States of America • Jamomir Bilek, Jenton International Ltd, UK • Francesco Marra, Università degli Studi di Salerno, Italy • Colm O'Donnell, University College Dublin, Ireland • Ferruh Erdoğdu, Ankara University, Turkey	17:10 - 17:25 **(S05.4)** **Fish-side stream-derived protein hydrolysates exert anti-inflammatory actions in mouse models of human diseases** Christos Tsatsanis, *University of Crete, Greece*	**(S06.4)** **Helping children make better dietary choices by widening their knowledge on nutrition and food science** Noelia da Quinta, *AZTI, Basque Research and Technological Alliance (BRTA), Spain*
17:45 - 18:05	**(O17.5)** **Selection of DNA aptamers for the detection of foodborne toxins** Ricardo Olivera, *Instituto Nacional de Investigação Agrária e Veterinária, I.P. (INIAV,I.P.), Portugal*	**(O18.5)** **Cooking Methods Affect Quality of 3D-Printed Vegan Burger Patties Containing Chia Mucilage-based Emulsion Gels** Kezban Candoğan, *Ankara University, Turkey*	**(O19.5)** **Influence of the cleaning fluid on changes in the chemical composition of food-based soils** Kristin Hovorka, *Technische Universtität Dresden, Germany*	**(O20.5)** **Inverse graphics: from X-ray to 3D pork shoulder models** Michiel Pieters, *KU Leuven, Belgium*		17:25 - 17:40 **(S05.5)** **Effectiveness of AQUABIOPRO-FIT innovative nutritional supplement against depression, anxiety, and stress on healthy adult volunteers** Zoi Georgiou, *Biognosis, Greece*	**(S06.5)** **Food Possibilities: A framework for an integrated approach to healthy, sustainable food behaviours across schools, communities, business and government** Danielle McCarthy, *Queen's University Belfast, Northern Ireland*
						17:40 - 17:55 **(S05.6)** **Environmental and socio-economic considerations within the AQUABIOPRO-FIT project** Léo Staccioli and Beatriz Cassuriaga Dias, *ARDITEC Association, France*	17:55 - 18:05 Q&A
						17:55 - 18:05 Q&A	
19:00 - 22:00	**Conference Dinner | Guinness Storehouse** **Conference dinner guests are welcome to visit the Guinness Experience between 19:00 - 20:00**						

Wednesday 9 November 2022

Room	President Suite | Level 2	1872 Room | Level 3	Lansdowne Room | Level 2	Havelock Suite | Level 4	Vavasour Suite | Level 2	Special session room 442 | Level 4	Special session room 441 | Level 4
08:30 - 10:35	**Session 21: Protecting the food chain, biosecurity, food fraud and authenticity** Chairs: John Spink and Julie Dunne	**Session 22: Emerging technologies for valorising side streams, food waste & by products** Chairs: Nigel Brunton and Cristina L.M Silva	**Session 23: Engineering food structures to enhance nutrient quality and bioavailability** Chairs: Peter Fryer and Tara Grawet	**Session 24: Dietary recommendations consistent with a sustainable healthy diet, current & future policies** Chairs: Anne Nugent and Steven Mulrooney	**NTP Session 9: Meeting future consumer demands for quality, nutritious and healthy foods with non-thermal processing technologies** Chairs: Yuan Jiang and Robert Sevenich	**Special Session: How to make food nutrition security data FAIRer: an introduction to FNS-Cloud** Chair: Paul Finglas	**Special Session: Predictive modelling tools to evaluate the effects of climate change on food safety (PROTECT)** Chair: Enda Cummins
08:30 - 08:55	**(KN21.1)** **Latest developments in food authenticity: An overview** Paul Brereton, *QUB, United Kingdom*	**(KN22.1)** **Next Gen Meat and Dairy Products and Production** Roman Buckow, *University of Sydney, Australia*	**(KN23.1)** **Alternative proteins** Hadrien Delemazure, *Clextral, France*	**(KN24.1)** **Personalised food-based dietary guidelines to support transition to a more sustainable healthy diet.** Aifric O'Sullivan, *University College Dublin, Ireland*	**(N9.1)** **Meeting future consumer demands for quality, nutritious and healthy foods with non-thermal processing technologies** Diána Bánáti, *University of Szeged, Hungary*	**(S07.1)** **Food Nutrition Security Cloud (FNS-Cloud)** Paul Finglas, *Quadram Institute Bioscience, UK*	08:30 - 08:35 **Introduction of the PROTECT project** Enda Cummins, *University College Dublin, Ireland*
08:55 - 09:15	**(KN21.2)** **Crisis Management. What the egg scare can teach us about food crisis management?** Sterling Crew, *The Food Aunthenticity Network, United Kingdom*	**(O22.2)** **Sensory properties of whitefish protein solubles – can it be broth?** Tone Aspevik, *Nofima AS, Norway*	**(O23.2)** **Towards the use of protein microgels as multifunction additives** Siavash Soltanahmadi, *University Of Leeds, United Kingdom*	**(O24.4)** **AI4Food: Bringing Artificial Intelligence and Mobile Device Sensors to Health Diets** Sergio Romero-Tapiador, *Universidad Autónoma De Madrid, Spain*	**(N9.2)** **Effect of PEF pretreatment on physical and chemical properties of freeze-dried strawberries and bell peppers** Marianna Giancaterino, *University of Natural Resources and Life Sciences, Austria*	**(S07.2)** **The FNS-Cloud Food Labelling Demonstrator: Branded food composition databases - how and why to collect data?** Igor Pravst, *Nutrition Institute, Slovenia*	08:35 - 08:50 **(S08.1)** **Quantifying human exposure to Aflatoxin M1 through raw milk under climate change scenarios** Rhea Sanjiv Chhaya *University College Dublin, Ireland*
09:15 - 09:35	**(O21.3)** **A model for consumer exposure to norovirus from oysters, based on ISO 15216-1:2017 detection.** Kevin Hunt, *University College Dublin, Ireland*	**(O22.3)** **New process for improved sensory properties of marine powders based on cod filleting residues** Silje Steinsholm, *Nofima AS, Norway*	**(O23.3)** **Does carrageenan hinder meat proteolysis? Proteomic analyses of in vitro digestions** Maayan Ben David, *Technion- Israel institute of technology, Israel*	**(O24.3)** **Dietary guidelines for health and sustainability in Europe: Guidelines vs reality** Marie Conway, *Teagasc, Ireland*	**(N9.3)** **Using High Pressure Processing to create novel protein based structures and textures** Carmen Moraru, *Cornell University, United States of America*	**(S07.3)** **Making Food data FAIR – The FNS-Cloud Nutrition & Lifestyle Demonstrator** Eileen Gibney, *University College Dublin, Ireland*	08:50 - 09:05 **(S08.2)** **Assessing the impact of climatic factors on the quality and safety of raw milk** Styliani Roufou, *University Of Malta, Malta*
09:35 - 09:55	**(O21.4)** **Evaluation of different strategies to reduce the microbial load of fresh fruits and vegetables** Felix Schottroff, *University of Natural Resources and Life Sciences (BOKU), Austria*	**(O22.4)** **Innovative production of prebiotics from acid whey with a hyperthermophilic β-glucosidase from Thermotoga neapolitana** Athanasios Limnaios, *National Technical University of Athens, Greece*	**(O23.4)** **Formulation of Glyceryl stearate-based oleogels as carriers of β-carotene: formation, characterization and in vitro digestion** Mohsen Ramezani, *University Of Lleida, Spain*	**(O24.2)** **The Adherence and Significance of Mediterranean Diet as Sustainable Healthy Dietary Pattern** Metin Guldas, Bursa *Uludag University, Turkey*	**(N9.4)** **Role of sugars on the inactivation of polyphenoloxidase induced by cold atmospheric plasma** Lilia Neri, *University of Teramo, Italy*	**(S07.4)** **Making Diet & Microbiome data FAIR – The FNS-Cloud Diet & Microbiome Demonstrator** Maria H. Traka, *Quadram Institute Bioscience, United Kingdom*	09:05 - 09:20 **(S08.3)** **Predicting milk contamination under climate change scenarios** Lydia Katsini, *KU Leuven, Belgium*

09:55 - 10:15	(O21.5) **Identification of botanical origin of Greek honeys using UV-vis and FT-NIR spectroscopy** Dafni Dimakopoulou-Papazoglou, Aristotle *University Of Thessaloniki, Greece*	(O22.5) **Metamorphasis of Crab Shell into Butterfly Wings: Advanced Patterned Films from Food Waste** Russell Banta, *University College Cork, Ireland*	(O23.5) **How microstructure, mechanical properties and macrostructure breakdown affect gastric digestion of whey protein gels** Dan Liu, *Wageningen University & Research, the Netherlands*	(O24.5) **Findings from a systematic review of behavioural determinants relating to healthy sustainable diets.** Bríd Bourke, *University College Cork, Ireland*	(N9.5) **Phenolic compound profiles and antioxidant concentrations in lettuce grown under AI developed LED light recipes** Gultekin Hasanaliyeva, *Nottingham Trent University, United Kingdom*	(S07.5) **FOODRUGS, integrating public data repositories to explore food-drug interactions** Enrique Carillo de Santa Paul, *IMDEA Food Institute, Spain*	09:20 - 09:35 (S08.4) **Multi-criteria framework to evaluate safety and environmental impacts: Application to a large dairy farm** Rodney Feliciano, Secalim, *INRAE, Oniris, France*
10:15 - 10:35	(O21.6) **White brined and hard cheeses from Epirus region in Greece: Discovering the terroir secrets** Athina Tzora, *University Of Ioannina, Greece*	(O22.6) **Functional compounds extracted from yeast lees** Nerea Iturmendi, *Universidad Pública de Navarra, Spain*	(O23.6) **Development of 3D microstructure in fried starch-water mixtures for property estimation** Ujjwal Verma, *KU Leuven, Belgium*	(O24.6) **Milk consumption among schoolchildren in Ireland** Ellen Greene, *University College Dublin, Ireland*	(N9.6) **Effects of ultrasound on off-flavour-related aroma compounds in a pea protein-based yoghurt alternative** Julia Matysek, *Technische Universität Berlin, Germany*		09:35 - 09:50 (S08.5) **Mathematical models for predicting spoilage of non-refrigerated food products due to thermophilic spore-forming bacteria** Ourania Misiou, *Aristotle University Of Thessaloniki, Greece*
							09:50 - 10:05 (S08.6) **Towards resource sustainability: Modelling fouling and cleaning in milk pasteurisation processes** Maria Ioanna Malliaroudaki *University of Nottingham, United Kingdom*
							10:05 - 10:20 (S08.7) **Climate change challenges in the transition to an environmentally sustainable European dairy sector by 2050** Paola Guzmán Luna, *Universidade de Santiago de Compostela, Spain*
							10:20 - 10:35 (S08.8) **Microbial risk ranking as "a web-based decision support system" tool** Gopaiah Talari, *Creme Global, Ireland*
10:35 - 11:05	**Refreshment break | Poster Session 2 | Atrium and Presidents Terrace**						

Room	President Suite | Level 2	1872 Room | Level 3	Lansdowne Room | Level 2	Havelock Suite | Level 4	Vavasour Suite | Level 2	Special session room 442 | Level 4	Special session room 441 | Level 4
11:05 - 12:50	**Session 25: Novel Thermal Technologies** Chair: Ferruh Erdoğdu	**Session 26: Emerging technologies for valorising side streams, food waste & by products** Chairs: Robert Sevenich and Paola Pittia	**Session 27: Formulation of foods to enhance their sustainability and/or nutritional value** Chairs: Avi Shpigelman and Delphine Huc-Mathis	**Session 28: Towards a food environment to satisfy sustainable healthy diets** Chairs: Monqiue Raats and Kees de Gooijer	**NTP Special Session 10: Panel Discussion on the Future of non-thermal technologies & Closing Address** Moderator: Henry Jaeger	**Special Session: Shaping our Future Sustainable Food Systems** Chair: Hugo de Vries	**Special Session: Innovations for food producers and food SMEs: How to encourage putting innovations into practice** Chair: Geneviève Gésan-Guiziou
11:05 - 11:30	**(O25.1)** **Electro-heating technologies for innovation in industrial applications for process safety and efficiency** Ferruh Erdoğdu, *Ankara University, Turkey*	**(O26.1)** **Application of innovative technologies for valorization of biomass from house crickets** Marios Psarianos, *Leibniz Institute For Agricultural Engineering And Bioeconomy (ATB), Germany*	**(O27.1)** **Capillary suspensions for oil structuring with agri-food residues micronized via high-pressure homogenization in oil** Annachiara Pirozzi, *University of Salerno, Italy*	**(KN28.1)** **Consumer attitude toward innovative and sustainable food processing** Diána Bánáti, *University of Szeged, Hungary*	11:05 - 12:10 **(N10.1)** • Gustavo Barbosa-Canovas, Washington State University, United States of America • Carmen Moraru, Cornell University, United States of America • Oliver Schlüter, ATB-Potsdam, Germany • Stefan Toepfl, ELEA Technologies, Germany • Jasna Ivanovic, Uhde High Pressure Technologies, Germany • Christoph Hartmann, Nestlé, Switzerland	11:05 - 11:25 **(S09.1)** **European Partnerships in Food responding to Farm 2 Fork objectives** Daniela Lüth, *European Commission, Belgium*	11:05 - 11:10 **Introduction to the Session** Geneviève Gésan-Guiziou, *National Research Institute for Agriculture, Food and the Environment (INRAE), France*
11:30 - 11:50	**(O25.2)** **Digital Tools for Knowledge Transfer in MW/RF Heating of Foods** Francesco Marra, *University Of Salerno, Italy*	**(O26.2)** **Protein extraction from tomato leaves** Marieke Bruins, *Wageningen University & Research, the Netherlands*	**(O27.2)** **Processing improves physical and oxidative stability of cricket protein emulsions** Xiaocui Han, *University Of Helsinki, Finland*	**(O28.2)** **Online Food Shoppers: Pattern of behaviour and sustainability practices** Claire O'Neill, *Universtiy College Cork, Ireland*		11:25 - 11:40 **(S09.2)** **FOODPathS leading to the future Partnership Sustainable Food Systems** Hugo de Vries, *INRAE, France*	11:10 - 11:25 **(S10.1)** **Agrifood Innovation: New Needs in the FOOD 2030 Scenario** Jonas Lazaro-Mojica, *FoodDrinkEurope, Belgium*
11:50 - 12:10	**(O25.3)** **Modeling and design of Ohmic heating chambers: a computational approach** Fabrizio Sarghini, *University Of Naples, Italy*	**(O26.3)** **Split-stream processing of asparagus side-streams improves the flavour of dried asparagus food ingredients** Eirini Pegiou, *Wageningen University & Research, the Netherlands*	**(O27.3)** **Soy juice fermentation for yogurt production: how a relevant starter selection can improve it?** Stéphanie Deutsch, *Inrae - Umr Stlo, France*	**(O28.3)** **Are sustainable and healthy foods also affordable? A multivariate analysis in the Irish market** Maria Dermiki, *Atlantic Technological University, Ireland*		11:40 - 11:55 **(S09.3)** **Towards an EU network of university-driven local food ecosystems** Jeroen Knol, *European Federation of Food Science and Technology, the Netherlands*	11:25 - 11:45 **(S10.2)** **Innovative upgrades to value and packaging of small quantities of liquid food products** Imca Sampers, *Ghent University, Belgium and* Geneviève Gésan-Guiziou, *INRAE. France*

12:10 - 12:30	(O25.4) **Development of an innovative-novel process approach for reduced oil fried products** Ozan Karatas, *Ankara University, Turkey*	(O26.4) **Chitin and chitosan extraction from edible insects: characterization and comparison between different species and by-products** José Carlos Ribeiro, *GreenUPorto/FCUP, Portugal*	(O27.4) **Processing-dependent nature of plant-protein polyphenol interactions: Are the interactions responsible for protein protection of polyphenols?** Avi Shpigelman, *Faculty of Biotechnology & Food Engineering, Echnion, Israel*	(O28.4) **Exploring food choice motives of Irish consumers and their potential to drive sustainable consumption** Shelley Fox, *Atlantic Technological University, Ireland*	12:10 - 12:40 (N10.2) **Closing address** Bala Balasubramaniam, *Ohio State University, United Sates of America* **Closing Remarks** James Lyng and Dolores O' Riordan, *University College Dublin, Ireland*	11:55 - 12:10 (S09.4) **FOODPathS Exploring collaboration between diverse actors in a network of Food System Labs** Jonas Lazaro-Mojica, *FoodDrinkEurope, Belgium*	11:45 - 11:55 (S10.3) **Biotechnology tools for clean label plant-based new foods** Inés Echeverría, *Centro Nacional de Tecnología y Seguridad Alimentaria (CNTA), Spain*
12:30 - 12:50	(O25.5) **Conversion of Xylan to Xylose from Pistachio Shell by Microwave/CO_2 Assisted Hydrolysis** Filiz Hazal, *Gaziantep University, Turkey*	(O26.5) **Showing the opportunities of fruits by-products valorization through carbon removal technology in Central Wallis** Dominic Hafner, *dss+, Switzerland*	(O27.5) **Structuring biphasic systems for improved nutritional and textural properties** Maya Davidovich-Pinhas, *Technion, Israel Institute Of Technology, Israel*	(O28.5) **Nudging as a tool to help students make sustainable and healthy decisions at university canteen** Cristina Mora, *Università Di Parma, Italy*		12:10 - 12:20 (S09.5) **Stimulating short food supply chains (fruit, vegetables, traditional foods)-case study Romania** Denisa E. Duta, *National Institute of Research and Development for Food Bioresources IBA, Romania*	11:55 - 12:05 (S10.4) **Supporting a frozen fruit value chain of small farmers for optimising production, reducing environmental footprint and re-using data for certification and subsidies** Marianna Gkavrou, *NEUROPUBLIC SA, Greece*
	12:50 - 13:00 **Microwave and Radio frequency systems for the food industry** Alisa Doroshenko, *SAIREM, France*					12:20 - 12:30 (S09.6) **Embedding food safety considerations for water usage in food production systems** Kaye Burgess, *Teagasc, Ireland*	12:05 - 12:15 (S10.5) **A second chance for food surplus: a digital marketplace to promote circular economy and avoid food waste** Elisa Carloni, *University of Bologna, Italy*
						12:30 - 12:40 (S09.7) **'Soup-action' as an example of local campaign against the challenges of food systems during the pandemic.** Michał Janiak, *Institute of Animal Reproduction and Food Research, Poland*	12:15 - 12:25 (S10.6) **Collaborative Artificial Intelligence for Sustainable Manufacturing in the Food Industry** Juan S. Angarita-Zapata, *University of Deusto, Spain*
						12:40 - 12:50 (S09.8) **Synergies and value creation from losses and waste and efficient use of resources in the agri-food chain** Manuela Pintado, *Universidade Católica Portuguesa, Portugal*	12:25 - 12:50 **Round table discussion** Moderator: Katherine Flynn, *IFA – ISEKI-Food Association, Austria*
12:50 - 14:00	**Lunch | Poster Session 2 | Atrium and Presidents Terrace**						

Room	President Suite | Level 2
14:00 - 14:30	**Plenary Session 3: The role of ohmics in food safety** Chair: Dolores O'Riordan and James Lyng
14:00 - 14:30	**(PL3.1)** **Bringing molecular methods to bear on food safety** Colin Hill, *University College Cork, Ireland*
14:30 - 15:10	**Plenary Session 4: Awards and announcing EFFoST2023** Chair: Hugo de Vries
14:30 - 15:00	**Awards** • Lifetime Achievement Award and Science to Society Award, Hugo de Vries, President of EFFoST Board • EFFoST Student of the Year Awards, Hugo de Vries, President of EFFoST Board and Ralf Jakobi, *Cargill, Belgium* • GNT Young Scientist Award, Kai Rieneke, *GNT Group, Germany*
15:00 - 15:10	Announcement of EFFoST2023
15:10 - 15:50	**Big Afternoon Break | Poster Session 2 | Atrium and Presidents Terrace | *Sponsored by Nestlé***
Room	**President Suite | Level 2**
15:50 - 17:20	**Plenary Session 5: The role of food processing in achieving healthy and sustainable diets** Chair: Dolores O'Riordan
15:50 - 16:00	**(PL5.1)** Gert Meijer, *Nestle, Switzerland*
16:00 - 16:10	**(PL5.2)** Ciarán Forde, *Wageningen University, the Netherlands*
16:10 - 16:20	**(PL5.3)** Liisa Lahteenmaki, *Aarhus University, Denmark*
16:20 - 16:30	**(PL5.4)** Eileen Gibney, *University College Dublin, Ireland*
16:30 - 16:40	**(PL5.5)** Lilia Ahrné, *University of Copenhagen, Denmark*
16:40 - 17:20	Plenary Discussion
17.20 - 17:30	**Conference Closing Remarks**
17:20 - 17:30	Hugo de Vries, *President of the EFFoST Board* Dolores O'Riordan and James Lyng, Conference Chairs, *University College Dublin, Ireland*

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Day 1: Monday 7 November 2022							
08:30-18:00	**Registration in the Atrium of AVIVA Stadium**						
09:00-12:00			08:45-12:10 Young EFFoST Day 2022		Opening NTP2022 & Sustainability of Food Supply for the future through Innovative NTP		
13:00-14:00	**EFFoST Welcome & Opening Session** | Presidents Suite				Emerging Non-thermal Processing Technology - Case Studies		
13:30-14:00	**Plenary Session 1: Future proofing the agri-food industry** | Presidents Suite						
14:00-15:45	Enhancing the sensory appeal of food	The Internet of Things for Food	Sensor technology to enhance food quality	Supporting consumer choices and preferences: technologies to help consumer decisions	Role of NTP in future foods from alternative sources for an increasing global population	Workshop: Upload your scientific work to an open repository	
15:45-16:15	**Refreshment Break** | Atrium and Presidents Terrace						
16:15-18:00	Food toxicology and allergenicity	Techniques to enhance energy efficiency & minimise environmental impact	Modelling, its role in quality by design	Bioactives and secondary metabolites: generation and characterisation	Consumer perception and regulatory considerations in relation to NTP		
18:00-20:00	**Welcome Reception** | Atrium and the Mezzanine						
Day 2: Tuesday 8 November 2022							
08:30-10:00	**Plenary Session 2: Meeting the future challenges of the food industry** | Presidents Suite						
10:00-10:30	**Refreshment Break | Poster Session 1** | Atrium and Presidents Terrace						
10:30-12:35	Identifying and preparing for emerging food safety risks	Consumers' attitudes to processed foods and desire for clean labels	Innovative and novel sustainable food processes	Formulation of foods to enhance their sustainability and/or nutritional value	Emerged Non-thermal Processing Technology - Commercial Case studies	Filling knowledge gaps on alternative proteins to accelerate the dietary shift	Improving Sustainability in Food Processing using Moderate Electric Fields (MEF)
12:35-13:45	**Lunch | Poster Session 1** | Atrium and Presidents Terrace					12:50-13:15 | Special session room 442 **Scientist careers in industry - How to be a subject matter expert in corporate organizations** Christoph Hartmann, Nestlé, Switzerland *Session sponsored by Nestlé*	
13:45-15:50	Bioinformatics and its role in food safety, hygienic design & contamination control	Advances and challenges in alternative proteins	Advances in food packaging to safeguard food and the environment	Consumer trends and responses to emerging and future foods	How will nonthermal technologies play a part in future local and global food safety and security	The INGREEN journey from agrifood sidestream to bio-obased products	Global Harmonization Initiative - available, sustainable, healthy food for the future
15:50-16:20	**Refreshment Break | Poster Session 1** | Atrium and Presidents Terrace						
16:20-18:05	Session 17: Emerging technologies for the rapid detection of food safety issues	Session 18: Designing and producing foods to meet future challenges	Approaches to minimise water use and water waste	Robotics, automation and control of food processes	Scaleup, Digital Twins and Modelling of Non-thermal Processing Technologies	Aquaculture and Fisheries sidestream proteins and bioactives as ingredients	Creating transparency from farm to fork for trust and a healthier food system
19:00-22:00	**Conference Dinner** | Guinness Storehouse						
Day 3: Wednesday 9 November 2022							
08:30-10:35	Protecting the food chain, biosecurity, food fraud and authenticity	Emerging technologies for valorising side streams, food waste & by products	Engineering food structures to enhance nutrient quality and bioavailability	Dietary recommendations - sustainable healthy diet, current & future policies	Meeting future consumer demands for quality, nutritious and healthy foods with NTP	How to make food nutrition security data FAIRer: an introduction to FNS-Cloud	Predictive modelling tools to evaluate the effects of climate change on food safety
10:35-11:05	**Refreshment break | Poster Session 2** | Atrium and Presidents Terrace						
11:05-12:50	Novel Thermal Technologies	Emerging technologies for valorising side streams, food waste & by products	Formulation of foods to enhance their sustainability and/or nutritional value	The role of foodservice & food retailers in satisfying sustainable healthy diets	Panel Discussion on Future of non-thermal technologies & Closing Address	Shaping our Future Sustainable Food Systems	Innovations for food producers and food SMEs
12:50-14:00	**Lunch | Poster Session 2** | Atrium and Presidents Terrace						
14:00-14:30	**Plenary Session 3: The role of ohmics in food safety** | Presidents Suite						
14:30-15:10	**Plenary Session 4: Awards and announcing EFFoST2023** | Presidents Suite						
15:10-15:50	**Big Afternoon Break | Poster Session 2** | Atrium and Presidents Terrace | *Sponsored by Nestlé*						
15:50-17:20	**Plenary Session 5: The role of food processing in achieving healthy and sustainable diets** | Presidents Suite						