

Programme



# MiFFI

3<sup>rd</sup> International Conference on  
**Microbial Food and  
Feed Ingredients**

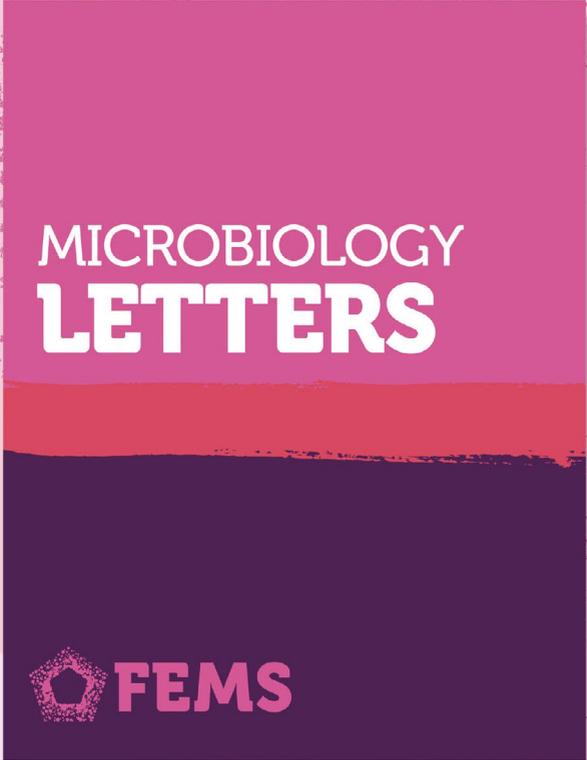
19 - 21 April 2023  
Copenhagen · Denmark

[www.miffi.org](http://www.miffi.org)  
#MIFFI2023

# MIFFI THEMATIC ISSUE 2023

Edited by  
**Egon Bech Hansen,**  
**Dennis Sandris Nielsen,**  
**and Gisèle LaPointe**

It is our pleasure to announce that we are creating a third thematic issue on "Microbial Food and Feed Ingredients" in collaboration with the Federation of European Microbiological Societies. We encourage you to submit your contribution (Research Letters or MiniReviews) before the 1st of October 2023 to *FEMS Microbiology Letters*. The thematic issue will be made free to read for everyone for 3 months and the content will get dedicated promotion by FEMS and their publisher Oxford University Press. We look forward to receiving your exciting papers!



**MICROBIOLOGY  
LETTERS**

 **FEMS**

Read the previous two MiFFI thematic issues and the current call for papers at  
**[academic.oup.com/femsle](https://academic.oup.com/femsle)**



Federation of European  
Microbiological Societies

**MIFFI**



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# Organization

## The Scientific Committee

**Dennis Sandris Nielsen**

Department of Food Science,  
University of Copenhagen, Denmark (Chair)

**Christel Thea Jørgensen**

Bactolife, Denmark

**Egon Bech Hansen**

National Food Institute,  
Technical University of Denmark, Denmark

**Fergal P. Rattray**

Novozymes, Denmark

**Gisèle LaPointe**

Department of Food Science,  
University of Guelph, Canada

**Herwig Bachmann**

VU University Amsterdam/NIZO,  
The Netherlands

**Ildar Nisamedtinov**

Lallemand, Estonia

**Irina Borodina**

Novo Nordisk Foundation Center  
for Biosustainability,  
Technical University of Denmark, Denmark

**Karsten Kragh**

IFF Health and Biosciences, Denmark

**Lotte Bach Larsen**

Department of Food Science,  
Aarhus University, Denmark

**Ole Højberg,**

Department of Animal Science  
Aarhus University, Denmark

**Rosa Aragão Börner**

Nestlé Research, Switzerland

**Svend Laulund**

Chr. Hansen A/S, Denmark

# Welcome

MiFFI 2023 is the 3rd International Conference on Microbial Food and Feed Ingredients in Copenhagen, Denmark. I must admit that I truly enjoyed the first two MiFFI's. I am thus delighted to welcome you to join old and new colleagues, fellow researchers, and perhaps future collaborators at this year's conference.

We are excited once again to gather a great variety of participants as MiFFI aims at bridging the gap between academia and industry to share scientific results, discuss current developments, push the regulatory agenda and foster the microbial food and feed ingredients community. It has been fun identifying the best speakers for the 4 plenary and 8 parallel sessions on exciting scientific topics which forms the core of MiFFI 2023.

## Topics overview

- › Microbially derived bioactive compounds
- › Enzymes for food and feed applications
- › Microbial feed ingredients for improved animal performance
- › The human and animal microbiome and health
- › Plant-based fermented foods
- › Applications of cultures, enzymes, and metabolites
- › Precision fermentation
- › Microbial foods

## Plenary sessions

- › Integration of multiomics data for microbiome studies
- › Probiotics for today and for the future
- › Regulation of GMOs in EU now and in the future
- › Trajectories towards sustainable and healthy foods

The topics are addressed from different angles of functionality, safety, and regulatory aspects and we hope this will give you the opportunity to be inspired, to join discussions, and to expand your network.

We also have the pleasure to announce that another joint thematic issue on Microbial Food & Feed Ingredients will be published with FEMS Journals (Federation of European Microbiological Societies). We therefore encourage you to submit your manuscripts (full papers and/or reviews), before the 1st of October 2023. We look forward to receiving your papers!

Furthermore, we have arranged some exciting social events, so you will get a chance to network and mingle with colleagues and peers from your field. We hope you will enjoy the conference and your stay in Copenhagen!

On behalf of the Scientific Committee,

### Conference Chair

**Professor Dennis Sandris Nielsen**

University of Copenhagen, Denmark.



# General Information

## Conference website

www.miffi.org

## Conference venue

### Marmorhallen Frederiksberg Campus

University of Copenhagen

Thorvaldsensvej 40

1871 Frederiksberg

## Conference language

The conference will be held in English.

## Name badges

All participants and exhibitors must wear their name badge in the conference area at all times. If you have purchased a dinner ticket it is printed on the back of your badge.

## Lunch and coffee breaks

Lunch and coffee is available in the exhibition area. Please see programme for exact time of breaks.

## Poster session

The poster area is located in a room next to the registration stand in the Marble Hall. Please place posters in the room during the morning break at 10:30 on Thursday 20 April.

## Wifi Free

WiFi is provided throughout the venue by logging on to "KU Guest" and creating your own account.

## Meeting room

A meeting room is available at room A2-70.01.

## Speaker information

Please bring your presentation on a USB stick to the session room in a break before your session starts. A technician will be present to assist in the upload, if necessary. All presentations will be deleted after the conference in order to secure that no copyright issues will arise at the end of the conference.

## Mobile phones

All mobile phones must be on silent mode during the sessions. We encourage you to share pictures and experiences from the conference with colleagues - both in person and on social media, but please show consideration for the people in your photographs when you share them.

## Social media

Follow MiFFI – International conference on Microbial Food and Feed Ingredients on LinkedIn or Twitter. Please use #MiFFI2023 when posting about the conference.

## Conference secretariat

### CAP Partner

Nordre Fasanvej 113

DK-2000 Frederiksberg

Denmark

Tel.: +45 70 20 03 05

info@cap-partner.eu

www.cap-partner.eu

## Social programme

### Welcome reception

**Time** 19 April 2023 at 17.00 – 19.00

**Place** Marble Hall and room  
A2-70.02, Conference venue

*(included in the registration fee)*

### Conference dinner

**Time** 20 April 2023 at 19.00 – 22.00

**Place** Vandværket, Rabarbervej 2,  
2400 Copenhagen NV

*(not included in the registration fee)*

# Programme

Wednesday, 19 April 2023

17:00-19:00	<b>Registration</b>	Marble Hall
17:30-18:00	<b>Welcome and introduction</b> by Egon Bech Hansen, Professor at DTU, Denmark and member of MiFFI Scientific Committee Presentation: Tusen Vin – A tale of a Danish Wine and Cider Adventure by co-owner of Tusen Vin, Sofie Saerens, bioengineer and yeast geek!	Room A2-70.02
18:00-19:00	<b>Cider tasting from Tusen Vin and fingerfood</b>	Marble Hall

## Thursday, 20 April 2023

08:30	<b>Registration &amp; Coffee</b>	Marble Hall
09:30-10:30	<b>Plenary session I</b>	Room A2-81.01
09:30	Welcome - Opening ceremony	<b>Chair: Dennis Sandris Nielsen,</b> Department of Food Science, University of Copenhagen, Denmark
09:45	<b>Integration of Multiomics data for Microbiome studies</b>	<b>Morten Arendt Rasmussen,</b> Professor in Computational Food and Health Science, Microbiology and Fermentation, KU-FOOD and COPSAC
10:30	<b>Coffee Break &amp; Exhibition (Poster Mounting )</b>	Marble Hall
11:00-12:05	<b>Parallel sessions</b>	Room A2-81.01
<b>Session 1: Microbially derived bioactive compounds</b>		
11:00	Introduction	<b>Chairs: Dennis Sandris Nielsen,</b> Department of Food Science, University of Copenhagen, Denmark <b>and</b> <b>Rosa Aragão Börner,</b> Nestlé Research, Switzerland
11:05	Gut microbiota-derived metabolites in early life	<b>Henrik Munch Roager,</b> Associate Professor, University of Copenhagen
11:25	Insights into microbial foods as provided by omics approaches	<b>Paul Cotter,</b> professor, Head Food Biosciences, Teagasc and CTO/co-founder SeqBiome Ltd
11:45	Fermentation-based process for the production of red beet color with an improved sustainability profile	<b>Philip Tinggaard Thomsen,</b> Technical University of Denmark
11:55	Water Kefir and Derived Pasteurized Beverages Modulate Gut Microbiota, and promotes immunomodulation	<b>Claire Boulangé,</b> Nestlé Research, Switzerland
12:05-13:00	<b>Lunch &amp; Exhibition</b>	Marble Hall

Wednesday, 19 April 2023

	<b>Thursday, 20 April 2023</b>	
<b>11:00-12:05</b>	<b>Parallel sessions</b>	<b>Room A2-70.04</b>
	<b>Session 2: Enzymes for food and feed applications</b>	
<b>11:00</b>	Introduction	<b>Chair: Karsten Kragh,</b> IFF Health and Biosciences, Denmark
<b>11:05</b>	Sustainability benefits beyond phosphorus and calcium with a novel phytase feed enzyme	<b>Charlotte Poulsen,</b> Sr. Principal Scientist, IFF Laureate, IFF Health and Biosciences
<b>11:25</b>	Enzymes and microorganisms in baking: Opportunities for synergies targeting processing and health	<b>Christophe Courtin,</b> professor, Laboratory of Food Chemistry and Biochemistry, University of Leuven, Belgium
<b>11:45</b>	Constraint-based metabolic modelling of cyanobacteria for branched-chain amino acids overproduction	<b>Amit Kugler,</b> Uppsala University, Sweden
<b>11:55</b>	Structural characterization of multi-domain, extracellular proteases from lactic acid bacteria	<b>Egon Bech Hansen,</b> Technical University of Denmark

INFORMATION

PROGRAMME

FLOORPLAN

POSTER OVERVIEW

INDUSTRY

MIFFI 2025

# Programme

Thursday, 20 April 2023

<b>12:30-13:00</b>	<b>Industry Symposia LALLEMAND</b>	<b>Room A2-81.01</b>
	Meeting the new needs of the probiotic industry with yeast-based fermentation nutrients	<b>Speaker: David Guerrand,</b> Ph.D, Biotech Business Director, Lallemand Bio-Ingredients
<b>13:00-14:00</b>	<b>Poster Session</b>	
<b>14:00 -15:05</b>	<b>Parallel sessions</b>	<b>Room A2-81.01</b>
	<b>Session 3: Microbial feed ingredients for improved animal performance</b>	
<b>14:00</b>	Introduction	<b>Chair: Christel Thea Jørgensen,</b> Bactolife, Denmark
<b>14:05</b>	Stabilization of the healthy piglet gut microbiome using Binding Proteins	<b>Sandra Wingaard Thrane,</b> Bactolife, Denmark
<b>14:25</b>	Turning sawdust into nutritious feed for aquaculture	<b>Petri-Jaan Lahtvee,</b> Assoc. Professor, Tallinn University of Technology
<b>14:45</b>	Fecal viromes depleted of enveloped viruses efficiently treats Clostridioides difficile-associated diarrhea in a murine model	<b>Torben Sølbeck Rasmussen,</b> University of Copenhagen
<b>14:55</b>	Fermented Spirulina as a potential bioactive and nutritional food ingredient	<b>Polona Jamnik,</b> University of Ljubljana, Biotechnical Faculty
<b>15:05-15.35</b>	<b>Coffee Break &amp; Exhibition</b>	<b>Marble Hall</b>
<b>15:35-17.00</b>	<b>Plenary session II</b>	<b>Room A2-81.01</b>
	<b>Probiotics for today and for the future</b>	
<b>15.35</b>	Introduction	<b>Chairs: Dennis Sandris Nielsen</b> Department of Food Science, University of Copenhagen, Denmark <b>Egon Bech Hansen</b> National Food Institute, Technical University of Denmark
<b>15:40</b>	Reverse translating the ketogenic diet for live biotherapeutic product development for the treatment of developmental epilepsies	<b>Christopher Reyes,</b> PhD, CEO, Bloom Science, USA
<b>16:10</b>	The future of symbiotics. How Microbiome science is playing an important role throughout life	<b>Dr Anja Wellejus,</b> Department Manager, Chr Hansen, Denmark
<b>16:40-17.00</b>	<b>Discussion</b>	
<b>19:00-22.00</b>	<b>Conference Dinner: Vandværket, Rabarbervej 2, 2400 Copenhagen NV</b> <i>NB: Conference Dinner ticket must be purchased separately.</i>	

<b>14:00 -15:05</b>	<b>Parallel sessions</b>	<b>Room A2-70.04</b>
	<b>Session 4: The human and animal microbiome and health</b>	
<b>14:00</b>	Introduction	<b>Chair: Dennis Sandris Nielsen</b> Department of Food Science, University of Copenhagen, Denmark
<b>14:05</b>	Transplantation of maternal feces-filtrates to neonatal pigs reduces post-weaning diarrhea	<b>Thomas Thymann,</b> MSc, DVM, PhD, Professor, Section for Comparative Pediatrics and Nutrition, Department of Veterinary and Animal Science, University of Copenhagen
<b>14:25</b>	How micronutrients supplementation indicates improved anaerobicity of the gut lumen	<b>Dr. H.J.M. Harmsen,</b> Associate Professor, Department of Medical Microbiology and Infection prevention, University Medical Center Groningen
<b>14:45</b>	The effect of colonic pH on microbial activity and metabolite production using common prebiotics as substrates: an in vitro study	<b>Zhuqing Xie,</b> University of Copenhagen
<b>14:55</b>	Supplementation with five human milk oligosaccharides changes the microbiome of formula-fed infants and brings microbial development closer to that of breastfed infants	<b>Andrea Holst,</b> Chr Hansen, Denmark

9:00-10.15	<b>Plenary session III</b>	<b>Room A2-81.01</b>
	<b>Regulatory affairs: What does the EU GMO regulation need to be fit for purpose for use of microorganisms?</b>	
09:00	Introduction	<b>Chair: Svend Laulund</b> Chr. Hansen A/S, Denmark
09:05	Opportunities by genome editing technologies for food cultures	<b>Fabio Dal Bello</b> , PhD, Scientific Director Sacco System, Chair of the regulatory working group of EFFCA
09:25	Need for an update of the EU GMO legislation with regard to microorganisms obtained with new genomic techniques	<b>Jens Litske Petersen</b> , Special Adviser, PhD, Ministry of Food, Agriculture and Fisheries, Danish Veterinary and Food Administration
09:45	The Commission's work on new genomic techniques	<b>Sirkku Heinimaa</b> , Deputy Head of Unit, DG SANTE, European Commission
10:05	<b>Discussion</b>	
10:15-10:45	<b>Coffee Break &amp; Exhibition</b>	<b>Marble Hall</b>
10:45	<b>Parallel sessions</b>	<b>Room A2-81.01</b>
	<b>Session 5: Plant-based fermented foods</b>	
10:45	Introduction	<b>Chairs: Dennis Sandris Nielsen</b> Department of Food Science, University of Copenhagen, Denmark <b>and</b> <b>Herwig Bachmann</b> VU University Amsterdam/NIZO, The Netherlands
10:50	Controlling microbial contaminants in plant-based foods	<b>Dr Marjon Wells-Bennik</b> , NIZO Food Research, Ede, The Netherlands
11:10	Next generation of plant-based food – improved by fermentation	<b>Dr Biljana Bogicevic</b> , Group Leader and Expert, Technical Microbiology, Nestlé Research
11:30	Is there life in plant-based yogurt alternatives?	<b>Ene Viiard</b> , TFTAK, Estonia
11:40	HybPi-Cheese - a possibility for animal protein reduction without losing original product properties	<b>Ueli von Ah</b> , Agroscope, Switzerland



11:50	<b>Industry Symposia SAMPLIX</b>	<b>Room A2-81.01</b>
	<b>High-throughput screening in droplets</b>	<b>Speakers:</b> <b>Dr Peter Mouritzen</b> , VP Application & Market Development at Samplix <b>Dr Volkan Besirlioglu</b> , Schwaneberg Group, RWTH Aachen University <b>Dr Tatyana Eleanor Saleski</b> , DTU – The Novo Nordisk Foundation Center for Biosustainability
12:20-12:50	<b>Lunch &amp; Exhibition</b>	<b>Marble Hall</b>
12:50-13:30	<b>Poster Session</b>	
13:30-14:35	<b>Parallel sessions</b>	<b>Room A2-81.01</b>
	<b>Session 7: Precision fermentation</b>	
13:30	Introduction	<b>Chairs: Lotte Bach Larsen</b> , Department of Food Science, Aarhus University, Denmark <b>and Irina Borodina</b> , Novo Nordisk Foundation Center for Biosustainability, Technical University of Denmark
13:35	Challenges and bottlenecks in precision fermentation of milk proteins	<b>Peter Ruhdal</b> , Professor, Technical University of Denmark
13:55	High-yield production of human milk oligosaccharides using engineered <i>Escherichia coli</i>	<b>Dr Katja Parschat</b> , Head of HMO R&D at the Chr. Hansen HMO GmbH
14:15	Modular metabolic engineering and synthetic coculture strategies for the production of aromatic compounds in yeast	<b>Huadong Peng</b> , The Novo Nordisk Foundation Center for Biosustainability, Technical University of Denmark
14:25	Growth rate and limiting substrate define the nutritional composition and cell size of microbial biomass for food applications	<b>Myrsini Sakarika</b> , Ghent university, Belgium
14:35-14:45	<b>Quick Break – Go to room A2-81.01</b>	
	<b>Closing plenary session IIII</b>	<b>Room A2-81.01</b>
	<b>Introduction</b>	<b>Dennis Sandris Nielsen</b> , Department of Food Science, University of Copenhagen, Denmark
14.45-15.15	<b>Trajectories towards sustainable and healthy foods</b>	<b>Olivier Jolliet</b> , Professor of Quantitative Sustainability Assessment, DTU-Sustain department of the Technical University Denmark
15:15-15:25	<b>Closing Session</b>	<b>Room A2-81.01</b>
	<b>Closing Remarks and Poster Prizes</b>	

<b>11:50</b>	<b>Industry Symposia BASE CLEAR</b>	<b>Room A2-70.04</b>
	The Power of Microbial Genomics: Transforming Food and Feed Production through Regulatory Expertise	<b>Speaker: Dennis Kap,</b> Product Manager Regulatory Affairs.
<b>13:30-14.35</b>	<b>Parallel sessions</b>	<b>Room A2-70.04</b>
	<b>Session 8: Microbial foods</b>	
<b>13:30</b>	Introduction	<b>Chair: Rosa Aragão Börner,</b> Nestlé Research, Switzerland
<b>13:35</b>	Fungi fermentation - Creating the next generation food	<b>Ramkumar Nair,</b> PhD, Founder & CEO of Mycorena
<b>13:55</b>	Innovative microalgae production, processing, and food applications	<b>Alexander Mathys,</b> Professor, Sustainable Food Processing, ETH Zurich
<b>14:15</b>	GastronOmics of Pleurotus ostreatus mycelium as a novel food	<b>Loes Van Dam,</b> Technical University of Denmark
<b>14:25</b>	Microbial protein from recovered nitrogen: nutritional quality, safety and feasibility assessment	<b>Lotte Van Peteghem,</b> Ghent university, Belgium

# INNOVATION SCHEME FOR FERMENTATION NUTRIENTS

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OF LARGE-SCALE  
FERMENTATION

**FM902  
LD00**

# Floor Plan



## Partners & Sponsors

A2	Samplix (Partner)
A3	Base Clear (Partner)
A4	Lallemand Bio-Ingredients (Partner)
B4	Angel yeasts
C3	SBI

C4	Constant systems
D1	Symcel
D2	EFFCA
D5	Ramcon
D6	Sani Membranes

# Poster Overview

No.	Title	Type	Presenter	Authors
1	Ant yogurt: fermentation and coagulation of milk by the ant holobiont	Poster	Verónica Ramos Viana	Verónica Ramos Viana   Veronica Sinotte   Diego Prado   Leonie Johanna Jahn   Nabila Rodríguez Valerón   Esther Merino Velasco   Sevgi Sirakova Mutlu   Rasmus Munk   Morten O. A. Sommer   Robert R. Dunn
2	Specific microbiome signatures allow to trace PDO Mozzarella cheese geographical origin	Poster	Raffaele Magliulo	Raffaele Magliulo   Vincenzo Valentino   Alessia Esposito   Danilo Ercolini   Francesca De Filippis
3	Genomic characterization of Lactic Acid Bacteria strains for the use as postbiotics	Poster	Chiara Maria Calvanese	Chiara Maria Calvanese   Francesca De Filippis
4	The stressostat: a novel approach in adaptive laboratory evolution to improve end-product resistance	Poster	Sylviani Hartono	Sylviani Hartono   Marlisa F. A. Meijerink   Tjakkoo Abee   Eddy J. Smid   Oscar van Mastrigt
5	Improving sensitivity of detection by monitoring optical density during microbial growth in raw material with microplate reader	Poster	Cleide Møller	Cleide Møller   Trine Markussen   Christine Dao Pedersen   Rikke Eriksen   Michael Wainoe   Mai Faurshou
6	Advanced bioinformatics analysis to enhance microbiome data mining	Poster	Eline Klaassens	eline klaassens   Paola Lisotto   Radhika Bongoni
7	Microbiome of dairy plants harbor potential probiotic strains and can be used as a marker of cheese geographical origin	Poster	Francesca De Filippis	Francesca De Filippis   Vincenzo Valentino   Raúl Cabrera-Rubio   Giuseppina Sequino   Niccolò Carlino   José Cobo Díaz   Coral Barcenilla   Narciso Quijada   Carlos Sabater   Martin Wagner   Abelardo Margolles   Avelino Álvarez Ordóñez   Nicola Segata   Paul Cotter   Danilo Ercolini
8	A reproducible enteric phage community improves blood glucose regulation in an obesity mouse model	Poster	Xiaotian Mao	
9	Versatile Lactic Acid Bacteria Improve Texture in Both Fermented Milk and Soybean Matrices	Poster	Stjepan Kracun	Vera Kuzina Poulsen   Elahe Ghanei Moghadam   Stjepan Kracun   Birgit Albrecht Svendsen   Wioleta Marta Nielsen   Gunnar Oregaard   Anders Krarup
10	Metabolic engineering of Rhodotorula toruloides for astaxanthin production using Golden Gate Assembly Platform	Poster	Inna Lipova	Inna Lipova   Paola Monteiro de Oliveira   Gabriel Luz Chaves   Nemailla Bonturi   Petri-Jaan Lahtvee
11	Suitability of Yarrowia for food applications.	Poster	Jonathan Dahlin	Jonathan Dahlin   Irina Borodina
12	Optimization of cultivation strategies to isolate next generation probiotic strains from human gut	Poster	Alessia Esposito	Alessia Esposito   Giuseppina Sequino   Danilo Ercolini   Francesca De Filippis

No.	Title	Type	Presenter	Authors
13	plant-based Lactic acid bacteria isolation from spontaneously fermented foods by using a newly modified medium	Poster	Hang Xiao	Hang Xiao   Egon Bech Hansen   Claus Heiner Bang-Berthelsen   Guillermo Molina   Miguel Tovar
14	Microalgae Schizochytrium limacinum as a source of omega-3 fatty acids	Poster	Anastasiia Vozniuk	Anastasiia Vozniuk   Olena Krasovska   Yuriy Pynyaha
15	Identifying rational strategies for reducing post-acidification by lactobacilli through genome-scale metabolic modeling	Poster	Martin Holm Rau	Martin Holm Rau   Solvej Siedler   Susanne Bidstrup   Ahmad Zeidan
16	Fermented Foods as a source of beneficial microbes: a meta-analysis	Poster	Vincenzo Valentino	Vincenzo Valentino   Raffaele Magliulo   Danilo Ercolini   Francesca De Filippis
17	Valorization of microbial protein fermentation through proteomics, bioinformatics, and integrated, data-driven membrane process design for isolation of bioactive proteins/enzymes.	Poster	Søren Storck Hansen	Søren Storck Hansen   Morten Lykkegaard Christensen   Simon Gregersen Echers   Theis Sommer   Eleni Ntokou
18	Plant-based cheese analogs: insights about products on the market	Poster	Caroline Kothe	Isabela Jaeger   Pierre Renault   Joshua Evans   Jeverson Frazzon   Caroline Kothe
19	The Lab Simulator of Milk Fermentation: Continuous Monitoring of Acidification Delay Caused by Phage Contamination	Poster	Göksen Arik	Göksen Arik   Dorentina Humolli   Yuandong Sha   Paulina Deptula   Dennis Sandris Nielsen   Åsmund Rinnan   Finn Kvist Vogensen
20	High-Throughput Screening: an efficient tool to redesign blends suitable for plant-based foods	Poster	Federica Biolcati	Federica Biolcati   Patrizia Buldo   Fabio Dal Bello   Federica Volontè
21	Promoting Innovation of ferMENTedFOods (PIMENTO) - COST Action CA20128	Poster	Antonio Del Casale	Antonio Del Casale
22	TITAN project - Digital Innovation pilots for transforming the food system: Focus on 3 pilots on microbes	Poster	Antonio Del Casale	Antonio Del Casale
23	Synergetic effect of the coculture of Leuconostoc pseudomesenteroides and Lactococcus lactis, isolated from insects, on the generation of plant-based dairy alternatives based on soy, pea, oat and potato drinks	Poster	Guillermo Eduardo Molina	Guillermo Eduardo Molina   Claus Heiner Bang-Berthelsen   Hang Xiao
24	Microbial conversion of syngas to single cell protein: The role of carbon monoxide	Poster	Yufeng Jiang	Yufeng Jiang   Yifeng Zhang
25	Microbial synthesis of bovine gelatin in B. subtilis for potential food applications	Poster	Anargyros (Argyris) Alexiou	Anargyros (Argyris) Alexiou   Carsten Jers   Ivan Mijakovic   Lei Yang

No.	Title	Type	Presenter	Authors
26	Feeding fermented rapeseed and seaweed (EP199) to sows alters gut microbiome composition and pig production parameters	Poster	Dennis Sandris Nielsen	Nilay Budeyri Gokgoz   Rikke Matthiesen   Morten Arendt Rasmussen   Lukasz Krych   Yan Hui   Pia Sørensen   Ninfa Rangel Pedersen   Dennis Sandris Nielsen
27	Development of a model system for monitoring savory flavor from 2-methyl-3-furanthiol (MFT) in yellow peas	Poster	Sylvester Holt	Sylvester Holt   Alberthe Nielsen   Héloïse Tatreux   Mikael Petersen   Wender Bredie
28	Exopolysaccharides from lactic acid bacteria as functional microbial food ingredients	Poster	Menşure Elvan	Menşure Elvan   Hayriye Harsa
29	From Invention to Innovation: Industrial Perspective on Shortening Time To Market in Precision Fermentation Space	Poster	Vratislav Stovicek	
30	Processing of vegetable proteins suitable for food production	Poster	Karin Bjerre	
31	Fermented rapeseed and soybean in combination with macro algae inhibits human and livestock pathogenic bacteria.	Poster	Frederik Børgner Beck	
32	Fermentation-based process for the production of red beet color with an improved sustainability profile	Oral (Session 1)	Philip Tinggaard Thomsen	Philip Tinggaard Thomsen   Irina Borodina
33	Water Kefir and Derived Pasteurized Beverages Modulate Gut Microbiota, and promotes immunomodulation	Oral (Session 1)	Rosa Aragão Börner	
34	Constraint-based metabolic modelling of cyanobacteria for branched-chain amino acids overproduction	Oral (Session 2)	Amit Kugler	Amit Kugler   Karin Stensjö
35	Structural characterization of multi-domain, extracellular proteases from lactic acid bacteria	Oral (Session 2)		Lise Friis Christensen   Magnus Høie   Claus Heiner Bang-Berthelsen   Paolo Marcatili   Egon Bech Hansen
36	Fecal viromes depleted of enveloped viruses efficiently treats Clostridioides difficile-associated diarrhea in a murine model	Oral (Session 3)	Torben Sølbeck Rasmussen	Torben Sølbeck Rasmussen   Sarah Forster   Sabina Larsen   Alexandra Von Münchow   Kaare Tranæs   Anders Brunse   Josue Castro-Mejia   Signe Adamberg   Axel Hansen   Kaarel Adamberg   Camilla Hansen   Dennis Sandris Nielsen
37	Fermented Spirulina as a potential bioactive and nutritional food ingredient	Oral (Session 3)	Polona Jamnik	Polona Jamnik   Nik Mahnič   Lea Pogačnik da Silva   Barbara Jeršek   Jasmina Masten Rutar   Mojca Korošec   Nives Ogrinc   Nataša Poklar Ulrih
38	The effect of colonic pH on microbial activity and metabolite production using common prebiotics as substrates: an in vitro study	Oral (Session 4)	Zhuqing Xie	Zhuqing Xie   Weiwei He   Alex Gobbi   Hanne Bertram   Dennis Sandris Nielsen

No.	Title	Type	Presenter	Authors
39	Supplementation with five human milk oligosaccharides changes the microbiome of formula-fed infants and brings microbial development closer to that of breastfed infants	Oral (Session 4)	Andrea Holst	Andrea Holst   Stina Jensen   Gerben Hermes   Adam Baker   Katja Parschat   Pernille Myers
40	Is there life in plant-based yogurt alternatives?	Oral (Session 5)	Ene Viiard	Natalja Part   Jekaterina Kazantseva   Aili Kallastu   Helen Vaikma   Sirli Rosenvald   Dmitri Pismennõi   Tiina Krisciunaite   Ene Viiard
41	HybPi-Cheese - a possibility for animal protein reduction without losing original product properties	Oral (Session 5)	Ueli von Ah	Ueli von Ah   Elias Zwyszig   Florian Loosli   Barbara Walther   Barbara Guggenbühl   Hans-Peter Bachmann   Helena Stoffers
42	Growth and metabolic profiling of Lactiplantibacillus plantarum in cheap alternative growth media	Oral (Session 6)	Sigurd Christensen	Sigurd Christensen
43	Exploring the potential antihypertensive properties of selected Lactic Acid bacteria and their incorporation in yogurt production	Oral (Session 6)	Zeynep Ağırbaşı	Zeynep Ağırbaşı   Sebnem Harsa
44	Modular metabolic engineering and synthetic coculture strategies for the production of aromatic compounds in yeast	Oral (Session 7)	Huadong Peng	Huadong Peng
45	Growth rate and limiting substrate define the nutritional composition and cell size of microbial biomass for food applications	Oral (Session 7)	Myrsini Sakarika	Myrsini Sakarika   Frederiek-Maarten Kerckhof   Lotte Van Peteghem   Alexandra Pereira   Tim Van Den Bossche   Robbin Bouwmeester   Ralf Gabriels   Delphi Van Haver   Barbara Ulçar   Lennart Martens   Francis Impens   Nico Boon   Ramon Ganigué   Korneel Rabaey
46	GastronOmics of Pleurotus ostreatus mycelium as a novel food	Oral (Session 8)	Loes van Dam	Loes van Dam   Pablo Cruz-Morales   Nabila Rodriguez   Ana Calheiros de Caralho   Diego Prado   Line Pedersen   Morten Sommer   Leonie Jahn
47	Microbial protein from recovered nitrogen: nutritional quality, safety and feasibility assessment	Oral (Session 8)	Lotte Van Peteghem	Lotte Van Peteghem   Silvio Matassa   Korneel Rabaey   Myrsini Sakarika



# Industry

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**LALLEMAND**

LALLEMAND BIO-INGREDIENTS

# Industry Symposium A

20 April, 12:30–13:00

Room A2–81.01



**LALLEMAND BIO-INGREDIENTS**

## Meeting the new needs of the probiotic industry with yeast-based fermentation nutrients.

### Abstract

Until recently, the leading probiotics available to consumers were generally produced from a narrow range of microorganisms. Most recent advances in the knowledge of gut microbiota are changing this paradigm, and a much broader range of microorganisms is now being investigated and produced. While that change is opening new doors to new applications, it is also a challenge for the industry to produce those next-generation probiotics. Among the different constituents of the fermentation media, yeast-based nutrients have a strong impact on the microorganisms' yield and quality. Lallemand Bio-Ingredients is specialized in the development and production of yeast-based fractions and will present some recent developments addressing the new needs of the probiotic industry, with solutions to increase the biomass yield and its stability over freeze-drying.

### Speaker

**David Guerrand**

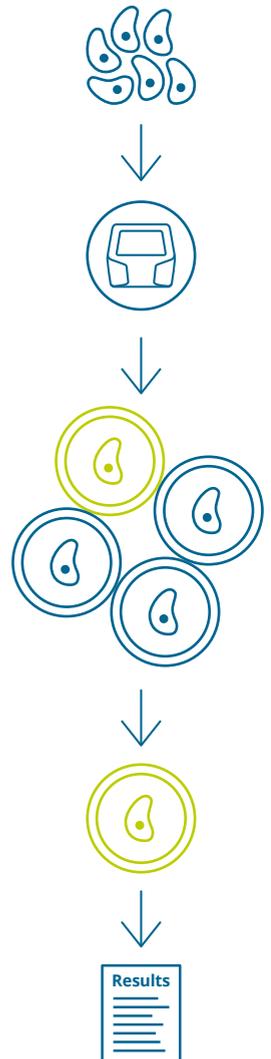
Ph.D, Biotech Business Director - Lallemand Bio-Ingredients

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## Join us

for our symposium  
 "High-throughput screening in droplets"  
 on Friday, **April 21 at 11:50** in room  
 A2-81.01 and visit booth **A2** to learn more.



## High-throughput screening in droplets

### Abstract

Join Samplix for a session focused on our novel technology, which improves the throughput and efficiency of the screening of enzymes and other molecules. First, Dr. Peter Mouritzen will describe the Xdrop® technology. Then Dr. Volkan Besirlioglu will talk about how his group uses Xdrop and flow cytometry to selectively enrich rare, active enzyme variants from a large cell library. Finally, Dr. Tatyana Eleanor Saleski will show how her group uses Xdrop and their GPCR-based biosensors for high-throughput screening for secondary metabolite production.

### Speakers

#### Dr. Peter Mouritzen

VP Application & Market Development at Samplix

#### Dr. Volkan Besirlioglu

Schwaneberg Group, RWTH Aachen University

#### Dr. Tatyana Eleanor Saleski

DTU – The Novo Nordisk Foundation Center for Biosustainability

# HOW CAN WE HELP YOU?



## 01 INGREDIENT DISCOVERY, CHARACTERISATION & APPROVAL



### 01. Microbial Ingredients

From discovery of novel microbial strains to regulatory approval

## 02 APPLICATIONS & PRODUCT DEVELOPMENT



### 02. Human Health

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03



### 03. Skin Health & Personal Care

Supporting testing and claims for skin care ingredients and formulations

04



### 04. Animal Health & Performance

Linking the animal microbiome to performance and sustainable farming

## 05 PRODUCTION & QUALITY CONTROL



### 05. Quality Solutions

Rapid microbial testing for the pharmaceutical and food industry



## The Power of Microbial Genomics: Transforming Food and Feed Production through Regulatory Expertise

### Abstract

We are at a turning point. Food and feed products ensure the prevention of disease, support health, and even provide solutions to climate change and biodiversity loss. Production of food and feed is no longer limited to simply meeting our required daily nutritional intake. Sophisticated (biological) ingredients now provide solutions to problems exceeding single issues. How do you decide between new strain discovery and expanding the field of product applications? How to use microbial genomics and metabolomics to define the safety of innovative products? How can the limitations that authorities must deal with and acknowledge provide a good regulatory framework for innovative companies? Can regulatory expertise transform and optimize your feed and food production processes? Dennis Kap will uncover the power of microbial omics and regulatory expertise for the feed and food industry.

### Speaker

**Dennis Kap**  
Product Manager Regulatory Affairs

# Industri Directory

## Partners

	<p><b>Samplix</b> www.samplix.com <span style="float: right;"><b>Booth no. A2</b></span></p> <p>Samplix ApS supports the life sciences and molecular engineering communities with unique microfluidics instruments that change how calls are analyzed. Xdrop and Xdrop Sort support microbial and mammalian cell analysis work by encapsulating individual cells in double-emulsion droplets for incubation, rapid and accurate functional population analysis, and sorting. This enables a true single-cell view of cells in rapid workflows suitable for biosynthesis and more.</p>
	<p><b>Base Clear</b> www.baseclear.com <span style="float: right;"><b>Booth no. A3</b></span></p> <p>BaseClear is a biotechnology company with strong expertise and experience in applied microbiology. With our state-of-the-art robotics and analysis equipment, including the latest sequencing technologies such as Illumina and Oxford Nanopore Technologies we offer a complete suite of microbial genomics services from metagenomics, microbiome analysis to microbial strain characterization services and culturomics. Being the preferred partner for many leading brands in various industries such as human health, personal care and animal nutrition in the Netherlands, in Europe and beyond, we support our clients in improving their processes and products, gaining approval and confirming claims.</p>
	<p><b>Lallemand Bio-Ingredients</b> www.bio-lallemand.com <span style="float: right;"><b>Booth no. A4</b></span></p> <p>We develop, produce and supply yeast-based solutions to optimize the industrial production and performance of a broad range of organisms (bacteria, yeasts, moulds, fungi and others). Lallemand Fermentation Nutrient Ingredients (FNI) portfolio addresses the needs of the biotechnology industry. Our range of products and technical expertise are combined to support the fast-growing demand in industrial microbiology-based companies.</p>

## Gold Sponsor

	<p><b>Angel yeasts</b> en.angelyeast.com <span style="float: right;"><b>Booth no. B4</b></span></p> <p>Angel can supply different fermentation nutrients such as yeast extract, yeast peptone, autolyzed yeast &amp; inactive yeast, which are widely used in the below applications.</p> <ul style="list-style-type: none"> <li>• Biopharma &amp; Diagnostics culture media</li> <li>• Food cultures &amp; Probiotics</li> <li>• Microbial Food &amp; Feed Bioingredients</li> <li>• Bio-agriculture</li> </ul>
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## Silver Sponsors

	<p><b>SBI</b> www.scientificbio.com <span style="float: right;"><b>Booth no. C3</b></span></p> <p>Scientific Bioprocessing, Inc. (SBI) is dedicated to pioneering digitally simplified bioprocessing by providing actionable insights from the lab to the production floor. With the DOTS platform, SBI offers a broad portfolio of state-of-the-art bioprocessing sensors and actuators as well as innovative DOTS software, for sensor control and data monitoring. Or in other words: One sensor platform to simplify your bioprocessing.</p>
	<p><b>Constant systems</b> constantsystems.com <span style="float: right;"><b>Booth no. C4</b></span></p> <p>Founded in 1989, Constant Systems Limited is now 33 years old and entering our fourth decade of operations we are still very much dedicated to the design, manufacturing and maintenance of our high-pressure cell disruption equipment which has built a reputation on reliability, reproducibility, efficacy and consistency.</p>

## Bronze Sponsors

	<p><b>Symcel</b> www.symcel.com <span style="float: right;"><b>Booth no. D1</b></span></p> <p>Symcel provides a novel cell-based assay tool for real-time biological activity measurements using isothermal microcalorimetry. Our solution, the calScreener™, delivers a phenotypic, metabolic readout in real-time. By directly measuring the heat produced those results from metabolic processes in the sample, you get an energy output measured in µW, providing new insight, not previously possible with traditional methods. Measurements are sample independent, simply place your sample in the calScreener™ and let it do the rest.</p>
	<p><b>EFFCA</b> www.effca.org <span style="float: right;"><b>Booth no. D2</b></span></p> <p>The European Food &amp; Fermentation Cultures Association - EFFCA - was formed in 1992. The vision of EFFCA is to support the growth and promote the use of food cultures at a global level. EFFCA cooperates, both within the European Union and globally, with a wide range of stakeholders and policymakers aiming at promoting the development of applications of food cultures.</p>
	<p><b>Ramcon</b> www.effca.org <span style="float: right;"><b>Booth no. D5</b></span></p> <p>RAMCON is a focused distributor with more than 80 employees in sales, support, and service. We focus on these three core areas and target the Industrial, Medical, Chemical and Life Science markets in the Nordic countries.</p>
	<p><b>Sani Membranes</b> www.sanimembranes.com <span style="float: right;"><b>Booth no. D6</b></span></p> <p>SANI Membranes is a Danish cleantech company and the inventor of the Vibro® technology. The Vibro® technology is used in biopharma, ingredients, food and dairy industries for filtration, separation, clarification and concentration. Primary applications are processing of all kinds of cell cultures, proteins, enzymes and separation of target molecules.</p>

# Save The Date

The Danish Microbiological Society  
**Annual Congress 2023**

13 NOVEMBER 2023  
COPENHAGEN · DENMARK

## Keynote speakers

**Morten Meldal**  
Professor,  
Nobel Prize in Chemistry, 2022,  
Department of Chemistry,  
University of Copenhagen

**Joakim Larsson**  
Professor, Institute of Biomedicine,  
University of Gothenburg

**Kimberly Ann Kline**  
PhD MPH, Professor,  
Department of Microbiology and  
Molecular Medicine,  
University of Geneva



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**2025**



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4<sup>th</sup> International Conference on  
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## Editor-in-Chief

Dr. Badal C. Saha  
National Center for Agricultural  
Utilization Research, USDA-ARS,  
Peoria, IL, USA

## Selected Special Issues

Biological Conversion of Biomass  
Residues and Waste Streams for the  
Sustainable Production of Biofuels  
and Bio-Based Products

Pigment Production in Submerged  
Fermentation

Flavor and Aroma in the Fermented  
Food

## Aims and Scope

- Fermentation processes and product development;
- Strain improvement;
- Bioprocess and metabolic engineering;
- Fermentation of food and beverages;
- Scaling up fermentation processes;
- Downstream processing of fermentation products;
- Microbial physiology and metabolism;
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