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Message from the Chair

Hello, Colleague!

I trust this finds you all in great health and spirits! With the eclipse of multiple lockdown periods now disappearing, traveling has resumed, giving us the opportunities to reunite with our professional peers, friends, and family. The 2022 Atlanta AOCS Annual Meeting was a great example!

We take this opportunity to sincerely appreciate the involvement of members of the [EAT Division](#), the generous contributions from sponsors, and the outstanding AOCS staff for a successful annual meeting in Atlanta. While our Vice-Chair, Filip Van Bockstaele, and his session chairs had put together an excellent EAT technical program, our Treasurer, Serpil Metin (outgoing), and Andrew Gravelle (incoming) did an awesome job with divisional finances. Sincere thanks to you all!

At the upcoming [2023 AOCS Annual Meeting & Expo](#) in Denver, Colorado, USA, we will have five EAT [sessions](#) featuring fundamental and applicational aspects of fat crystallization and complex food systems, along with recent hot topics on lipids for plant-based food. There are also two joint sessions with the Biotechnology and Lipid Oxidation and Quality divisions, along with a poster session.

AOCS has always been the perfect platform where the observational data from the industry meet the explanations from academia. I sincerely urge you all to submit your research for the upcoming annual meeting and let us all continue learning from each other!

The EAT Division does not exist without you, the esteemed members, and we encourage you to stay connected and reach out to the leadership team with any ideas, suggestions, and wishes you might have.

Kaustuv Bhattacharya

Chair, EAT Division, AOCS

Principal Designer, International Flavors & Fragrances

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Renew your AOCS membership



Thank you for being a part of the AOCS community! AOCS will continue to be your resource for learning about new technologies and creating collaborations. As an AOCS member, you have access to [member benefits](#) such as AOCS journals, INFORM magazine, and discounts to AOCS meetings and educational courses to help you on your professional journey.

[Renew your 2023 membership today.](#)

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Submit your research for the 2023 AOCS Annual Meeting & Expo



The [call for papers](#) for the [2023 AOCS Annual Meeting & Expo](#) is officially open!

The EAT program organizer, Filip Van Bockstaele, has been working with session chairs to create an impactful lineup of sessions that could feature your research. Take a look at a few highlights:

Soft Matter and Complex Food Structures

Multi-scale structuring of multicomponent foods and the impact on functionality, with particular focus on the role of surfaces and interfaces on relevant phenomena such as phase transitions, rheology, and structure formation. Examples include edible soft matter systems such as gels, emulsions, and foams. Industry-relevant topics include clean label formulations, natural ingredients, and optimized structure formulation.

Session chairs: Andrew J Gravelle, Assistant Professor, University of California Davis, USA; and Maya Davidovich, Assistant Professor, Head of Laboratory for Lipids and Soft Matter, Faculty of Biotechnology and Food Engineering, Technion, Israel

Lipid Solutions for Plant-based Applications

Alternative fats for animal-derived food product analogs. Encompasses basic science and development innovations regarding re-construction/quantification of fat flavor, adipose tissue mimetics, tribology, flavor delivery, and more.

Session chairs: Alejandro G Marangoni, Professor, Canada Research Chair, University of Guelph, Canada; and Stephanie Marty-Terrade, Expert Lipid, Nestlé, UK

Oxidation in Emulsions and Structured Systems

Joint Session with the Lipid Oxidation and Quality Division

Focus on understanding mechanisms of lipid oxidation in emulsions and structured systems and new strategies to prevent oxidation for healthier foods.

Session chairs: Betül Yesiltas, Researcher, Technical University of Denmark, Denmark; Hong-Sik Hwang, Research Chemist, USDA ARS NCAUR, USA; and Mitch Culler, Graduate Research Assistant, University of Massachusetts, Amherst, USA

Submit your abstract

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Expand your knowledge at your own pace to fit your busy schedule



High oleic oils: Development, properties, and uses

Featuring an impressive lineup of industry leaders—including Michael Eskin, involved in the development of canola oil—'[High oleic oils](#)' is a must-see course full of the latest research and innovations in the high oleic oils space.

Course registrants also receive 50% off the course's [namesake eBook](#).

[Get on-demand access.](#)



Chocolate science and processing: An applied perspective on how to process chocolate from bean to bar

By the time you buy it, your favorite chocolate bar has completed a long journey to reach your local grocery store. Silvana Martini and Steve Bernet from the Aggie Chocolate Factory share the entire process from start to finish with you in their [on-demand course](#).

Learn the ins and outs of chocolate creation, starting from the bean harvest, in 'Chocolate science and processing.'

[Get on-demand access.](#)

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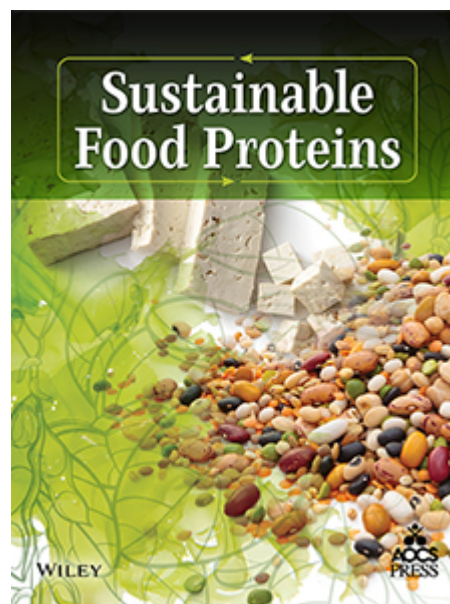
Submit an article to an all-new AOCS journal!

In November 2020, the AOCS executive board began germinating on an idea. At the time, more and more food and feed companies were entering the alternative proteins space, and proteins research was ballooning. The board realized a need for one place where anyone interested in this burgeoning field could find cutting-edge protein research.

Led by this mission, the executive board appointed a task force charged with making the journal a reality. After two years of nurturing the idea, and committing to the work of seeing it through, AOCS is proud to announce that the international, open-access journal, [Sustainable Food Proteins](#), is open for submissions.

The *Sustainable Food Proteins* scope will cover all aspects of sustainably-produced food proteins, including processing and extraction technologies, food structures and digestion, sensory, and nutritional and health impacts. More specifically, the journal editors are calling for papers on:

- Structures and functionality of alternative proteins
- Recombinant technologies for protein production (in bacteria, yeast, or plants)
- Cell culture-based production of animal protein
- Novel analytical techniques for protein characterization and functionality
- Food product formulations and product development with alternative protein ingredients
- Sensory and consumer aspects of protein foods
- Digestion and nutritional quality of alternative proteins and protein-based foods
- Sustainable protein-based ingredients that enable health and wellness in livestock, pets, and farmed fish



[Submit your paper to Sustainable Food Proteins today!](#)

Submit your paper

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Stay informed with *INFORM* magazine

Is it time to reconsider the role of saturated fats in the human diet?

Saturated fats and their possible adverse effects on human health have been discussed for a long time. This article highlighted current dietary recommendations on saturated fats and the recent findings on in vivo fat behavior. The recent findings showed that individual saturated fatty acids (SFA) and SFAs from different sources might affect human health differently. The article emphasized the importance of food matrix to prevent adverse effects on SFA, which should be noted while formulating new products.

[Read the article.](#)

Mimicking mother's milk

The milk fat globule membrane (MGFM), a tri-layer membrane of proteins and polar lipids, surrounds droplets of fat in breast milk. Since MGFM supplementation increase cognitive and brain development, companies have been looking for solutions to close the nutrition gap between infant formula and breast milk. Moreover, one of the recent solutions was MGFM obtained from other sources, such as cow milk. The article also mentions the recent research on the separation techniques of MGFM for industrial applications.

[Read the article.](#)



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Read journal articles curated for EAT Division members

The following four articles recently published in *JAOCS* and *Lipids* may be of particular interest to the members of the EAT Division.

Oleogels and bigels as alternatives to saturated fats: A review on their application by the food industry

Authors: Pedro M. Silva, Miguel A. Cerqueira, Artur J. Martins, Luiz H. Fasolin, Rosiane L. Cunha, António A. Vicente.

[Read the paper.](#)

Recent developments and prospects in the extraction, composition, stability, food applications, and *in vitro* digestion of plant oil bodies

Authors: Jia Hao, Xiaoyu Li, Qiuyu Wang, Wenwen Lv, Wenguan Zhang, Duoxia Xu.

[Read the paper.](#)

Relationship between the physical properties of butter and water loss during lamination

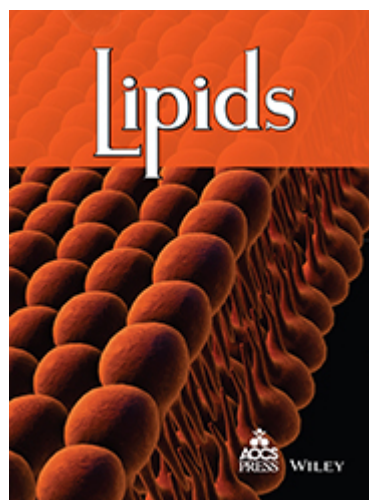
Authors: Annalisa Jones, Silvana Martini.

[Read the paper.](#)

Docosahexaenoic acid and arachidonic acid levels are correlated in human milk: Implications for new European infant formula regulations

Authors: Kathryn E. Hopperton, Michael A. Pitino, Kathryn Walton, Alex Kiss, Sharon L. Unger, Deborah L. O'Connor, Richard P. Bazinet.

[Read the paper.](#)



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Watch an open-access presentation on the AOCS YouTube channel

The [AOCS YouTube channel](#) contains a range of informational videos. Below is one presentation which may be of interest.

Reimagining Meat: Pathways for Scientists Focused on Fats and Oils in the Alternative Protein Field

Dr. Prieria Panescu, Senior Scientist, Plant-Based Specialist at The Good Food Institute
Dr. Alejandro Marangoni, Professor and Canada Research Chair at the University of Guelph

This presentation compared the impact of alternative meats and conventional meat on the environment. The researchers also provided insightful comments on the taste and price gaps between alternative and conventional meats. To achieve better meat alternatives, this webinar discussed the current situation and promising methods for the food industry and researchers.

[Watch the presentation.](#)

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AOCS continues to host [webinars](#), and past events are archived and available on demand in the [AOCS Webinar Library](#). Below are three presentations which may be of interest.

Upcoming webinar

New and emerging microbial approaches to produce sustainable and functional fats for food applications

This webinar is hosted by the [Biotechnology](#) and [Edible Applications Technology](#) Divisions of AOCS.

When: December 5, 2022, 11 a.m.–12:30 p.m. CST (Chicago, USA; UTC-06)

Presenters: Professor Maria Barbosa, Microalgal Biotechnology, AlgaePARC, Wageningen University, Netherlands and Dr. Yulin Lu, Co-founder and CEO of Yali Biosciences Inc., South San Francisco, California, USA

Tropical oils such as palm oil, coconut oil, and cocoa butter are the most widely adapted technical solutions to provide structure and melting behavior in plant-based analogs, but current production practices may contribute to further deforestation and habitat loss. An emerging alternative to tropical oils is the use of microbially-derived lipids, as advances in food biotechnology are making lipid production using microbial sources more feasible. Examples include improvements in fermentation technology, genetic and metabolic engineering of oleaginous microorganisms, and feedstock engineering, or the use of food and agricultural waste materials as carbon and nitrogen sources.

All registrants will have access to the webinar recording, and attendees of the live broadcast will receive a certificate of attendance.

[Register now.](#)

Past webinars of interest

Defining the quality of plant-based proteins: Challenges and opportunities for pulses

Presenter: Dr. James D. House, Professor and Head of the Department of Food and Human Nutritional Sciences, Faculty of Agricultural and Food Sciences, University of Manitoba, Winnipeg, MB

This webinar provides an overview of the current and proposed methods positioned to measure protein quality, and summarizes the impact of various parameters on protein quality with a primary focus on pulses. The latter includes processing, blending, varietal selection, agronomic factors, and factors related to the consumer.

[Watch the recording.](#)

The future of food

Presenter: Brad McKay, President of McKay Consulting

With the world's population expected to grow by 2 billion by 2050, we will need new and innovative means of safely producing, manufacturing, and delivering food in a manner that supports the sustainability of the earth's environment and our species. This webinar starts with a look at human evolution and the history of food and then addresses the future of food and food manufacturing.

[Watch the recording.](#)

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EAT Division sponsorship

The EAT Division recognizes professionals and students who work passionately to further the science of fats and oils. Sponsors help us to deliver a great AOCS Annual Meeting & Expo by sponsoring one or more of the following events or awards:

- [One of EAT's Technical Sessions](#)
- [Timothy L. Mounts Award](#)
- [EAT Outstanding Achievement Award](#)
- [Edible Applications Technology Division Student Excellence Award](#)

In recognition of the donation, sponsoring companies will receive:

- Recognition in the Edible Applications Technology Division newsletter
- Special thank you at the opening of the session
- Acknowledgement of the sponsorship in the Annual Meeting program via the AOCS website

Contact [Bill Stanton](#) to discuss how your company can become a sponsor.

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Share your thoughts

Have the EAT newsletters been a useful resource to you? Was your interest area missing from the list of resources? If you have any comments or ideas of additional topics to cover in upcoming communications, please reach out to [Andrew Gravelle](#).

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