



The 2023 AOCS Annual Meeting & Expo is coming up, and you won't want to miss the biotechnology program!

Register today

Message from the Chair

Dear Colleague,

I hope the new year is treating you well and you are attending the upcoming 2023 AOCS Annual Meeting & Expo in beautiful Denver, Colorado, in April/May! Please promise to expand your network, knowledge, and professional horizons by taking advantage of what the annual meeting has to offer. It's a fantastic opportunity to develop long-lasting relationships and inspire others with your current research interests.

The BIO Division has organized 11 sessions this year, including a poster session, spanning all three days of the scientific program.

We should be grateful to many of you (like my Vice Chair Sarah Moran née Willet), who are co-chairing these sessions and put in a lot of work into assembling great panels of speakers to benefit our audiences.

And lastly, I would like to encourage you (if you haven't done it yet) to open a Chat GPT account and explore the brave new world of AI that will disrupt our world much sooner than most of us think. I guarantee that you will be blown away (like I was) by its capabilities and potential, including its deep knowledge of biotechnology of oils and fats.

Best regards,

Tim Ulmasov

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2023 AOCS Annual Meeting & Expo

April 30–May 3

Colorado Convention Center, Denver, Colorado, USA

Network with new and familiar faces and discover the latest biotechnology research

Register today

Biotechnology Technical Program

Enjoy 65 hand-selected presentations that feature exciting developments in the biotechnology industry.

Oral Presentation Highlights

Enzymatic preparation and purification of sn-1,3 diacylglycerols and their physicochemical properties

Presenter: Yong Wang, Jinan University

Bio-based azelate polyols and their evaluation in thermoplastic polyurethanes

Presenter: Tuan Noor Maznee Tuan Ismail, Malaysian Palm Oil Board (MPOB)

Effect of solid-state fermentation using *Aureobasidium pullulans* and *Mucor circinelloides* on camelina meal proximate composition and digestibility

Presenter: Bishnu Karki

Development of synthetic genetic circuits to improve water-use efficiency in sorghum

Presenter: Janina Tamborski, Stanford University



Production and formulation of novel microbial oil in food applications

Presenter: Alex Chapeaux, C16 Biosciences

Poster Presentation Highlights

Growth of the oleaginous fungus *Umbelopsis isabellina* on blends of glucose and glycerol and their effect on lipid production

Presenter: Panagiotis Dritsas, University of Patras

Preparation and characterization of carbon nanotubes enhanced canola protein isolate (CNT/CPI) bio-adhesive for wood application

Presenter: Emeka Enemuoh

Specifics and growing use of high erucic acid rapeseed (HEAR)

Presenter: Petro Vyshnivskyi

The development of betanin inks for piezoelectric ink-jet printing for the detection of volatile amines released during fish spoilage

Presenter: Brock Levac, University of Guelph

Valorization of nutrient rich liquid waste and soybean hulls by using microbial fermentation

Presenter: Bishnu Karki, South Dakota State University

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Network with Colleagues

Make the most of your annual meeting experience by attending one of our networking events. Browse a few events of interest below.

New in 2023! Morning Yoga

Tuesday, May 2 | 6:45–7:45 am

Kick off day three of the annual meeting with a yoga class with Erin McDougal from Zen Out Yoga. Get relaxed and centered before another day of learning. Towels and yoga mats will be provided, or you are welcome to bring your yoga mat from home. **Advance registration is required. Spots are limited.**



Biotechnology Division Dinner

Tuesday, May 2 | 6–7:30 pm

The [2023 Biotechnology Division Ching Hou Award](#) winner and student winners will be recognized and will give a short presentation during this evening networking event.

AOCS Member and Volunteer Appreciation Luncheon

Wednesday, May 3 | 1–2:25 pm

We appreciate you! All meeting attendees are welcome to enjoy complimentary food and fun as we recognize our volunteers. You will also have a chance to win prizes! Learn more about how to volunteer and get inspired by those who make a difference through volunteering with AOCS.

[Register now](#)

Broaden your knowledge with the AOCS Continuing Education Program

Statistical Design of Experiments Training

This two-hour course offers statistical design of experiments (DOE) training intended to provide a basic level of understanding of DOE concepts so that all parties will have a better idea of good design and analysis practices.

The training is on-demand to fit your busy schedule. On-demand access includes access to recordings, slides, and course materials for 30 days.



**Get on-demand
access**

AOCS membership benefits corner

Each year, enjoy 10 issues of INFORM — the official member magazine of AOCS.

Editor's picks from *INFORM* magazine

From the farmers market to store shelves

Have you ever wondered how food is turned from a recipe into real products stocked on supermarket shelves? This is not as easy as it seems, as there are many regulatory and production challenges in scaling food production from a kitchen into a big factory. This article helps you understand what people need to be informed about when they want to supply their products to larger markets.

[Read the article.](#)

Why we need agroecology

Anand Swaroop, a biochemist and the president of nutritional supplier Cepharm, explained in this article why agroecology is very important to safeguard the existence and supply of wild and endemic medicinal plants. Against the increasing impact of climate change on plant growth cycle, the principles of agroecology could prove to be a more sustainable method for food production.

[Read the article.](#)



Broaden your knowledge with full access to AOCs's four peer-reviewed journals.

Editor's picks from the *Journal of the American Oil Chemists' Society (JAOCS)*

Selective hydroxyalkoxylation of epoxidized methyl oleate by an amphiphilic ionic liquid catalyst

Authors: DeMichael D. Winfield, Bryan R. Moser

Oleic acid is a precursor for many biobased materials. The oleic acid first needs to undergo chemical reactions such as epoxidation and subsequent hydroxyalkoxylation. The hydroxyalkoxylation step is conventionally performed with sulfuric acid or a metal catalyst. Many ionic liquid catalysts are ineffective due to their high polarity. This research shows an amphiphilic ionic liquid catalyst could be used with several advantages. This could be a path for a greener alternative to conventional hydroxyalkoxylation catalysts.

[Read the article.](#)



Did you know that
as an AOCs
member, you

Optimization of *Chlorella vulgaris* cultivation grown in waste molasses syrup using mixture design

Authors: Fahimeh Sadat Mohammadi, Daryush Arabian

The growth of microalgae *Chlorella vulgaris* was optimized under culture media containing waste molasses as a cheap organic carbon source and other nutrients. The experimental design showed that the molasses, NaNO₃ and K₂HPO₄ demonstrated key roles in biomass and lipid productivity in the mixotrophic growth conditions. Although too much molasses lead to a decrease in biomass and lipid productivity, an optimal amount of molasses in combination with the other nutrients could produce lipids up to 115 mg L⁻¹ d⁻¹. This research showed that waste molasses can be used as a promising feedstock for cost-effective cultivation of *C. vulgaris*.

[Read the article.](#)

qualify for an annual meeting discount? Take advantage of this benefit by registering today!

Register now!

AOCS Webinars are your opportunity to connect with researchers, industry experts, and thought leaders from across the globe. Invest an hour of your day and be inspired. AOCS members have exclusive access to the [AOCS Member Webinar Library](#) to watch past webinars.

Editor's picks of AOCS Webinars

Past webinars of interest

Successful Start-Up Series: From product innovation to business plan

Presenters: Bryan Yeh, President and CEO at American Biodiesel, Inc. dba Community Fuels; Managing Director, Bryan Yeh Consulting; Sue Lancaster, Chief Commercialization Officer, South Dakota Innovation Partners; Anthony Clark, Chief Technology Officer at Helaina



This webinar is part of the AOCS Successful Start-Ups series and outlines some key requirements for getting an innovation pitch-ready for a financier or potential business partner. What aspects of an idea need to be 'solid' before being pitched? What elements can make the difference between success and failure? Find out by watching this webinar.

[Watch the recording.](#)

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

Presenters: Professor Maria Barbosa, Microalgal Biotechnology, AlgaePARC, Wageningen University; Dr. Yulin Lu, Co-founder and CEO of Yali Biosciences Inc.



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

This interactive panel discussion features invited speakers who will discuss some of the recent advances and emerging opportunities in this space, including feasibility and economic aspects of microbial oils, mimicking the physicochemical and functional properties of tropical fats in plant-based foods, upstream, downstream, and scale-up challenges (and solutions) for microbial oils, and minor lipidic components in microbial oils for food and nutraceutical industries.

[Watch the recording.](#)

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