



Message from the Chair

Dear Colleague,

I hope this message finds you and your family well. In this newsletter, you will find updates on the upcoming [2022 AOCs Annual Meeting & Expo](#), *INFORM* magazine articles, AOCs journal articles, and AOCs Award winners from our Division. Highlights are summarized below.

The 2022 AOCs Annual Meeting & Expo will be held in person and online in Atlanta, Georgia, USA, on May 1–4. Atlanta is well known as an important business hub in southeast US, together with famous places of interests, like World of Coca-Cola and CNN headquarters. My personal favorite place is the Georgia Aquarium with giant whale sharks. AOCs has set up tours to help you [explore Atlanta](#) while you're there.

I highly recommend each of you to take advantage of this opportunity and join us to learn, network, and have fun. We have an exciting [technical program](#) — see the section below for highlights. I encourage you to attend the Division dinner on Tuesday, May 3, at 7:15 EDT. We are looking forward to hearing your stories, ideas, questions, and suggestions on the technical program and other Division business matters.

I encourage you to attend open-access sessions on the [annual meeting livestream](#) in the lead up to the meeting. These sessions are open to everyone:

- [Industry updates](#) on Thursday, April 14, at 9–11:30 a.m. CDT (Chicago, USA; UTC-5).
- [Biotechnology Division Student ePoster Pitch Competition](#) on Tuesday April 19, at 1:40–2:45 p.m. CDT (Chicago, USA; UTC-5).

Our leadership team has received positive feedback on our recent Midweek Mixer: Using enzyme-based soy processing to maximize recovery of high value components. [Watch the recording](#) if you weren't able to attend.

Midweek Mixers are a great opportunity to share knowledge, introduce colleagues to the Division, and meet new people. Contact us at the emails below if you would like to host a mixer.

Thanks all of you for your involvement and support to the AOCs Biotechnology Division. I cannot wait to meet all of you soon face-to-face in Atlanta or online by camera. Stay safe and healthy!

Best regards,
Long Zou (Joe)
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Learn and connect at the 2022 AOCs Annual Meeting & Expo May 1–4 in Atlanta, Georgia, USA, and live online

Our program is rich and exciting thanks to Todd Underiner, the Division's vice chair, and the session chairs who worked hard to assemble a prime scientific program.

You are invited to join Biotechnology Division Dinner on Tuesday, May 3, at 7:15 p.m. EDT (Atlanta, USA; UTC-4). We will recognize the winners of the [2022 Biotechnology Division Ching Hou Award](#) and student awards.

There are also other [networking events](#) to grow your professional network and events to help you [explore Atlanta](#), a city filled with rich history.



Register

Explore the Biotechnology technical program

View the [technical program](#) to preview sessions. We will hold sessions on a number of important topics, including:

- Synthesizing oleochemicals
- Potential prebiotic oligosaccharides
- Biobased monomers
- Fermentation media
- Enzyme-based soy processing
- Targeted drug delivery carriers

Notable talks include “Molecular simulation as a tool for the design of biosurfactant-based cosmetic formulations” and “Detection of genome edited products — is it CRISPR?”

Watch open-access industry updates before the annual meeting

Live online, Thursday, April 14 | 9–11:30 a.m. CDT (Chicago, USA; UTC-5)

Speakers from Kalsec® Inc., Milestone, Inc., Pennakem Europa and Schrödinger will share recent advances in products and services on the [annual meeting livestream](#). These presentations are free and open to everyone. You don't have to be registered for the annual meeting to attend.

[Preview all presentations](#)

Kalsec® Inc.

Clean label food protection strategies: Dual functional and synergistic food preservation system with DuraShield™ natural food protection blends.

Milestone, Inc.

Combined use of microwave assisted extraction and saponification for food quality and safety.

Pennakem Europa

Recent achievements in the industrial scale-up of EcoXtract® solution, the sustainable and safe hexane alternative to extract efficiently vegetable oils and plant-based proteins.

Schrödinger

How digital molecular simulations will drive the next generation of innovation in reformulation and sustainability of consumer-packaged goods.

Add event to calendar



Cheer on students in the Student ePoster Pitch Competition

Live online, Tuesday, April 19 | 1:40–2:45 p.m. CDT (Chicago, USA; UTC-5)

The Student ePoster Pitch Competition gives student researchers an opportunity to highlight their research achievements and win cash prizes! Support and encourage students by watching the ePoster Pitches on the [annual meeting livestream](#) and voting for your favorite presentation.

Four students will be selected to give 5-minute oral presentations in each competition. [View the finalists](#) for our competition this year.

[View competition](#)

Add event to calendar



Congratulations to AOCS Award winners from our Division!



Casimir C. Akoh, recipient of the 2022 A.R. Baldwin Distinguished Service Award

We are delighted to recognize Casimir C. Akoh for receiving the 2022 A.R. Baldwin Distinguished Service Award. This award recognizes long-term, distinguished service to AOCS in a variety of positions of significant responsibility. This is the Society's highest service award. [Get to know Casimir in this award spotlight.](#)



F. Xavier Malcata, recipient of the 2022 Stephen S. Chang Award

We are delighted to recognize F. Xavier Malcata for receiving the 2022 Stephen S. Chang Award. This award recognizes a scientist, technologist or engineer who has made distinguished accomplishments in research for the improvement or development of products related to lipids. [Get to know F. Xavier in this award spotlight.](#)



Lu-Kwang Ju, recipient of the 2022 Biotechnology Division Ching Hou Biotechnology Award

We are delighted to recognize Lu-Kwang Ju for receiving the 2022 Biotechnology Division Ching Hou Biotechnology Award. This award recognizes a scientist, technologist or leader who has made significant contributions to the advancement of the Division's area of interest. [Get to know Lu-Kwang Ju in this award spotlight.](#)



Jiazi Chen, first place, 2022 Biotechnology Division Student Award

The Biotechnology Division Student Award recognizes graduate students presenting outstanding oral or poster presentations within the Biotechnology technical program at the AOCS Annual Meeting. [Get to know Jiazi in this award spotlight.](#)



Xin Guo, second place, 2022 Biotechnology Division Student Award

The Biotechnology Division Student Award recognizes graduate students presenting outstanding oral or poster presentations within the Biotechnology technical program at the AOCS Annual Meeting. [Get to know Xin in this award spotlight.](#)

Explore AOCS news and resources



Member spotlight: Tom McKeon

Tom McKeon is the current AOCS BIO Division Member Liaison. He has retired after 38 years of service with the United States Department of Agriculture, Agricultural Research Service in Albany, CA. [Read this member spotlight](#) to learn his words of wisdom from a long career in biotechnology



Keep your career on the move

The AOCS Career Center helps you search and apply to 100+ jobs using robust filters, set up job alerts to deliver the latest jobs to your inbox and access job searching tips and tools. [Search current job opportunities](#) and resources to help you make the next move in your career.

Read curated articles from *INFORM* magazine and AOCS journals

A new kind of plant breeding

Epigenetics allows researchers to breed traits into plants by manipulating molecular switches that turn genes off or on, instead of without changing their DNA sequence. [Read the article.](#)

Dendrimers for enhancement of lipase activity

Dendrimers are viable nanomaterials that can immobilize and activate many enzymes, including the lipases that catalyze industrial processes. [Read the article.](#)



Enzymatic hydrolysis and fermentation of soy flour to produce ethanol and soy protein concentrate with increased polyphenols

Authors: Ruchir M. Agrawal, Michael J. Miller, Vijay Singh, Hans H. Stein, and Pawan S. Takhar.

There is a need to effectively concentrate soy protein from defatted soy flour (DSF) while simultaneously valorizing the carbohydrate-rich byproduct, which would otherwise be a waste. This study aims to evaluate a process developed to produce soy protein concentrates (SPC) by substantially hydrolyzing carbohydrates from DSF with the help of enzymes into water-soluble saccharides and monomeric sugars, which were simultaneously utilized by *Saccharomyces cerevisiae* for fermentation into ethanol. The effect of process time on SPC, overall protein recovery, carbohydrate hydrolysis, yeast growth, ethanol concentration, and total polyphenol concentration (TPC) of SPC and hydrolysate was evaluated... TPC of SPC prepared by enzymes + yeast (EY) treatment increased by 2.5 times compared to the control. Thus, this novel process successfully produced a high-protein SPC with hydrolyzed RSOs, lower insoluble carbohydrates, high TPC, and a coproduct ethanol.

[Read the article.](#)



Lipase-mediated synthesis of neopentyl glycol diester using a combination of reduced and standard pressure

Authors: Ji Won Kim, Byung Hee Kim, Yangha Kim, Moon-Won Lee, Dong Joong Im, and In-Hwan Kim.

Neopentyl glycol (NPG) diester is a biodegradable lubricant used in the machinery industry as it is suitable for the low-temperature environment. NPG diester was successfully synthesized with fatty acid and NPG using immobilized lipase. The Eversa immobilized lipase was the most effective biocatalyst for the synthesis of NPG diesters. The effects of enzyme loading and temperature on conversion were explored at a standard pressure of 101.3 kPa. And then, the effect of reduced pressure was investigated in the range of 1.3 to 40.0 kPa under optimum conditions obtained at standard pressure. The maximum conversion of ca. 63% was achieved at the optimal temperature of 50°C and the enzyme loading of 5% (based on the total weight of the substrate) at standard pressure after 10 h. This pressure combination method employed in this study demonstrated a novel, energy-saving strategy for the synthesis of NPG diester.

[Read the article.](#)



[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.

Past webinar of interest

High-oleic oil of yeast as potential feedstock for biodiesel production from lignocellulosic pentoses

Presenter: Mahesh Balwant Khot, postdoctoral researcher, Biotechnology Centre of the University of Concepcion

In this webinar, you'll learn more about research that evaluates the biomass of the yeast strain newly isolated from the degraded wood in the Chilean rainforest to produce biodiesel based on its lipid content and fatty acid profile. [Watch the recording.](#)

Particle-filled protein-starch suspensions as model for investigating interactions in plant-based meat analogues

Presenter: Stacie Dobson, Ph.D candidate, University of Guelph

In this webinar, you'll learn about research that created a fundamental plant-based meat analogue composite to investigate properties, like highest water holding capacity, highest protein solubility, and increased solubility, in plant-based meat analogues. [Watch the recording.](#)

Upcoming related meeting reminders

International Society of Biocatalysis and Agricultural Biotechnology (ISBAB)

The 16th ISBAB Meeting is postponed until November 9–11, 2022, and will be held at the National Chung Hsing University in Taichung, Taiwan.

The [AOCS Asian Section](#) Annual Meeting is set to meet during ISBAB, led by Asian Section Chair Ahmad Parveez Ghulam Kadir (Malaysian Palm Oil Board, Malaysia). You can contact the chair at parveez@mpob.gov.my.

World Congress on Oleo Science (WCOS 2022)

The 2nd WCOS will now be held as an online event, August 23–September 3, 2022. Several AOCS members have worked hard to organize an interesting [technical program](#).

Share your thoughts

We welcome any ideas and suggestions for making the newsletter more relevant to you, the Division members. We would also be happy to receive e-mails from you about any stories, news, photos, achievements, awards, etc. that you would like to share with other members. Please send all content to [Newsletter Editor Sarah Willett](#).

STAY CONNECTED



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