



PICOGRAM V. 102

and Program

AMERICAN CHEMICAL SOCIETY
AGRO Division
Spring 2023 Hybrid Meeting and Expo
Indianapolis, Indiana, USA
Crossroads of Chemistry

March 26 - 30, 2023



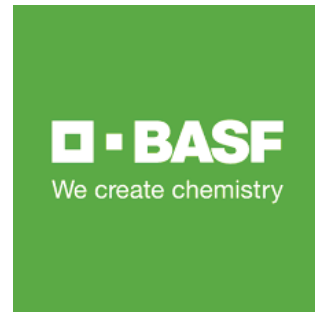
2023 AGRO DIVISION PATRONS

Thank you for your continued support!

Diamond



Platinum



Gold



Task Force II on
2,4-D Research Data

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From the Chair's Desk Heidi Irrig

ARE YOU HAVING FUN YET? John Clark, Program Chair for the Fall 2012 ACS Meeting in Philly, asked me in email exchanges regarding programming the Fall 2022 meeting in Chicago. His words brought a huge smile to my face because up until then I was living Jay Gan's words regarding his experience programming the Fall 2016 meeting in Philly, **it was undoubtedly the largest event that I had to coordinate in my life**, which epitomized why I was not smiling much.

Engagement with the past Program Chairs, many wonderful organizers, dedicated volunteers, and wise AGRO leadership made programming the Fall 2022 meeting a wonderful experience for me. Thank you all for the privilege of programming the Fall meeting. I

promise to maintain this commitment of support to our future Program Chairs and Officers. And big thank you to my bosses at Syngenta (Adora Clark and John Abbott) for their encouragement and support of my efforts with AGRO!



Fall 2022 ACS Meeting. In 2020 and 2021 AGRO participated in the ACS meetings in a virtual format. Returning to *in-person* while maintaining the virtual component made this AGRO's first truly hybrid meeting. While bringing a hybrid meeting to fruition was a bit chaotic and full of uncertainty at times, it was my pleasure to serve the AGRO Division and its members! Thank you for your support, encouragement, and patience as I responded to the numerous inquiries and pleas for clarification on the terminology associated with *hybrid* and what it would mean for our members who just wanted to present their scientific research, endeavors, and advancements. I constantly had a sheet by my side defining the different types of participation in-person room, virtual only, hybrid room, and on-demand!

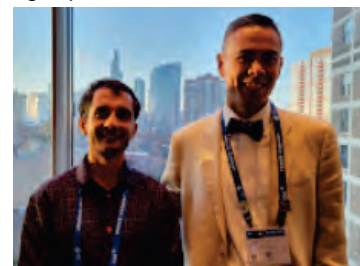
As the pandemic limited some members in-person attendance, 64 organizers created 21 great symposia, with over 240 abstracts for 38 oral sessions. Of the 38 oral sessions, 18 were in-person sessions and 20 hybrid sessions. These were all excellent presentations demonstrating that research and advances in agricultural science



research proceeded despite the pandemic. In fact, there was a general cheerfulness as members gathered to share their research, explore new areas of science while rekindling and forging new networks. **AGRO's own Laura McConnell** was a keynote speaker at the ACS Opening Keynote Session in Chicago and gave an inspiring talk on the positive impact AGRO has had in her life and career.

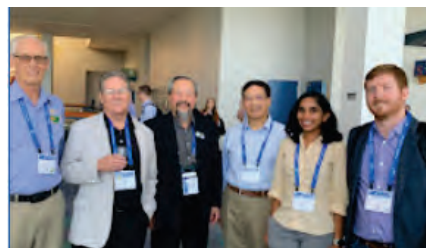
AGRO Governance Meeting Changed to Grow with AGRO Event at Fall 2022 Meeting. Although AGRO by-laws state Executive Committee (EC) governance meetings are to take place the Sunday night of the ACS meeting, since several EC members were not able to travel due to the pandemic, we saw this as a chance to change things up a bit. The EC voted to have a virtual governance meeting after the Fall 2022 meeting so all could participate.

We then designed a Sunday night event to attract new membership by showcasing AGRO Committees. Many thanks to Katoria Tatum-Gibbs for creating a slide show showcasing the AGRO Committees; the purpose of the committees, current



members, and how much fun it is to participate in an AGRO Committee. This was a very popular session with about 125 early career scientists (undergraduate and graduates alike) and others attending and several indicating interests in volunteering for a committee.

In a continuing effort to encourage new membership, we had swag (pins, tee-shirts, notebooks, and chocolate) this year at the Hospitality Desk and at the Division Row event. Shanique Grant coordinated the work to select and purchase the swag. The swag successfully attracted many inquires and interest at the meeting. **Thank you Shanique!**



*And now we welcome 2023!
Opportunities do not just happen,
AGRO members create them!*

I am honored to serve as the 2023 AGRO Division Chair and happy to see plans being made to continue developing AGRO into a Division beneficial to our scientific community.

AGRO Strategic Planning IPG. An Innovative Program Grant for strategic planning is in place. Kevin Armbrust, Ed Norris, and Leah Riter are co-leading. They represent a cross-section of the disciplines in engaged in agricultural science: academia, government, and industry, respectively, and are at differing levels of experience and disciplines. The retreat will in Washington, DC at the ACS headquarters in late 2023. Details are coming.

AGRO History Committee. This committee was developed to establish a means and location to retain key AGRO documents as a resource for members and leaders. Ken Racke, 2011 Division Chair, agreed to Chair the History Committee as a start. **Thank you, Ken!**

The upcoming 2023 ACS Spring Meeting and Exposition. *Did you know AGRO used to program at both the Fall and Spring meetings?* At the Fall 2007 meeting (Laura McConnell was Division Chair and John Johnston was Program Chair), AGRO decided to focus programming around one ACS meeting per year. And this has been an positive change as we have been able to focus on one meeting that captures most of us as opposed to splitting our time.

As John Clark, Jay Gan, and I have attested, programming one meeting and exposition is a huge undertaking. However, this year, because the ACS Spring meeting will be in the heart of US agriculture, Indianapolis, Indiana, AGRO is participating in the Spring meeting. While Aaron does have the very capable assistance of former Program Chair, Ken Racke for the 2023 Spring meeting, our hats are off you Aaron!! Many thanks to Aaron for programming at both the Spring and Fall 2023 meetings and to Ken for assisting Aaron with Spring meeting!



Award Nominations. AGRO Division has several annual research and service awards. Please consult the AGRO webpage (<https://www.agrodiv.org/awards/>) for eligibility and nomination details. Several Awards are currently open for nominations from AGRO members with deadlines in March and April.

Of note, **AGRO Fellow** nominations can be submitted to the Awards Committee Chair, Qing Li by March 31, 2023. AGRO Fellow criteria include continued and substantial contributions of time, talents, and service to the AGRO Division of ACS and to the agrochemical science over a period of at least six years. Check the website for details- (<https://www.agrodiv.org/awards/>).

Nominations are open for **ACS Fellows** through April 1, 2022 (<https://www.acs.org/content/acs/en/funding/awards/acs-fellows.html>). Please contact me, heidi.irrig@syngenta.com for further information.

The Early Career Scientist Committee is accepting nominations until April 4, 2023, for the **AGRO New Investigator Award** which recognizes recent graduates in last the five years who have produced significant accomplishments conducting research, consulting, or performing regulatory studies. AGRO is also accepting applicants for **Student Travel Award**. See pages 9 and 11 for details of these early scientist awards.

AGRO Elections. This Spring, Qing Li, qingl@hawaii.edu, will lead the Nominating and Election Committee for 2023. He is accepting nominations and self-nominations for our annual election. We will need good candidates for the positions in the Executive Committee, Officers, and Councilors.

Division Membership. We welcome new members. Do you know colleagues that would benefit from AGRO membership? Could your employer explore an AGRO membership campaign? One does not need to be an ACS member to be an AGRO Division member, and the price is \$16 or less. ACS has a direct link for online division memberships (<https://home.acs.org/forms/s/technical-divisions?>). Please contact the Membership Chair Chris Bianca, chris.bianca@jrfamerica.com, with questions or references.

AGRO Website and Email. We continue to update our website, thanks to Edmund Norris, to provide easy to access information regarding future meetings, events, webinars, job announcements etc. Please contact us at <https://www.agrodiv.org/contact-us/> to submit an event, news article, job announcement, and collaborative efforts with other entities on our website. And thank you Pat Havens for volunteering to take over e-newsletter and to Laura McConnell for training both Edmund and Pat.



Volunteers. The AGRO Division runs on volunteers, so thank you for the good membership response. Please check out the AGRO Division Committees (p. 27) for new Chairs and membership changes in several committees. If you are interested in general volunteering, please contact Qing Li, qingl@hawaii.edu or Heidi Irrig, heidi.irrig@syngenta.com.

Get involved. To get involved in AGRO activities, please fill out the **Get Involved** form available on the AGRO website (<https://www.agrodiv.org/get-involved/>). Your ideas, concerns, and input are valuable and helpful to enhancing the AGRO Division and our services to our membership.

*Enjoy the meeting and
Indianapolis!*

AGRO FELLOWS

1971	Louis Lykken Tom H. (Bucky) Harris Herman Beckman (Posthumous)	1985	Henry Dishburger Richard C. Honeycutt	2012	Jeffrey J. Jenkins John J. Johnston
1972	Wendell F. (Bud) Phillips Don G. Crosby Elvins Y. Spencer	1986	Gunter (Jack) Zweig	2013	Stephen O. Duke Cathleen J. Hapeman Kenneth D. Racke Teresa A. Wehner
1973	Mr. Roger C. Blinn Philip C. Kearney Julius J. Menn	1987	Willa Garner	2014	Aldos C. Barefoot Jeanette M. Van Emon
1974	Morton Beroza James P. Minyard, Jr. Joe C. Street	1988	Jan Chambers James Seiber	2016	Kevin J. Armbrust Del A. Koch Sharon K. Papiernik Pamela J. Rice
1975	Hank F. Enos Maurice B. Green Charles H. Van Middlelem	1990	Joseph Fenyes	2017	Diana Aga Jay Gan Marja Koivunen Steven J. Lehotay Thomas M. Stevenson
1976	Marguerite L. Leng Jack R. Plimmer Gerald G. Still	1991	Nancy N. Ragsdale	2018	John J. Beck Julie E. Eble
1977	Gustave K. (Bob) Kohn	1992	Don Baker Joel Coats Guy Paulson	2019	Leah S. Riter
1978	S. Kris Bandal Paul Hedin	1993	Larry Ballantine	2020	Cheryl B. Cleveland Aaron D. Gross Heidi B. Irrig
1979	Rodney D. Moss	1994	James Heitz Ralph Mumma Willis Wheeler	2021	Michael E. Krolski Qing X. Li Kalumbu Malekani Carmen Tiu
1980	G. Wayne Ivie John B. Siddall (Posthumous)	1996	John Bourke	2022	Yelena Sapozhnikova
1981	Robert M. Hollingworth Gino J. Marco	1998	Hank Cutler Paul Giesler		
1983	John Harvey, Jr.	2000	Barry Cross		
		2001	Robert Hoagland		
		2003	Judd O. Nelson		
		2005	Rodney Bennett		
		2006	Terry D. Spittler		
		2007	John M. Clark Ann T. Lemley R. Donald Wauchope		
		2008	Allan S. Felsot		
		2011	Laura L. McConnell		

ACS FELLOWS FROM THE AGRO DIVISION

2009	Glenn Fuller	2015	Rodney Bennett	2020	Thomas M. Stevenson
2010	James N. Seiber		John J. Johnston	2021	Sharon K. Schneider
2011	John W. Finley N. Bushan Mandava	2016	Aldos C. Barefoot	2022	Diana Aga Kevin L. Armbrust Allan S. Felsot
2012	Jeanette M. Van Emon	2017	Stephen O. Duke		
2014	Kevin Hicks	2018	Cathleen J. Hapeman		
2014	Laura L. McConnell Kenneth D. Racke	2019	Joel R. Coats Steven J. Lehotay Beth A. Lorsbach		



AGRO AWARDS COMMITTEE REPORT

Qing X. Li, Chair

SENIOR AWARDS. **Thomas M. Stevenson** of FMC Agricultural Solutions is the winner of the 2023 ACS International Award for Research in Agrochemicals. Thomas is recognized for the impact of his work on the commercialization of multiple ground-breaking products that work through new biochemical modes-of-action and include the fungicide famoxadone and the insecticides indoxacarb, chlorantraniliprole, and cyantraniliprole. The award will be presented at a symposium organized by Kathleen Shelton and Seva Rostovtsev at the Fall National ACS Meeting in San Francisco, August 13 - 17, 2023.

Kevin G. Meyer of Corteva Agriscience is the winner of the 2023 AGRO Award for Innovation in Chemistry of Agriculture. Kevin is recognized for innovation and leadership in the discovery of important new fungicides with a novel mode of action. He led the discovery of fenpicoxamid through the modification of a natural product and further developed the fully synthetic fungicide florylpicoxamid. The award will be presented at the Fall 2023 ACS Meeting in San Francisco.

John M. Clough of Syngenta is the winner of the 2024 ACS International Award for Research in Agrochemicals. John will be recognized for his pioneering work in natural product chemistry for crop protection and his leadership in agrochemical research. His ground-breaking research on and invention of strobilurin fungicides led to the invention of azoxystrobin and then to more than 1000 strobilurin patents and almost 20 commercial products worldwide. A symposium will be organized for the Fall ACS Meeting in Denver in August 2024.

The *Journal of Agricultural and Food Chemistry* (JAFC) and the AGRO and AGFD Divisions sponsor two lectureships for outstanding papers published in JAFC the previous year. Winners will be announced soon along with the Spencer and Sterling Hendricks Awards.

Nominations for the 2025 International Award for Research in Agrochemicals and the 2024 AGRO Award for Innovation in Chemistry of Agriculture are being sought. The nomination criteria for these awards can be found at agro.div/awards/.

EARLY CAREER SCIENTIST AWARDS. The 2022 winner of the AGRO New Investigator Award was **Cera Fisher**, Postdoctoral Research Associate of the Department of Entomology at Cornell University. Her primary research interests are in understanding how nucleotide sequence-level changes contribute to the origin of new morphological or physiological traits. Applications for the 2023 New Investigator Award should be submitted by April 4, 2023 (see p. 9).

The Division also provides funding assistance for university students who wish to present their research in a poster and participate in AGRO events at National ACS meetings. The 2022 winners were first place, **Juliet Ochola**, and tied for second place **Oluwatosin Popoola**, **Sara McComic**, and **Flinn O'Hara**. Applications for the 2023 Student Travel Awards are due April 4, 2023 (see p. 11).

AGRO is very excited and pleased to have received an increase of \$2K to a total of \$6K in sponsorship from Syngenta for the New Investigator Award! AGRO strives to serve its newer members with opportunities to attend ACS meetings, and this increased funding will allow AGRO to support early career scientist further.

AGRO AND ACS FELLOW AWARDS. Nominations for Fellow for the Agrochemicals Division are being solicited by the AGRO Awards Committee. Do you know an AGRO member who has enthusiastically volunteered for and acted as an ambassador for AGRO by promoting our goal of advancing agricultural chemistry with innovative solutions? Then you likely know a future AGRO Fellow! Please consider nominating AGRO members for the ACS Fellow Award. Please note that the ACS Fellow nominations must be submitted through the Division Chair. The deadlines each year are March 31 for the AGRO Fellow Award and April 1 for the ACS Fellow Award.

***AGRO has many outstanding scientists and volunteers.
Please consider nominating a deserving colleague for the
AGRO Division and external awards.***

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Cara, Senior Biologist
United States



Crossroads of Ag Innovation

AGRO Evening Social

March 29, 2023

6:00 – 8:00 PM

**Corteva Indy
Headquarters**



**Networking and
Engagement**



**Scientific
Celebration**



**Food and
Fun**

- Come hear from ACS President Judy Giordan and other science leaders
- Free bus transport starting at 5:00 pm from the Conv. Center (Maryland St.)
- Sign up in advance by adding a free ticket to your ACS meeting registration
- Network and engage with fellow scientists
- Test your ag knowledge and win prizes
- Enjoy food and drinks



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CALL FOR APPLICANTS

AGRO DIVISION

2023 NEW INVESTIGATOR AWARD

Sponsored by Syngenta

2023 Fall ACS Meeting in San Francisco, California, USA

The AGRO Division seeks nominations for the New Investigator Award (NIA) to be awarded at the ACS meeting in San Francisco, California, August 13 – 17, 2023. The purpose of the New Investigator Award is to recognize scientists who have obtained a doctoral degree and are actively conducting academic, industrial, consulting, or regulatory studies.

The Division is interested in work on all aspects of agrochemicals which are broadly defined to mean pesticides of all kinds (e.g., chemical pesticides, biopesticides, pheromones, chemical attractants, fumigants, plant incorporated protectants, and disinfectants) as well as biotechnology-derived crops (e.g., Bt crops, Roundup Ready crops, etc.). The categorical areas of

study related to agrochemicals are very broad and encompass environmental chemistry, toxicology, exposure assessment, risk characterization, risk management, and science policy. Studies of veterinary pharmaceuticals and antibiotics are included in the Division's mission. The Division encourages submissions related to public health protection as well as crop, livestock, aquaculture, and wildlife protection.

AGRO is also interested in the environmental chemistry and effects resulting from agricultural production (e.g., soil processes, water/air quality) and in chemical products made from agricultural commodities and byproducts. This includes biofuels and bioproducts and the issues surrounding their production and use.

The Process:

- To be eligible for the award, the scientist must have obtained their doctorate no more than five years before the time of the Fall ACS National Meeting. Thus, for 2023, applications will be considered from **scientists who have obtained their doctorates no earlier than the year 2018**.
- A panel consisting of at least three AGRO members will choose up to three finalists based on their extended abstracts, 1-page *curricula vitae*, and letter(s) of recommendation.
- **Each finalist will receive up to \$2000 for travel and meeting expenses.**
- Each finalist will deliver an oral presentation (which will be judged by the panel) in one of the AGRO Program symposia. The winner, who will receive a plaque, will be chosen after all finalists have presented their papers.

Deadline:

The extended abstract, *curriculum vitae*, and letter(s) must be received at nia@agrodiv.org, no later than **April 4, 2023**.

To apply for the New Investigator Award, submit the following to nia@agrodiv.org:

1. Submit a **2500-character abstract** to a symposium in the AGRO Division using the ACS Meeting Abstracts Programming System (<http://maps.acs.org/>).
2. Submit an **extended abstract (maximum 2 pages) describing the candidate's research/studies** to the NIA Coordinator. Include the impact (or potential impact) of the results as it pertains to issues of concern to AGRO.
3. Submit a 1-page **curriculum vitae**.
4. Submit at least **one letter of recommendation** from a current supervisory scientist (e.g., post-doctoral mentor, a business manager, departmental chair).
5. Deliver an oral presentation in an appropriate symposium at the ACS Meeting in San Francisco, California.

For more information, please contact:

Sasha Kweskin, NIA Co-Coordinator
Bayer US LLC, Crop Science Division
sasha.kweskin@bayer.com

Nurhayat Tabanca, NIA Co-Coordinator
USDA-ARS, Subtropical Horticulture Research
nurhayat.tabanca@usda.gov

Daniel Swale, NIA Co-Coordinator
University of Florida
dswale@epi.ufl.edu

The AGRO Division is grateful for our new AGRO New Investigator Award sponsor!





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CALL FOR APPLICANTS

AGRO DIVISION 2023 EDUCATION TRAVEL AWARDS

Sponsored by Bayer US LLC, Crop Science Division

UNDERGRADUATE and GRADUATE STUDENT RESEARCH

Travel Support for Student Posters

2023 Fall ACS Meeting in San Francisco, California, USA

The AGRO Division has established an endowment fund to promote an understanding of the role of chemistry in agriculture. To address this goal, student awards will be made through the Division's Education Committee.

Applications are sought for the 2023 Travel Awards. Selected undergraduate and graduate students will be awarded up to \$1,000 each to help defray costs of attendance to give a poster at the Fall National Meeting, which will be held in August 13 – 17, 2023, in San Francisco, California. Students should submit their abstracts in the symposium of their choice. First, Second, and Third place winners in the poster competition will receive an additional cash award.

The subject of the presentation should pertain to the chemistry of the AGRO Division. Topics should relate to pest management chemistry including synthesis, metabolism, regulatory, risk assessment, biotechnology, resistance, mode of action, residues, delivery, fate/behavior/transport, and agronomic practices. The AGRO Division is also interested in chemical products made from agricultural commodities and byproducts, including biofuels, and the issues surrounding their production.

PLEASE NOTE: *This travel award is eligible for only poster presentations. Senior graduate students who have previously attended scientific meetings and are in their last year of graduate school are encouraged to do an oral presentation. However, the presentation will not be eligible for the travel award. These students should also submit a poster separate from (but can be related to) their oral presentation.*

For more information, please contact the co-coordinators:

Aaron Gross
Virginia Polytechnic Institute and State University
Department of Entomology
Blacksburg, Virginia
tel: 540-232-8448
adgross@vt.edu

To apply, students should submit the following no later than April 4, 2023 (subject to change):

1. A **2500-character abstract** formatted according to the directions given at the ACS Meeting Abstracts Programming System (<http://maps.acs.org/>). Be sure to include name of the applicant, applicant's address, and applicant's e-mail address.

After completing step #1 above, forward the ACS email indicating the abstract number and stating that abstract was successfully submitted to:

posters@agrodiv.org

Only abstracts submitted to symposia organized by the AGRO Division will be eligible for the travel awards.

2. A two-page extended abstract giving more detail of the research/presentation. For a sample extended abstract, visit <http://www.agrodiv.org/graduate-students/>.
3. A short letter of nomination from the faculty advisor that verifies current enrollment of the student.
4. A headshot

SUBMIT items 2 and 3 and a copy of the ACS email as a **SINGLE pdf file to our posters email address** below with the abstract number in the email subject line.

posters@agrodiv.org

NOTE:

Files sent directly to the co-coordinators will not be accepted.

Sara Whiting
Bayer R&D Services LLC
700 Chesterfield PKWY W
Chesterfield, MO 63017
tel: 319-512-9385
sara.whiting@bayer.com

*Abstracts will be reviewed by the Education Committee
Applicants will be notified of their selection status in May 2023*

Special thanks to our sponsor for their generous contribution





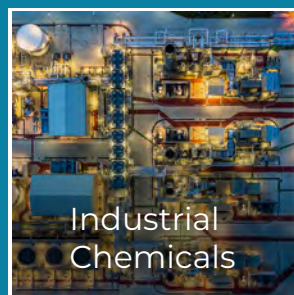
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- > Conservation & Mitigation Measures
- > Dossier Preparation & Submission
- > Pre & Post Submission Liaison
- > Data Review & Evaluation
- > Industrial Chemicals, REACH & TSCA
- > Maximum Residue Limits (MRLs)
- > Litigation Support, Data Compensation & Expert Witness

TECHNICAL SUPPORT

- > Toxicology, Ecotoxicology & Chemistry Expertise
- > Ecological & Human Health Risk Assessment
- > Environmental Fate & Exposure Modeling
- > Non-Target Species Assessment
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- > Lab & Field Study Design, Protocol Development, Placement & Monitoring
- > Good Laboratory Practice (GLP) & Quality Assurance Expertise



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Notes from the Program Chair

Aaron D. Gross, adgross@vt.edu

The Agrochemical Division (AGRO) will have a spectacular year in 2023 that includes programming at two national meetings. First, AGRO will make a stop at the crossroads of America in Indianapolis, Indiana for the ACS Spring meeting to engage in the **Crossroads of Chemistry**. This exciting theme and location provide a unique opportunity to highlight the importance of this region to global agricultural production and human health.

AGRO will host four symposia with over 100 abstracts that will feature cutting-edge agrochemical research advances. This includes a partnership with the Division of Organic Chemistry (ORGN) for a special symposium highlighting *the challenges and opportunities of organic chemistry in agricultural and pharmaceutical sciences*. Through this partnership will have the occasion to interact with aspiring early career organic chemists to highlight their role in the betterment of agricultural production.

The Spring meeting will culminate Wednesday evening with a social event hosted by Corteva Agrisciences at their Indianapolis Global Headquarters with a keynote speech by the ACS President Judy Giordan. This social event will highlight agricultural chemistry allowing both AGRO and non-AGRO members to socialize and network while providing the opportunity to expand AGRO's membership base. Significant efforts by Ken Racke, along with several local Indianapolis AGRO members (Pat Havens, John Rohanna, and Carmen Tiu...to name a few), will surely make the Spring 2023 meeting a Success!

Fall 2023 Meeting, San Francisco, California. After a stop in Indy, AGRO is preparing an exceptional Fall 2023 program where we will return to the Golden City of San Francisco to engage in the inspiring theme of **Harnessing the Power of Data**. San Francisco will not only provide a fantastic location to network with your colleagues, but to also present your research through 32 planned symposia topics. This includes AGRO's participation in achieving "Zero Hunger" through a special symposium organized by Laura McConnell, Coralia Osorio Roa, and Adelina Voutchkova.

At the Fall 2023 meeting, AGRO will celebrate the many accomplishments we have made over the past 50 (or 53) years! These celebrations will include a special symposium highlighting where AGRO has been and its future opportunities organized by Ken Racke and Jeanette Van Emon, a special AGRO Gala will occur on Wednesday evening of the meeting, and a regional Agriculture Tour (open to all ACS members) is planned for Thursday of the meeting. A joint virtual special issue of the *J Agric Food Chem* and *ACS Agric Sci Tech* is also being planned.

In San Francisco, we will recognize the significant achievements of our colleagues in agrochemical research.

Thomas Stevenson of FMC will be awarded the ACS International Award for Research in Agrochemicals. This award is sponsored by Corteva Agriscience and is being organized by Seva Rostovtsev and Robb DeBergh. The 2023 award winner for the AGRO Innovation Award which is sponsored by BASF is

Kevin G. Meyer of Corteva Agriscience. AGRO will host the Kenneth A. Spencer Award with the sponsorship of the ACS Kansas City Section; this awardee will be announced soon! Additionally, the Journal of Agricultural and Food Chemistry Best Paper Award (sponsored by AGFD and AGRO) will be announced in early spring.

AGRO Education Awards for Student Travel will be awarded to undergraduate and graduate students to present their poster at the Fall meeting; this includes a poster competition which is sponsored by Bayer. This award will defray costs associated with attending the meeting up to \$1,000 for a limited number of students. Applications are due April 4; see p. 11 for details. Sara Whiting and I are the co-chairs of this award program.

AGRO New Investigator Award (NIA) which is sponsored by Syngenta recognizes scientists who have obtained their doctoral degree in last five years and have produced significant accomplishments conducting research, consulting, or regulatory studies. Thank you to Sasha Kweskin, Nurhayat Tabanca, and Daniel Swale for organizing this award program. Applications are due April 4; see p. 9 for details.

Finally, the **Early Career Symposia Series** provides funds for symposia within the AGRO program that are organized by and feature speakers within 10 years of their highest degree earned. In Fall 2023, we are delighted to welcome one Early Career Symposia to our Program: *Harnessing Chemical Ecology to Achieve Food Security*, organized by Gareth Thomas and Nurhayat Tabanca.

Key information for Fall 2023 meeting:

- Abstract submission is open January 9 – April 4, 2023
- Education Award for Student Travel due April 4, 2023
- New Investigator Award due April 4, 2023
- The Fall ACS meeting will continue to be hybrid with the amount of hybrid and virtual tracks being announced later in the spring
- AGRO vice-chair, James Foster, has designed a new and exciting idea generation session for Denver

AGRO Programming Support. Finally, we continue to rely on the expertise of AGRO's Technical Program Administrator, Peney Patton, ppatton@agrodiv.org. Thank you, Peney, for all your help during this 2022 – 2023 planning cycle!

Enjoy Indy and the 2023 ACS Spring Meeting!



AGRO 50th and Beyond Celebration

At the ACS Meeting Fall 2023 Hybrid Meeting and Exposition
 San Francisco, California, USA
 August 13 – 17, 2023

AGRO 50th Anniversary Tour of California Agriculture

Thursday, August 17, 2023

Join us for a special educational tour of scenic California agriculture!
 Discover the many advances in agriculture over the past 50+ years!



Tentative Tour Agenda	
Time	Activity
6:45 AM	Board Chartered Bus
7:00 AM	Depart San Francisco for Davis, California
8:45 AM	<p><u>University of California Davis</u></p> <ul style="list-style-type: none"> • Welcome by Dean <p><u>Cooperative Extension Plant Sciences Research Field Crop location</u></p> <ul style="list-style-type: none"> • Presentation on pesticide research in support of specialty crops • Robert Mondavi Institute tour of sensory labs, food innovation kitchen, winery, and brewery • Tour of the campus research vineyard. • Tour of the Olive Oil Center with a presentation on olive oil and avocado oil research • IR-4 Research Projects presentation
Noon	Lunch at the Putah Creek Lodge on campus Lunch speaker: Prof. James Seiber (Etox and AGRO History).
1:30 PM	Depart Campus
2 - 4 PM	Additional agriculture stops on return trip. Locations to be finalized.
5 - 6 PM	Return to San Francisco

Participation is limited.

Check our website: agrodiv.org/agro-50th-anniversary-celebration/
 for updates on the registration process, fee, and agenda



AGRO 50th and Beyond Celebration

At the ACS Meeting Fall 2023 Hybrid Meeting and Exposition
San Francisco, California, USA
August 13 – 17, 2023

The AGRO Division was founded in 1970.
We will conclude 50th anniversary celebration activities with
several exciting events in San Francisco.

Attend the AGRO 50th Anniversary SPECIAL SYMPOSIUM

Chemistry for and from Agriculture: AGRO Division Legacy and Future Opportunities

This symposium on Wednesday, August 16, will include noteworthy speakers who will review historic contributions of our science and share future perspectives and will feature the recipient of the 2023 IUPAC Award in Crop Protection Chemistry

Contacts: Jeanette Van Emon, jmvanemon@gmail.com; Ken Racke, kenracke@gmail.com

Come Toast the AGRO 50th and Mingle at the GALA RECEPTION

A gala reception on Wednesday evening, August 16 will follow the special symposium and will include food, drink, trivia games, and special displays. Invitees will include AGRO members, awardees, and retirees as well as ACS and sister organization VIPs. Attendees will have the opportunity to win prizes, interact with an AGRO history timeline, and toast the AGRO's past and bright future.

Gala table sponsorships are available.

Contact: Andy Newcombe, andy.newcombe@arcadis.com

Join the Adventure of a Post-meeting AGRICULTURAL FIELD TOUR

An all-day agricultural field tour will be offered to AGRO members, guests, and ACS meeting attendees on Thursday, August 17. This tour of agricultural sites in the Sacramento Valley and on the UC-Davis campus will be both scenic and educational and include short research presentations from regional experts as well as a luncheon at the Putah Creek Lodge.

Contact: Andrew Coates, awecoates@gmail.com

AGRO 50th and Beyond
Celebrate our Past, Honor the Present, and Look to the Future!

Watch for further details on the AGRO website
www.agrodiv.org/agro-50th-anniversary-celebration

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Intrinsik is widely recognized as one of the leading ecological risk assessment firms in North America, particularly agrochemical scientific/technical support, endangered species, and contaminated sites.

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STONE intrinsik
ENVIRONMENTAL



9th LATIN AMERICAN PESTICIDE RESIDUE WORKSHOP
FOOD AND ENVIRONMENT
21-24 May 2023, Panamá.

The ninth edition of LAPRW will be held in a person way, chaired by Msc. Brenda Checa and sponsored by Ministerio de Desarrollo Agropecuario.

Main topics

Advanced analytical techniques and methods,
Analytical quality control and validation,
Monitoring programs and results,
Regulatory and other issues relating to pesticide residues.

Plenary lectures from international scientists
Lectures from Latin American researchers

- young scientists' presentations
- posters and discussion
- exhibition and vendor seminars
- Round tables discussions
- social activities networking

Pre- and post-workshop courses

North American Chemical
Residue Workshop's

STUDENT *Scholarships*

**Award winners will receive \$500 and free
registration for this summer's
conference**

Requirements:

5-minute poster preview presentation
Technical poster and attendance during poster sessions

Optional:

Presenting students are invited to submit a manuscript for
publication in a special issue of the Journal of Agricultural and
Food Chemistry (JAFC).



NACRW

NORTH AMERICAN
CHEMICAL RESIDUE WORKSHOP

Ft. Lauderdale, FL
July 23-26, 2023

Applications due by
April 21, 2023

For additional information, please visit NACRW online
(www.nacrw.org) or contact Katie Carlos at
Katherine.carlos@fda.hhs.gov.



NACRW

NORTH AMERICAN
CHEMICAL RESIDUE WORKSHOP

59th Annual NACRW

Save the Date

July 23-26, 2023

**Marriott Harbor Beach Resort
Fort Lauderdale, Florida**

Join us in sunny Florida



Call for Abstracts is now open.

Submit today - We want to hear from you!

Oral Presentation Deadline: April 7, 2023

Poster Presentation Deadline: April 21, 2021

Student Scholarship Deadline: April 21, 2021

For additional information, please visit
NACRW online (www.nacrw.org)



AGRO Strategic Programming Committee Standing Programming and Champions

Additional volunteers are always welcome!

James Foster, 2023 Committee Chair; james.foster@ejgallo.com

Agrochemical Residues, Analytical and Metabolism

Chemistry, and Metabolomics

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Growth Regulators in Agriculture

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Developments in Integrated Pest Management and Resistance Management

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Ecosystem Exposure and Ecological Risk Assessment

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Environmental Fate, Transport, and Modeling of

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Human and Animal Health Protection: Vector Control, Veterinary Pharmaceutical, Antimicrobial, and Worker Protection Products

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Technological Advances and Applications in Agriculture (e.g., Nanotechnology, Biocontrol Agents, Endophytes and Microbiomes)

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ADDITIONAL SYMPOSIA AT MOST NATIONAL MEETINGS

- **Awards and Tributes**
- **Protection of Agricultural Productivity, Public Health and the Environment – General Session**
- **Special Topics**



Comments from the Vice-Chair

James Foster, 2024 Program Chair
james.foster@ejgallo.com

The Agrochemicals Division of the American Chemical Society (ACS AGRO) continues to promote innovative solutions for agricultural productivity and to advance knowledge that benefits the public and the environment. Utilizing Topic Champions, we harness the diverse scientific expertise of our many volunteers to generate symposia that interests academia, industry, and government. Please consider submitting symposium topics and actively participating as a symposium chair or co-chair. As 2023 Vice Chair, I look forward to building upon our momentum from the Fall 2023 San Francisco meeting as we **Elevate Chemistry** in the Fall 2024 ACS Meeting in Denver, Colorado.

Programming Committee. The Strategic Programming Committee, which is chaired by the Vice-Chair, provides an ongoing forum for discussion of multi-year programming based on standing topics of proven interest. This committee maintains a volunteer list of Topic Champions that supports symposium planning. Topic Champions: a) serve as a general resource and an expert in their given area and institutional memory, b) identify timely symposia topics, and c) support specific symposia through

identification and mentoring of co-organizers. If you would like to participate on the Programming Committee, have ideas for symposia, or questions, please email me.

Going Higher in Denver. The theme for the ACS Fall 2024 meeting is **Elevating Chemistry**. Brainstorming of symposium programming ideas will occur throughout our meeting in San Francisco. Stay tuned for changes as we elevate the brainstorming of our traditional event at a special event entitled *Brewing Ideas for AGRO*. However, ideas can be shared at any time by emailing me directly.

Vendor Interface Program (VIP). The Vendor Interface Program returns in Denver! At the VIP, vendors will have the opportunity to market their organization and share promotional materials while networking over a bit of food and drinks. The VIP Program provides vendors with an excellent opportunity to connect with AGRO division membership.

We thank our many volunteers and sponsors for supporting AGRO and making it the vibrant, healthy ACS division that it is. We look forward to hearing from you, your participation, and seeing you in San Francisco and Denver!

Future ACS Meetings

2023 Fall ACS Meeting & Exposition

August 13-17, 2023, San Francisco, California
Harnessing the Power of Data

2024 Spring ACS Meeting & Exposition

March 17 – 21, 2024, New Orleans, LA
Many Flavors of Chemistry

2024 Fall ACS Meeting & Exposition

August 18-21, 2024, Denver, Colorado
Elevating Chemistry

2025 Spring ACS Meeting & Exposition

March 23-27, San Diego, CA

2025 Fall ACS Meeting & Exposition

August 17-21, 2025, Washington, DC

Thinking about organizing a symposium for an ACS Meeting?

AGRO SYMPOSIUM ORGANIZERS

Will receive assistance with:




- Developing a symposium summary and Call for Papers
- Identifying co-organizers
- Brainstorming organization and/or merger with other symposium to provide a more enriched symposium
- Funding to help with travel and/or non-member registrations

7 EASY STEPS FOR ORGANIZING A SYMPOSIUM

1. Propose, adopt, or borrow a symposium topic (e.g., Chemistry for and from Agriculture)
2. Inform the AGRO Program Chair, who will add to the list and arrange for Program Committee endorsement
3. Develop a paragraph summary of the symposium scope and potential lecture topics (template is on the website)
4. Identify one or more co-organizers if desired
5. Recruit speakers and invite abstracts (Half-day = 5-8 speakers; 1 day = 12-15 speakers)
6. Review and accept abstracts, order your speakers/sessions
7. Chair the symposium session



PROGRAMMING AND OUTREACH ACTIVITIES 2023 – 2025

Activity/Event	Leaders/ Champions	Status	Actions Required
AGRO Lunch and Learn Webinar Series	Solito Sumulong	<ul style="list-style-type: none"> Seminars are being scheduled for 2023 – 2024 academic year Submit proposals for webinars 	<ul style="list-style-type: none"> Watch for eNewsletter announcements and sign-up to participate seminars planned for Spring 2023
IUPAC International Congress of Crop Protection Chemistry March 14 – 17, 2023 New Delhi, India	Laura McConnell	<ul style="list-style-type: none"> Check out the website iupac2023.in 	<ul style="list-style-type: none"> Attend the meeting
9 th LAPRW – Food and Environment Panama City, Panama May 21 – 24, 2023	Steve Lehotay	<ul style="list-style-type: none"> Check website for updates and abstract submission meeting https://www.laprw2023.com/en 	<ul style="list-style-type: none"> Register before March 17, 2023 for best rates
North American Chemical Residue Workshop 2023 July 23 – 26, 2023 Marriott Harbor Beach Resort Fort Lauderdale, Florida	Steve Lehotay	<ul style="list-style-type: none"> Check website for updates and details www.nacrw.org Co-Sponsored by AGRO 	Submit abstracts <ul style="list-style-type: none"> Oral presentations are due April 7, 2023 Poster presentations are due April 21, 2023 Student Awards applicants are being sought
2023 Fall ACS Meeting August 13 – 17, 2023 San Francisco, California	Aaron Gross	<ul style="list-style-type: none"> Symposia are set Call for papers are on ACS and AGRO website 	<ul style="list-style-type: none"> Submit abstracts by October 17, 2022 Volunteers NEEDED!!
North American Chemical Residue Workshop 2024 July 14 – 17, 2024 Marriott Harbor Beach Resort Fort Lauderdale, Florida	Steve Lehotay	<ul style="list-style-type: none"> Check website for updates and details www.nacrw.org Co-Sponsored by AGRO 	Submit abstracts <ul style="list-style-type: none"> Oral presentations typically due in March Poster presentations typically due in May
2024 Fall ACS Meeting August 13 – 17, 2024 Denver, Colorado	James Foster	<ul style="list-style-type: none"> Planning underway Symposia proposals (Call for Papers) due November 15, 2023 	<ul style="list-style-type: none"> Volunteers and champions are always NEEDED!! Attend Brewing Ideas for AGRO in San Francisco Send ideas to James
2025 Fall ACS Meeting August 17-21, 2025 Washington, DC	2024 Vice Chair	<ul style="list-style-type: none"> Symposia proposals (Call for Papers) due November 15, 2024 	<ul style="list-style-type: none"> Volunteers and champions are always NEEDED!! Attend Brewing Ideas for AGRO in San Francisco



AGRO Lunch and Learn Webinar Series

Co-sponsored by Eurofins Agroscience Services

Recordings of AGRO Lunch and Learn Webinars are freely available on the AGRO website, agrodiv.org/category/webinars/

Planning is underway for the 2023 – 2024 AGRO Lunch and Learn Webinar Series.

Submit ideas to

Solito Sumulong, solito.sumulong@agrithority.com

Committee Members:

Amanda Chen, Laura McConnell, Natalia Peranganin,

James Seiber, Tom Sparks, Daniel Swale

SPECIAL THANKS TO OUR SPONSOR FOR
THEIR GENEROUS CONTRIBUTION!



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AGRO Division Officers, Councilors, and Executive Committee

2023 AGRO DIVISION OFFICERS



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AGRO Division Past Chairs

1969	Donald G. Crosby	1988	Paul A. Hedin	2007	Laura L. McConnell
1970	Elvins Y. Spencer	1989	Gustave K. Kohn	2008	John J. Johnston
1971	Wendell Phillips	1990	Willa Garner	2009	Kevin L. Armbrust
1972	Philip C. Kearney	1991	Guy Paulson	2010	Ellen L. Arthur
1973	Roger C. Blinn	1992	Joel Coats	2011	Kenneth D. Racke
1974	Charles H. Van Middeltem	1993	Larry Ballantine	2012	Aldos C. Barefoot
1975	Henry F. Enos	1994	Nancy N. Ragsdale	2013	John M. Clark
1976	Julius J. Menn	1995	Don Baker	2014	Stephen O. Duke
1977	James P. Minyard	1996	Barry Cross	2015	Cathleen J. Hapeman
1978	Gerald G. Still	1997	Willis Wheeler	2016	Pamela J. Rice
1979	S.K. Bandal	1998	Judd O. Nelson	2017	Jay Gan
1980	Jack R. Plimmer	1999	Richard Honeycutt	2018	Scott Jackson
1981	Marguerite L. Leng	2000	Ann T. Lemley	2019	Julie E. Eble
1982	Gino J. Marco	2001	Jeffery J. Jenkins	2020	Cheryl Cleveland
1983	G. Wayne Ivie	2002	Terry D. Spittler	2021	Leah S. Riter
1984	Robert M. Hollingworth	2003	Jeanette Van Emon	2022	Qing X. Li
1985	John Harvey, Jr.	2004	Rodney Bennett		
1986	Henry J. Dishburger	2005	Allan Felsot		
1987	James N. Seiber	2006	R. Donald Wauchope		

What the AGRO Committees Do More volunteers needed!

AWARDS COMMITTEE

Purpose: This committee administers awards offered by the Division to the extent authorized by the Division Executive Committee. The awards program is an integral part of the Division, its purpose being to recognize and encourage outstanding contributions to our science and our Division.

Composition: The Awards Committee Chair is appointed. The Committee consists of ten or more members who are senior and mid-career scientists, including past Award winners and ACS and Division Fellows.

BYLAWS COMMITTEE

Purpose: This Committee ensures that the Division's bylaws are maintained in accordance with changes in Division operations and in accordance with any changes requested either by the ACS, by ACS bylaw changes, or by the Division Executive Committee.

Composition: The Bylaws Committee is appointed. Members consist of currently serving Councilors.

COMMUNICATIONS COMMITTEE

Purpose: This Committee coordinates the Division's communication and publication activities. This includes management of the AGRO Division website, publication of the *PICOGRAM*, compilation of the AGRO eNewsletter, advancement of publication efforts through ACS Books, and publicizing of Divisional activities.

Composition: The Communications Committee Chair is appointed. The Committee Chair appoints at least three additional members.

DEVELOPMENT COMMITTEE

Purpose: This Committee interfaces with the patrons of our industry to coordinate support of our Division's scientific activities.

Composition: The Development Committee Chair is appointed. The Treasurer is a member, and several other members are appointed by the Committee Chair.

EARLY CAREER SCIENTIST COMMITTEE

Purpose: This Committee promotes the interests of students, postdoctoral researchers, and early career scientists and enhances their participation in programs of the AGRO Division. The Committee oversees education and development efforts concerning early career scientists and administers the graduate student travel award program and the New Investigator Award.

Composition: The Early Career Scientist Committee Chair is appointed. The committee consists of 6 or more members including at least 2 graduate students or recent post-grads, one member of the Membership Committee, and one member of the Communications Committee.

FINANCE COMMITTEE

Purpose: The purpose of the Finance Committee is to monitor the financial activities of the Division.

Composition: The Finance Committee Chair is appointed; incumbent Treasurer is an ex-officio member. The Committee Chair nominates approximately four members who have reasonably strong financial skills.

INTERNATIONAL ACTIVITIES COMMITTEE

Purpose: The International Activities Committee (IAC) seeks to enhance the role of AGRO in the broad international scientific community and to enrich its membership experience by promoting international collaborations and interactions among its members. It exists to facilitate coordination of international activities within AGRO, and to increase the participation of scientists from all countries in AGRO. The committee also acts to provide information and support to scientists outside of the United States who are interested in AGRO.

Composition: The International Activities Committee Chair is appointed. The Committee consists of six or more members.

MEMBERSHIP COMMITTEE

Purpose: The purpose of the Membership Committee is to develop programs and activities for the recruitment of new members to the Division and to the ACS, as well as to develop activities and programs for the retention of existing members.

Composition: The Membership Committee Chair is appointed; three or more members are appointed with the advice and approval of the Executive Committee.

NOMINATING AND ELECTION COMMITTEE

Purpose: The Nominating Committee develops a slate of qualified candidates for the elected Division offices that need to be filled for the following calendar year.

Composition: The Nominating Committee Chair is the Immediate Past Chair; other members are traditionally the past two Chairs.

PROGRAMMING COMMITTEE

Purpose: The purpose of the Programming Committee is to plan, develop, and implement the Division's technical program.

Composition: The Programming Committee Chair is the Division Vice-Chair; the Division Program Chair is a committee member. The Committee Chair nominates as many members as necessary to ensure that the Division's programming requirements are met.

STRATEGIC PLANNING COMMITTEE

Purpose: This Committee will assist the Executive Committee in development and implementation of the Division's strategic plan.

Composition: The Strategic Planning Committee Chair is appointed and confirmed by the Executive Committee. The Committee Chair(s) appoint(s) eight or more members.

AGRO Division Committees

AWARDS COMMITTEE

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Jeanette Van Emon, Assistant Chair, jmvaneumon@gmail.com
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Paul Reibach, 508-317-0108, phrfect@aol.com
Andy Newcombe, 302-584-5999, andy.newcombe@arcadis.com

MEMBERSHIP COMMITTEE

Chris Bianca, Chair, 484-804-6962, chris.bianca@jrfamerica.com
MEMBERS: Steven Lehotay, Leah Riter, Daniel Swale

NOMINATING AND ELECTION COMMITTEE FOR 2023

Qing Li, Chair, 808-956-2011, qingl@hawaii.edu
Leah Riter, 636-737-9331, leah.riter@bayer.com
Cheryl Cleveland, 919-547-2407, cheryl.cleveland@basf.com

PROGRAMMING COMMITTEE FOR 2023 (see p. 20)

James Foster, Chair, 314-277-3440, james.foster@ejgallo.com
Webinar SubCommittee (see p. 22)
Solito Sumulong, 816-841-0935,
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AGRO 50TH CELEBRATION COMMITTEE

Ken Racke, Co-Chair, kenracke@gmail.com
Jeanette Van Emon, Co-Chair, jmvaneumon@gmail.com

STRATEGIC PLANNING COMMITTEE

Leah Riter, Lead Co-Chair, 636-737-9331, leah.riter@bayer.com
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Edmund Norris, Co-Chair, 352-374-5825,
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AGRO Division

Combined Governance Meeting

September 13, 2022 (virtual)

2:30 – 6:00 PM CDT

Sharon Schneider, Secretary

ATTENDANCE

Officers: Qing Li, Chair; Heidi Irrig, Program Chair; Aaron Gross, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Leah Riter, Past-Chair; Rodney Bennett, Jeanette Van Emon, Councilors; Kevin Armbrust, Alternate Councilor

Executive Committee Members (EC): Amanda Chen, Andrew Coates, James Foster, Pat Havens, Mingming Ma, Edmund Norris, Amy Ritter, Thomas Sparks, Solito Sumulong, Katoria Tatum-Gibbs, Sara Whiting

Committee Chairs: Joel Coates, Cathleen Hapeman, Ken Racke

Guests: Dena Bennett, Michael David, Shengyou Longc, Laura McConnell, Andy Newcombe, Tom Stevenson, Nurhayat Tabanca, Yi Wang

1. Welcome – Qing Li

2. 2022 Fall ACS Meeting – Heidi Irrig

- AGRO convened 21 symposia with 64 organizers. There were 247 abstracts accepted, with 38 oral sessions (18 in-person, 20 hybrid). Excellent presentations demonstrated that research and technological advances did not slow down during the COVID-19 pandemic. Sessions were well attended in-person and virtually.
- ACS Opening Keynote Session – AGRO's own Laura McConnell was a keynote speaker and gave an inspiring talk on the positive impact AGRO has had in her life and career.
- Congratulations to award winners Diana Aga, Kevin Armbrust, and Allan Felsot (ACS Fellow); Yelena Sapozhnikova (AGRO Fellow); Pamela Marrone (Kathryn C. Hach Award); Jeff Scott (ACS International Award for Research in Agrochemicals); Joel Coates (AGRO Innovation Award for Chemistry of Agriculture); Song Yang and Cai-Guang Yang (JAFI Lectureship Award); Cera Fisher (New Investigator Award); and Student Travel Award winners Juliet Ochola (first place) and Flinn O-Hara, Sara McComic, and Oluwatosin Popoola (second place ties)
- The first Grow with AGRO event was a success. Approximately 125 persons attended with many indicating interest in volunteering for a committee.

3. Plans for Spring 2023 Indianapolis Meeting – Ken Racke

- Four symposia (oral and associated posters) are planned. Abstracts are open now and will close Oct. 17. Communications are ongoing to raise awareness for AGRO spring programming; a dedicated AGRO webpage was created; brochures and announcements shared at the Chicago ACS meeting; email blasts via the AGRO network and local ACS Indy Section booth. Considering networking event for undergraduate students at Indy.
- AGRO social networking event celebrating **Crossroads of Ag Innovation** to be sponsored at Corteva HQ campus.
- **Asking for help:** submit an abstract; publicize the meeting; provide support for Program Chair and Treasurer to attend

the meeting. James Foster hopes to attend as well but is not requesting travel support.

- AGRO will try to focus on in-person sessions; will depend on the number of hybrid meeting requests.

MOTION: To enable the 2023 AGRO Division Program Chair (Aaron Gross) and Treasurer (Del Koch) to attend this additional meeting for 2023, AGRO will provide travel/hotel support not to exceed \$1100 each, plus the cost of registration.

Motion Passed.

4. Plans for Fall 2023 meeting

• **Scientific program – Aaron Gross**

- *Harnessing the Power of Data.* 30-34 idea topics submitted in Blues and Brews; Aaron will be consolidating similar ideas. Will send Call for Symposia to potential organizers with proposals due Oct. 15; will also reach out via e-mail blast.
- *Non-technical events.* The 50th anniversary tour is planned for Thursday. Whether or not there is AGRO programming on Thursday depends on the number of abstracts that are submitted.
- *Governance meeting on Sunday night?* Proposal to focus on 2 non-technical events. Blues and Brews combined with Grow with AGRO on Monday night before Sci-Mix; 50th Gala combined with AGRO awards on Wednesday. Proposal not to include VIP at San Francisco but rather substitute with sponsored tables at the 50th Gala.

MOTION: The fall 2023 Combined Governance meeting may be held via videoconference after the San Francisco national meeting.

Motion Passed.

• **AGRO 50th – Ken Racke and Jeanette Van Emon**

- Symposia
 - ✓ *Chemistry For and From Agriculture: AGRO Division Legacy and Future Opportunities* (Ken, Jeanette). 1-2 sessions focused on historic reviews and future-casting for key AGRO topics. May include the 2023 IUPAC International Harmonization Award recipient lecture. Will be immediately followed by the Gala Reception
 - ✓ *Future of Agriculture and Food: Sustainable Approaches to Achieve Zero Hunger* (Laura McConnell, *et al*). Collaborative session with AGFD, ACS journals and University of California, Davis.
 - ✓ Proposed joint virtual special issue of *J. Agric. Food Chem.*, *ACS Agric. Sci. Technol.*, and *ACS Food Sci. Technol.*
- Gala Reception
 - ✓ To be held following the 50th anniversary symposium on Wednesday evening, replacing/incorporating the traditional Divisional Awards Social
 - ✓ Food and drink, AGRO legends and ACS VIPs, award recognitions, 50th logo souvenirs, and fun.
 - ✓ Gala Table Sponsors (Andy Newcombe) Organizations are invited to prepare a table display of their history, achievements, view of the future, etc. So far, 8 sponsors identified (7 paid) carrying over from 2020 plans – will invite more.
- Agricultural Field Tour
 - ✓ Visit to agricultural sites, including University of California, Davis on Thursday (Andrew Coates, Matt Hengel). Preliminary listing of tour stops developed, with most elaborate being UC Davis

component. Still looking for a vineyard/winery for stop on way back to San Francisco. Registration process will be open to all ACS, with AGRO members given early invitation. Ensure that the tour fulfill the promise of the funded IPG.

- Communications
 - ✓ 50th webpage has recently been updated with latest details. Will work closely with Aaron Gross and Cathleen Hapeman to link 50th promotion with overall San Francisco meeting communications. Discussion needed on 50th program booklet and/or link with printed *PICOGRAM* issue for meeting. Request input for expanding the AGRO timeline and publicize the AGRO timeline.
- Budget. Estimated at \$30,000 based on earlier plans but needs a review and refresh. Right now, estimated costs are \$35K; income sources are to divert social hour funds, VIP, seek an IPG. The tour is expected to be self-sustaining – tickets would cover costs.
- Next Steps and Needs: Gala Reception planning, additional volunteers (Racke Van Emon, Katoria Tatum-Gibbs, others?), Ag Field Tour volunteers, including education component leader (IPG), periodic 50th coordination sessions (Racke, Van Emon, Coates, Newcombe, Gross, Irrig, others?)
- **VIP – Andy Newcombe**
 - Not planning to proceed with VIP in 2023. Andy will help coordinate the gala and seek sponsorships.

5. Councilor's Report – *Jeanette Van Emon, Rodney Bennett*

- Council meeting was hybrid. Main action was that the board will be looking more at Diversity and Inclusion. Looking for a new CEO of ACS. Working groups are working on publishing – open access and financial impact on ACS, and membership – members can now join ACS and to AGRO free for one year. Additional funding is available to Divisions and local sections.
- Having all-virtual meetings was voted down. DAC's authority was extended to help Divisions that are struggling in the same way that Local Sections Activities Council can help local sections. ACS President Wilson is interested in increasing the value of ACS membership.

6. Strategic Planning – *Leah Riter*

- IPG for strategic planning is in place. Leah Riter, Ed Norris, and Kevin Armbrust are co-leading; they represent a cross-section of the disciplines: academia, government, and industry. The retreat will be in Washington, DC at the ACS HQ. More details on dates and agenda will be developed. Asking for an ACS facilitator. **They would like 12 – 15 AGRO members to participate in the retreat.**

7. ACS Publications Report – *Thomas Hofmann, Laura McConnell, Qing Li, Cathleen Hapeman*

- Editor-in-chief of *JAFAC*, *ACS Ag S&T*, and *ACS Food S&T*, Thomas Hofmann could not attend the meeting. He conveys his appreciation for support from the AGRO Division and its members.
- ACS started two new journals associated with *JAFAC* in 2021. They are *ACS Agricultural Science and Technology*; Laura McConnell as the Deputy Editor-in-chief; and *ACS Food Science and Technology*, Coralia Osorio Roa as the Deputy Editor-in-chief. Both are now at the second volume. There will be a joint virtual special issue of the three journals. The Call for Papers for our *Virtual Special Issue on The Future of Agriculture and Food: Sustainable Approaches to Achieve*

Zero Hunger is now published; please see here:

<https://axial.acs.org/2022/08/19/call-for-papers-virtual-special-issue-on-the-future-of-agriculture-and-food-sustainable-approaches-to-achieve-zero-hunger/>

- Proposals for invited reviews for *JAFAC* are considered; speak with Li or Hapeman for more information.

AGRO COMMITTEE REPORTS

8. Awards – *Qing Li*

- See *PICOGRAM* for full report.
- Instructions and deadlines for award nominations are in the *PICOGRAM* and on the website. The nomination deadline is December 31st of each year for the ACS International Award for Research in Agrochemicals (sponsored by Corteva) and the ACS Award for Innovation in Chemistry of Agriculture (sponsored by BASF). These awards are critical for AGRO. The Vice Chair is responsible for ensuring nominations of AGRO members for AGRO Fellow. The deadline is March 31st. The USDA-ARS Sterling Hendricks Memorial Lectureship (sponsored by USDA-Agricultural Research Service) and Kenneth A. Spencer Award (sponsored by KC section of ACS) are both co-sponsored by AGFD and AGRO. Steve Duke, Sterling Hendricks lecturer, was taken ill at the meeting and will give his talk during an AGRO Lunch and Learn. The lecture can be found at
- A suggestion has been made to the Development Committee that sponsors should consider increasing the amount of their sponsored award, particularly the International Award for Research in Agrochemicals. The award was initiated in 1969 at \$5000, and is still \$5000. The award for Innovation in Chemistry of Agriculture started in 2012 at \$5000 and also has not increased. Might the current sponsor wish to increase their sponsorship, or would an additional sponsor wish to co-sponsor the award? Also consider increasing the level of sponsorship required for each level of sponsorship. In all things relating to sponsorship, caution and diplomacy are in order. The Development Committee will take this in advisement. <https://www.ars.usda.gov/research/lectures/hendricks/>
- In addition to AGRO awards, please nominate AGRO members for ACS fellows, other ACS awards, and other awards.

9. Bylaws – *Rodney Bennett*

- Division bylaws will be simplified and approved by the constitution and bylaws committee of ACS. Will be released this year.

10. Communications – *Cathleen Hapeman*

- Thanks to Pat Havens and Ed Norris for taking over e-newsletter and website, and thanks to Laura McConnell for training them. Norris will be refreshing content on website soon. *PICOGRAM* will be printed once the paper shortage is alleviated. The Spring *PICOGRAM* will be electronic; may be an abbreviated one for the Indy meeting. There is a call for papers on the website now for the Indy meeting.

11. Development – *James Foster, Mingming Ma*

- 2022 sponsorship totaled \$34K from 11 sponsors: \$21K for awards, \$4K for symposia, and \$9K for *PICOGRAM* advertisements.
- Sponsorships for the Spring 2023 meeting are budgeted, including \$1K from the 2,4-D Industry Task Force II for symposium sponsorship and an unspecified amount in the range of \$19K – \$24K from Corteva.

- Sponsorships for the Fall 2023 meeting are being secured, including a \$5K pledge from BASF to sponsor the Innovation Award.
- Sponsorship request letters were sent out in early February 2022. All AGRO members were sent a sponsorship request letter and it was also posted on the AGRO website.
- The Development Committee will send thank you letters to all sponsors in September or October. The committee will collect sponsors' ads for inclusion into the *PICOGRAM* going forward as a regular responsibility of the committee.

12. Early Career Scientists – Aaron Gross, Sara Whiting

• Student Travel Awards

- For the 2022 National Meeting, a total of 8 travel award applications were received with 7 awards given to students from 4 universities (5 universities applied to the program). The number of 2022 applicants increased from the 2021 virtual meeting, but the number of applications are still down from the 27 award applications (and 20 awards given) for the Fall 2020 meeting. This past Fall meeting (2022) was the first year of an in-person meeting after reimplementing the travel award for poster presentations only (even though students can, and are encouraged, to submit a paper for a separate paper presentation).
- The cost of the student travel awards for 2022 was \$7,000, with each student receiving \$1,000 to defray travel costs and meeting registration. An additional \$600 was given to four poster winners:
 - ✓ First Place: Juliet Ochola (North Carolina State University) – Cash award \$300
 - ✓ Three-way tie at second place – Cash award \$100 (each): Flinn O'Hara (Louisiana State University), Sarah McComic (Louisiana State University), Oluwatosin Popoola (Clarkson University)
- The committee encourages AGRO to continue to evaluate the poster only format for travel award recipients

• Graduate student lunch

- Sara Whiting organized the graduate student lunch with a focus on networking (speed-dating style) with six individuals from industry, contract testing labs, academia, and government. A total of 18 early career scientists (graduate students and postdocs) participated (25 RSVP'd).
- The committee intends to continue with this format and alter the event name to be inclusive of post-docs and graduate students.

• New Investigator Award

- There were seven New Investigator Award applications for the 2022 Fall Meeting. Three finalists were chosen: Ellis Johnson (University of Nebraska), Anais Le Mauff (University of Orléans), Cera Fisher (Cornell University).
- The 2022 NIA winner was Cera Fisher
- The committee suggests increasing the award amount from \$1,275 to \$2,500, which may require moving from a reimbursement to an award, which may change from year-to-year, and which may have complications with sponsor (Syngenta). They further suggest enhancing the rules for applicants and adding clarity. This could include allowing the NIA to be given once to a person but also allow applicants to be finalist two (or maybe three) times.

• Early Career Symposia

- There were two Early Career Symposia at the Fall 2022 meeting: Deciphering plant-insect -microorganism signals for sustainable crop production; and climate change and sustainable agriculture: Impacts on food security/trade, risk assessment and pesticide fate studies (including Early Career Symposium)
- The committee suggests identifying early career scientist(s) to organize symposia at the Fall 2023 meeting (San Francisco) with a focus on the meeting theme (harnessing the power of data), which may include bioinformatics, and reinforcing guidelines to have the symposia speakers primarily comprised and led by early career scientists.

13. Finance – Joel Coats

- The AGRO Division Education Trust Fund is managed by J. P. Morgan. That fund now has a total of \$429,864 in it, as of July 31. The Equity sub-account (stocks) has \$340,782, which is down 13.8% since January 1. The Cash & Fixed Income sub-account (money markets and bonds) is showing a balance of \$89,033, which is down 7.8% since the first of the year. The Equity portion is designed for growth, while the Cash & Fixed Income portion is the more conservative portion. At this point, 78% of the total is in the Equity fund, while the Cash & Fixed Income part represents 22% of the total funds.
- The AGRO Division's other major holding is a Spectrum Income Fund, which is managed by T. Rowe Price. The balance in that account is \$193,431 as of August 31. This stock fund has lost 9.8% since the first of the year.
- The total in these two major investment funds is now \$623,000; that represents a decrease of 10.5% in the past year. Our August 2019 total value was \$590,000; in 2020 it was \$576,000. After those two down years, the investment value hit a new high in 2021 (\$696,000). In August 2022, the value is down 10.5% compared to August of last year. However, that current total is 7.5% higher than in 2020. Values reflect market volatility.

14. International Activities – Ken Racke, Carmen Tiu

- AGRO will sponsor \$1K in poster awards at the LAPRW 2023 to be organized in Panama.
- AGRO will host an exhibit booth at the 15th IUPAC Congress, New Delhi, India, March 14-17, 2023.
- Presentation of the IUPAC award for Internationally Harmonized Approaches to Crop Protection Chemistry is tentatively targeted for Fall 2023 ACS meeting in San Francisco.
- Future proposals
 - Develop an International Activities webpage within the AGROdiv website.
 - Increase cooperation with the African chapter of the AOAC.
 - Develop an AGRO International Exchange program (Chris Peterson, lead) to increase AGRO international outreach. Full proposal for administering the program will be circulated in 2023.
 - Develop cooperation with the Agrochemical Division of the Chinese Chemistry Society. Racke and Tiu had a teleconference and discussed cooperation.

15. Liaison – Kalumbu Malekani, Sasha Kweskin

No report

16. Membership – Chris Bianca

- The committee is working on connecting with more members to participate in the membership committee and help with promotions; still attempting to start the interviewing/podcast of long-time members with great stories within AGRO ACS; incentives to promote more people to sign up to the AGRO section

17. Nominating and Elections for 2024 – Qing Li

- The Division is always looking for qualified candidates. Send ideas to Qing Li. Election will be in June 2023.

NEW BUSINESS

18. Volunteer Sign Up List

- AGRO volunteer contact tracking:
<https://drive.google.com/file/d/1KDakkl5985XjznityRW4vaXUtt9XLjZd/view>

19. Proposal to Create AGRO History Committee, AGRO Archive, and Archivist – Ken Racke, Sharon Schneider

- The sub-committee of Ken Racke, Sharon Schneider, Amy Ritter, and James Foster recommend that AGRO appoint a temporary Operations Manual revision committee who would coordinate a revision and then dissolve. Schneider agreed to initiate this effort by circulating the Operations Manual to current and recent officers and committee chairs and asking them to suggest revisions on roles, responsibilities, and timelines. [Post-meeting update: manual was distributed for revisions with responses requested by Dec. 31, 2022.]
- The committee proposes to appoint a standing history committee, with the first priority task being to advance plans for advancing an AGRO archive plan, including defining the AGRO archivist role and establishing any initial policies/decisions needed for a contracted archivist to be retained and to start work at collecting and maintaining the archive. Once the archivist position was retained, this person can proceed in cooperation with the Secretary, Committee Chairs, etc., and the history committee's attention can be placed on next priority activities. Racke agreed to chair the history committee as a start.

MOTION: AGRO will create an History Committee.

Motion Passed.

19. Requests for Funding

MOTION: AGRO will approve up to \$500 per year to maintain agrodiv.org email accounts.

Motion Passed.

20. Northeastern Regional Meeting Funding Request.

- AGRO often requests sponsorship of regional meetings, and we have not provided funding unless there is AGRO-related programming at the meeting.

AGRO Division Virtual Meeting

December 2, 2022

1:00 – 2:30 PM CDT

Sharon Schneider, Secretary

ATTENDANCE

Officers: Heidi Irrig, Chair; Aaron Gross, Program Chair; James Foster, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Qing Li, Past-Chair; Rodney Bennett, Councilors

Executive Committee Members (EC): Dena Barrett, Amanda Chen, Kalumbu Malekani, Ed Norris, Natalia Peranginangin, Amy Ritter, Tom Sparks, Solito Sumolong, Daniel Swale, Sara Whiting

Committee Chairs and Guests: Cathleen Hapeman, Mingming Ma, Laura McConnell, Nurhayat Tabanca, Sasha Kweskin

1. Welcome – Heidi Irrig

2. Spring 2023 ACS Meeting Update – Aaron Gross and Ken Racke

- **Spring 2023 ACS Meeting Registration and Housing**
Will open December 12
- **Technical Program of Symposia**
 - Four AGRO symposia organized for 101 submitted abstracts
 - 82 oral papers organized into 11 half-day sessions (5 in-person and 6 hybrid requested)
 - 19 posters organized into one combined in-person (18) and one virtual (1) session
 - AGRO symposia nominally co-sponsored by AGFD (4), ENVR (3), and CHED (1)
 - AGRO nominally co-sponsoring ORGN (1) and AGFD (1) symposia
 - MAPS closing to edits on December 20
 - In September, ACS had given AGRO a waiver that permitted unequal programming with sessions only on Monday, Tuesday, and Wednesday. This morning, ACS notified Aaron Gross that AGRO is now required to program on Sunday through Thursday and we cannot exceed our allotment of sessions. We are not allowed to return hybrid rooms in favor of in-person only. Aaron Gross is trying to work with Meetings and Abstracts to get one answer. Still awaiting final approval of proposed AGRO symposia distribution.
[Post-meeting update: ACS permitted AGRO a waiver from the even-programming rule (as they had earlier indicated before retracting), by allowing us to not program on Thursday (and shift our one symposium from the Thursday morning "dead zone" to an extra slot that became available on Tue afternoon). Rod Bennett's assistance was key in getting connected with the new ACS leadership to consider our needs.]
- **AGRO Social Networking Event**
Planned for Wednesday evening, March 29
 - Billed as *Crossroads of Ag Innovation* event to play off ACS Indy meeting theme
 - Hosted and sponsored by Corteva at its headquarters campus; food/drink by Corteva
 - Complimentary shuttle bus transportation has been arranged between Convention Center and Corteva site
 - Innovative program of food, games, VIP addresses, photo booth, etc. in planning
 - ACS President-Elect Judy Giordan tentatively confirmed as keynote speaker
 - Attendee registration process to be handled online via ACS and open to all ACS members
- **AGRO Outreach Booth**
To be organized for the Indy meeting
 - To take advantage of unique mix of AGRO members and non-member local scientists
 - Ken Racke will be coordinating the booth, but will need volunteers

- For the booth, a new AGRO table banner, Division poster, top-up supply of pins, and membership flyer are being ordered or prepared; need Fall 2023 promo materials

- **Communications** – *Cathleen Hapeman*

Ongoing to raise awareness for AGRO spring programming

- Dedicated AGRO webpage created: www.agrodiv.org/event/2023-acs-spring-national-meeting/
- Email blasts via the AGRO network and local ACS Indy Section will be planned leading up to the meeting
- A Spring 2023 PICOGRAM is being planned to assist Indy meeting activities
 - ✓ Reduced page-count (40 max) and simple binding will keep costs low
 - ✓ Printed version of 250 copies for Indy attendees; all others to access e-version via website
 - ✓ Estimated cost of \$1,600 plus shipping already included in approved 2023 AGRO budget
 - ✓ Deadline for content submissions is February 1, 2023

3. Fall 2023 ACS Meeting – *Aaron Gross*

- **Technical Program**

- 33 symposium calls for papers; some may be combined depending on submissions.
- Approached by ENVR to co-sponsor a symposium: *Advanced materials and technologies for the detection and treatment of PFAS and other emerging contaminants*. Kalumbu Malekani volunteered to co-organize.
- [Post-meeting update: This symposium is moving forward with Kalumbu Malekani as co-organizer]
- MAPS will be open January 9 through April 4, 2023. April 4 will be the deadline for NIA and Student Travel Award nominations, as well.
- Symposium organizers will have about 1 week to return their workbooks; Program Chair has 1 week to assign sessions. Schedule slated to be complete by May 1.
- ACS allocated AGRO 38 on-site half-day sessions. In Chicago, we had 49. May be allowed to request more if we receive a large number of abstracts. Room formats and hybrid options are not known at this time. We could elect to do virtual and in-person only (not hybrid).

- **Business and Social Activities**

- There will be no in-person Governance meeting in San Francisco.
- Considering having *Blues and Brews*-type event (programming for Denver) mixed with *Grow with AGRO* on Monday evening, followed by SciMix.
- Tentatively planning 50th anniversary half-day symposium on Wednesday afternoon with the gala 4-8 pm on Wednesday. Gala will include food and drink, awards social, and cake. Tour scheduled for Thursday. Will likely need to program on Thursday morning to comply with ACS requirements.

4. Councilor Update

- Al Horvath is new CEO of ACS. He had previously been CFO. We need to ensure that ACS's new membership structure is sent to constituents. Membership and allocations to the Divisions are based on full members (not free members that are "auditing").

- Persons attending the Leadership Institute should be getting their invitations soon. The institute commences in person January 20-22, 2023.

5. Awards Committee – *Qing Li*

- Awards committee requested nominations for International and Innovation Awards – deadline is December 31. AGRO Fellow Award nomination deadline is March 31. ACS Fellow deadline is April 1, for which AGRO can nominate up to 4.
- An AGRO sub-committee (with members beyond the Awards Committee) is reviewing awards as USDA-ARS is discontinuing their support of the ACS component of the Sterling Hendricks Lectureship award presentation. May also consider requesting that honoraria be increased for AGRO's International and Innovation awards.

6. Strategic Planning Committee – *Ed Norris*

Leads have not been contacted by ACS, so they will be contacting Cassandra at ACS. Retreat tentatively scheduled for second quarter of 2023.

7. Webinars – *Solito Sumulong*

- There are 6 topics already identified for 2023. Steve Duke is scheduled for March 8.
- Still soliciting topics/speakers. Laura McConnell's ACS Zero Hunger Summit was suggested.

8. Communications Committee – *Cathleen Hapeman, Ed Norris, James Foster*

- Ed Norris worked with Ken Racke to draft an AGRO poster and marketing cards with the QR code linked to the membership application plus updated photos. Laura McConnell will take the poster to Indianapolis and New Delhi IUPAC. Could also display at SETAC Europe if anyone is attending.
- Development Committee received confirmation that there is limited space for ads in the short 40-page spring printed Picogram They will inform sponsors that ad space is first-come/first-served.
- Heidi Irrig requested that any volunteers who are interested in content development and communications should step up to help Cathleen with the *PICOGRAM*.
- Solito Sumulong will handle the Division's LinkedIn account.

9. Operations Manual Update – *Sharon Schneider*

Updates be returned to her by December 31.



AGRO Councilors' Report: Actions from ACS Board of Directors Meeting on August 19 – 20, 2022 and Summary of ACS Council from Hybrid Meeting on August 24, 2022

Jeanette M. Van Emon and Rodney Bennett, Councilors

Actions Summary for ACS Board of Directors

The Board received an extensive briefing and approved several recommendations from its Committee on Executive Compensation. The compensation of the Society's executive staff continues to be reviewed regularly by the Board.

- On recommendation of the Committee on Publications, the Board voted to approve the reappointments of Editors-in-Chief for several ACS journals. The reappointments will be announced once the individuals have been notified and appropriate arrangements for their continued service have been made.
- Upon recommendation of the Committee on Professional and Member Relations, the Board approved an ACS Nominee for the 2023 Perkin Medal.
- The Board approved amendments to the ACS Disaster Policy to include provisions on how and when to respond to human-made disasters and to ensure that the scope includes the *broader chemistry enterprise*.
- The Board Working Group on Structure and Representation drafted, and the Board approved, amendments to the Board Regulations resulting in most Board Committee terms becoming three years with a maximum of two terms in alignment with other Society Committees.
- The Board Working Group on Structure and Representation was asked to draft appropriate petitions to amend the ACS Governing Documents to incorporate international representation on the Board. Representation on the working group will be broadened to include members from the various committees: Council Policy; Nominations & Elections; International Activities; Constitution & Bylaws; and other Society stakeholders. The Board looks forward to ensuring international members have a voice and a vote on the Board of Directors.

The Board received an extensive report from the Society's CEO on issues relating to ACS Core Values, Membership, Strategic Initiatives, Financials, and upcoming events and activities. As part of the report, an update on the ACS Campaign for a Sustainable Future Strategic Initiative was provided by the ACS Director on Scientific Advancement.

Council Election Results

- **Council Policy Committee (CPC).** The Council elected Raychelle Burks, Anne M. Gaffney, Will E. Lynch, and Frankie K. Wood-Black for a three-year term (2023 – 2025). Lydia E.M. Hines was elected to serve through 2023.
- **Committee on Committees (ConC).** The council elected William F. Carroll, Jr., Ella L. Davis, Carmen Gauthier,

Thomas H. Lane, and Jason E. Ritchie for a three-year term (2023 – 2025).

- **Committee on Nominations and Elections (N&E).** The Council elected Michelle V. Buchanan, Alan B. Cooper, Kelly M. Elkins, Ellene Tratras Contis, and Kathryn E. Uhrich for a three-year term (2023 – 2025).

Highlights from Committee Reports and Key Actions

- The fall 2022 meeting was held in a hybrid manner from August 21-25. As of August 24, there were 11,619 registrations (9,355 in-person and 2,264 virtual).
- The Vice Chair of the Council Policy Committee (CPC) reported that both Council meetings in 2023 will be held in a hybrid manner, very similar to what Councilors experienced in Chicago. Councilors celebrating milestone anniversaries were acknowledged and thanked for their years of service on Council.
- The Chair of the Committee on Committees (ConC) recognized those chairs terming off various committees and thanked them for their service. Newly appointed chairs of committees that report to Council were announced to all Councilors and Councilors were reminded of the new online committee preference form that was open over the summer to solicit names of individuals interested in serving on ACS Society Committees.
- On the recommendation of the ConC, and with the concurrence of the CPC, Council approved the continuation of the Committee on Public Relations and Communications (CPRC).
- On the recommendation of the Committee on Nominations and Elections (N&E), and with the concurrence of the CPC, Council approved the Petition to Amend the Elections Function. This action helps to clarify, consolidate, and re-order existing requirements related to nominations and elections.
- On the recommendation of the Committee on Divisional Activities (DAC), and with the concurrence of the CPC, Council approved the Petition to Amend the Duties of the Committee on Divisional Activities, providing greater authority to step in and assist Divisions who have inactive Executive Committees.
- On the recommendation of the Committee on Local Section Activities (LSAC), and with the concurrence of the CPC, Council approved the Petition for a change in Section Name from the Northeast Tennessee Section to the Tennessee-Virginia Highlands Local Section.
- On the recommendation of the Committee on Membership Affairs (MAC), and with the concurrence of the CPC, Council approved the Petition to Amend the Application and Dues Process for Corporation Associates, allowing Corporation Associates to set fees based on a sales revenue model.

Council Special Discussion

President Wilson introduced and led a special discussion on *ACS for the Future*. She sought Councilor input on positive initiatives, programs or events that would greatly benefit ACS members or ACS at large. Three specific questions were posed to Councilors for their input and suggestions:

1. What can be accomplished to enhance the ACS experience?
2. Why (or how) do you think it would make a difference?
3. Who would be tasked with leading this effort (e.g. a section, committee, division, or other)?

Councilors provided their ideas and thoughts, and relevant Society units will receive this input within the next several weeks.

Council Resolutions Passed

- In memory of deceased Councilors: N. Bhushan Mandava, Carol Mosher, and Paul V. Smith.
- Congratulating Thomas Connelly for his leadership as Chief Executive Officer of the American Chemical Society for the past eight years.
- Expressing thanks to the officers and members of the Chicago Local Section as well as to the divisional program chairs and symposium organizers responsible for the outstanding technical sessions.
- Acknowledging Angela Wilson's service as ACS President and presiding officer of Council.

Special Notes from 2022 and 2023

- The Board of Directors has selected Albert G. Horvath, ACS Treasurer and Chief Financial Officer (CFO), as the Society's next CEO, effective Jan. 1, 2023. He succeeds Thomas Connelly Jr., who retired after nearly eight years with ACS.
- The ACS announced in 2022 the establishment of a Chief Operating Officer (COO) position, naming LaTrease Garrison as its inaugural COO. Garrison will continue to provide leadership and direction for programs in the areas of human resources, corporate development, membership, education, and scientific advancement.

Please let your Councilors know if you have any questions or comments regarding this report.

NOTES

American Chemical Society

AGRO Division

ACS Hybrid Meeting and Exhibition

March 26 – 30, 2023 (Eastern Daylight Time)

Indiana Convention Center and Crowne Plaza Union Square

Indianapolis, Indiana, USA

Aaron Gross, *Program Chair*, Heidi Irrig, *Division Chair*

PROGRAM

DIVISION BUSINESS AND PLANNING

These activities will be held virtually over the next few months following the Spring meeting and at the Fall ACS National Meeting in San Francisco, August 13 -17, 2023.

SOCIAL EVENTS

AGRO Coffee Breaks/Intermissions

Victoria Station Foyer (Crowne Plaza Indianapolis Downtown Union Square)

MONDAY, 9:20 – 9:50 AM, 3:45 – 4:15 PM

TUESDAY, 9:45 – 10:15 AM, 3:45 – 4:15 PM

WEDNESDAY, 9:45 – 10:15 AM, 3:20 – 3:50 PM

AGRO Social Networking Event

CROSSROADS OF AG INNOVATION

WEDNESDAY, 6:00 – 8:00 PM

- Hosted by Corteva Agriscience at its headquarters facility in Indianapolis
- Complimentary bus transport arranged by Corteva (*no private vehicles*)
- **Buses departing between 5:00 to 5:15 PM** from the Convention Center, Maryland Street Entrance (*assemble by signage*)
- Heavy appetizers and complimentary drinks
- Games and prizes
- Networking and engaging
- Presentations by ag and chemistry leaders
- Agriculture and agrochemical information displays
- **IMPORTANT: Ticketed event** for AGRO members and friends **who registered in advance** during ACS meeting registration of added via the ACS Registration Resource Center (*drop-ins not available*)
- AGRO members without tickets wishing to inquire about possible attendance should contact Pat Havens at pat.havens@corteva.com for waitlist status

AGRO POSTERS

AGRO Poster Session

MONDAY, 12:00 – 2:00 PM

Hall F-H, Indiana Convention Center

Sci-Mix and Division Row Poster Session

MONDAY, 8:00 – 10 PM

Hall F-H, Indiana Convention Center

MONDAY MORNING

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Themes: Green Chemistry, Industry

David Jones, John Rohanna, *Organizers, Presiders*

Tobias Harschneck, Lucas Huntimer, Leah Riter, *Organizers*

Oral – Hybrid

Victoria Station C/D, Crown Plaza Union Square

8:00 AM – Introductory Remarks

8:05 AM – 3824387. Strategies for the design and development of sustainable crop protection solutions. **Mark Pobanz**, Ann Buysse, John Rohanna, Yu Zhang, Guomin Shan

8:30 AM – 3816637. 1,2,4-triazole-aryl-amides as photosystem II inhibitors. **Jeremy Wilmot**, Dilpreet Riar, David Demeter, Yu Zhang

8:55 AM – 3818615. Synthesis and biological activity of 6-arylpicolinate herbicides with 3,4-disubstituted aryl tails. **Joseph Eckelbarger**, Jeffrey Epp, Natalie Giampietro, Joshua Roth, Christian Lowe, Paul Schmitzer, Norbert Satchivi, Nicholas Irvine, Noormohamed Niyaz, Jeremy Kister

9:20 AM – Intermission

9:50 AM – 3814390. Antimicrobial synergy assessment of nano-magnesium hydroxide and sodium polysulfide for crop protection. **Jorge Pereira**, Edwin Davidson, Javier Rivera-Huertas, Swadeshmukul Santra

10:15 AM – 3825364. Fungicidal kinase inhibitors. **Jeffrey Epp**, Cruz Avila-Adame, Paul LePlae, Maurice Yap, Jessica LaRocca

10:40 AM – 3827401. Natural volatile compounds as possible insecticides. **Cesar Sierra**, Daniel Victoria-Muñoz, Erika Plazas-Gonzales, Angie Daniela Torres Garcia

AGFD Division

Agri-Food Sustainability at a Crossroads: Challenges of the Food, Energy, and Water Nexus

Co-Sponsor: AGRO

Michael Appell, Lingyun Chen,; Vinka Craver, Omowunmi Sadik, Y. Jane Tseng *Organizers, Presiders*

8:00 AM – 12:00 PM

Oral – Hybrid

Grand Central Station B, Crowne Plaza Union Square

AGRO POSTER SESSIONS

12:00 – 2:00 PM

**** Poster – In-person only ****

Hall F-H, Indiana Convention Center

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Themes: Green Chemistry, Industry

David Jones, John Rohanna, *Organizers, Presiders*

Tobias Harschneck, Lucas Huntimer, Leah Riter, *Organizers*

- 3813217.** Optimization of droplet leaf spreading assessment with novel use of videometer. **Brandon Downer**, Leandro Cordova, Krista Scharnak, Grant Kippenbrock
- 3816646.** Increased throughput approach to measure pesticide active ingredient penetration through plant cuticles under controlled condition. **Natasha Freeman**, Leandro Cordova, Ke Min, Toby Cicak
- 3817425.** Integrated AlphaFold based protein modeling and virtual high throughput screening (vHTS) approach for hit generation and target discovery. **Pulan Yu**, Scott Smith, Alamgir Rahman, Yannick Djoumbou Feunang, Yu Zhang
- 3819257.** Microbial biotransformation screen for metabolite profiling and generation. **Chris Brown**, Yelena Adelfinskaya, Jesse Balcer, Serge Fotso, Paul Graupner, Matt Chase, Deepa D Acharya, Elizabeth McCusker, Yannick Djoumbou Feunang, Bruce Bell, Elizabeth Ibwe, Jeffrey Gilbert
- 3819316.** Agrochemical metabolite identification aided by plant cell culture experiments. **Jesse Balcer**, Yelena Adelfinskaya, Chris Brown, Michael Madary, Jeffrey Gilbert, Suresh Annangudi Palini
- 3820698.** Alternate chromatographic approaches aiding in separation and identification of relevant metabolites. **Krishnamoorthy Kuppannan**, David Robbins, Chris Brown, Mary Madeline Willis, Xiao Zhou, Yelena Adelfinskaya, Jeffrey Gilbert
- 3822301.** Non-traditional routes to identify significant photodegradates from an herbicide photolysis study. **Rohit Bhandari**, Chris Brown, Douglas Bland, Paul Speakman, Serge Fotso, Laura Laughlin
- 3826315.** Sweet and sour anthelmintic formulations: Thiabendazole. **Lida Aeindartehran**, Jonathan Lefton, Daniel Unruh, Tomče Runčevski
- 3828259.** Exploring the effect of methoxylated sucrose soyate polyol-based nanoparticles as fungicide delivery system for agricultural crops. **Raj Shankar Hazra**, Jayanta Roy, Long Jiang, Dean Webster, Mukhlesur Rahman, Mohiuddin Quadir
- 3828690.** Comparison of the extractability of pesticides from soil using different extraction methods. **Siqi Cao**, Annika Fahs, Michael Shepard
- Advancing Agrochemical Regulation, Education, and Public Policy in an Age of Skepticism and Scientific Illiteracy**
Co-Sponsors: AGFD, CHED, ENVR
Ronda Hamm, *Organizer, Presider*
Genevieve OSullivan, Carmen Tiu, *Organizers*
- 3815074 -** Should residue accumulation be considered for permanent and semi-permanent crops? **Jing Wang**

Understanding Environmental Quality and Health in Agroecosystems

Co-Sponsors: AGFD, ENVR

Adam Dolezal, Patrick Havens, Tamara Lunsman,

Organizers, Presiders

- 3819539.** Development of new strategies to address NER in soil. **Chloe De Perre**, Abigail DeMeyer, M Swift, Sharry Fears, Christopher Bianca, Shane Ring
- 3822010.** Fluorescent nematicidal chalcones. **Sabrina Dilts**, Anna Vo, Presenter, Monica Lopez, Daniel Zamudio, Austin DuBose, Angelica Cash, Carolyn Arpin
- 3825041.** Refinement alternative for rice paddy modelling of agrochemicals in Southern Europe. **Shiran Qiu**, Amy Ritter
- 3825374.** Thiocloprid detoxification capabilities of virus infection-recovered honeybees. **Vincent Prayugo**, Adam Dolezal
- 3825660.** Effects of fungicide exposure on Daphnia-Metschnikowia disease dynamics. **Jeannette Cullum**, Carla Cáceres
- 3848577.** Eat healthy or die young: Interactions between diet, pesticides, and viruses in honeybees. **Edward Hsieh**, Adam Dolezal

**** Poster – Virtual Sessions Only ****

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Themes: Green Chemistry, Industry

David Jones, John Rohanna, *Organizers, Presiders*

Robb DeBergh, Tobias Harschneck, Lucas Huntimer, Leah Riter, *Organizers*

- 3823938.** Smartphone application for nucleic acid detection-based biosensor technologies in agricultural food production. Taha Bayindir, Mehmet Degirmenci, Musa Unal, Hulya Eraslan, Ali Ergenc, **Meltem Elitas**
- 3824521.** Nitrogen-fortified humic acid-modified rock phosphate hybrid as a precision release nitrogen and phosphorous plant nutrient formulation. Nimshi Fernando, Imalka Munaweera, Nilwala Kottegoda, **Sayani Nimanka**

Midwest Row Crop Revolution: Agrochemistry State of Affairs After a Quarter-Century of Biotech-Enabled Agriculture

Co-Sponsors: AGFD, BIOT, ENVR

Theme: Industry

Financial Co-Sponsor: Industry Task Force II on 2,4-D Research Data

Thomas Mueller, Kenneth Racke, Fred Whitford, *Organizers, Presiders*

- 3822791.** What needs fixing: Identifying new pest resistance genes in maize and determining functionality of coded proteins. Eric Johnson, **Patrick Dowd**, Todd Naumann

MONDAY AFTERNOON

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Themes: Green Chemistry, Industry

David Jones, John Rohanna, *Organizers, Presiders*

Tobias Harschneck, Lucas Huntimer, Leah Riter, *Organizers*

Oral – Hybrid

Victoria Station C/D, Crown Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3820303. On-demand synthesis. **Timothy Jamison**

2:30 PM – 3820150. Tigolaner: Innovation story of a new bispyrazole allosteric modulator of GABA-gated channel and its use as a spot-on ectoparasiticide in animal health. Norbert Mencke, Klaus Raming, Ulrich Ebbinghaus-Kintscher, Andreas Turberg, **Michael Maue**

2:55 PM – 3816920. Development and scale up of cryogenic lithiation in continuous flow reactors. Samrat Mukherjee, Julio Gutierrez, Mark Ondari, **Jayachandran Devaraj**, Siyu Tu, Paul Speakman, Abraham Schuitman, Brian Scherzer, Lizhu Lin

3:20 PM – 3807520. Automated synthesis: Towards a decentralized synthesis network. **Kerry Gilmore**

3:45 PM – Intermission

4:15 PM – 3827608. Continuous flow synthesis of A2E guided by design of experiments and high-throughput studies. David Thompson, Marcelo Nociari, Kalpita Banerjee, **Giulia Murbach-Oliveira**

4:40 PM – 3824471. Sulfoxafloer and bees: What's the buzz? 10+ years on. **Vincent Kramer**

5:05 PM – 3827327. Application of high-throughput experimentation methods to guide scalable flow syntheses. **David Thompson**

Understanding Environmental Quality and Health in Agroecosystems

Co-Sponsors: AGFD, ENVIR

Adam Dolezal, Patrick Havens, Tamara Lunsman,

Organizers, Presiders

Oral – In-person only

Haymarket Station B, Crowne Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3817627. Repurposing non-target plant bioassays for compost risk assessment. **Chloe De Perre**, Yunjie Ding, Travis Bui, David Barnekow, Brian Beato, John Marton

2:30 PM – 3826504. Incorporating the US EPA's PAT assessment tool into the TERESA modeling suite for determining pesticide risks to threatened and endangered species in the United States. **Dwayne Moore**, Scott Teed, Hendrik Rathjens, Michael Winchell, Twyla Blickey, Patrick Havens

2:55 PM – 3820934. Toxicity of fungicides and fungicide-insecticide combinations on honeybee larvae. **Angelica Sanchez**, Benedict DeMoras, Daiana Almeida de Souza, Wee Hao Ng, Christina Zhao, Scott McArt

3:20 PM – 3848548. Effects of field relevant mixed and individual agrochemical profiles on honeybee queen reproductive biology. Adam Dolezal, Julia Fine, Madeline Shapiro, **Ashley St. Clair**

3:45 PM – Intermission

4:15 PM – 3818609. Literature review: Importance of flower strips to ecosystem services. **Melissa Harris**

4:40 PM – 3809339. Aquatic macrophyte TKTD effect model responsiveness to differing environmental baselines. Ed Pilling, Giovanna Meregalli, Vincent Kramer, **Marina Lauck**

5:05 PM – 3828383. Balancing species protection and soybean production: Systems approach to endangered species act pesticide mitigations. Leah Duzy, Ashlea Frank, Alan Samel, **Annie Krueger**

5:30 PM – 3826053. Enhancing below and above ground biodiversity on pasture lands: Climate positive agriculture. Scott Flynn, Jennifer Soong, Peter Baas, **Navdeep Mutti**

5:55 PM – Concluding Remarks

AGFD Division

Agri-Food Sustainability at a Crossroads: Challenges of the Food, Energy, and Water Nexus

Co-Sponsor: AGRO

Michael Appell, Lingyun Chen,; Vinka Craver, Omowunmi Sadik, Y. Jane Tseng *Organizers, Presiders*

8:00 AM – 12:00 PM

Oral – Hybrid

Grand Central Station B, Crowne Plaza Union Square

MONDAY EVENING

Sci-Mix and Division Row Poster Session

8:00 – 10 PM

AGRO Posters

See in-person posters listed for MONDAY at 12:00 PM

TUESDAY MORNING

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Themes: Green Chemistry, Industry

David Jones, John Rohanna, *Organizers, Presiders*

Tobias Harschneck, Lucas Huntimer, Leah Riter, *Organizers*

Oral – Hybrid

Victoria Station C/D, Crown Plaza Union Square

8:00 AM – Introductory Remarks

8:05 AM – 3810399. Delivering sustainable innovations across the entire product development cycle. **Ashish Batra**, Melissa Johnson, John Rohanna

8:30 AM – 3809271. Longevity studies to evaluate the performance and operating conditions of an enzymatic packed bed reactor. **Megan Cismesia**

08:55 AM – 3816536. Industrial-scale enantioselective hydrogenation using Pfaltz-type catalysts: Chemical development and academic collaborations. **Christoph Schotes**, Sascha Mueller.

9:20 AM – 3814347. Development of an efficient process to prepare methyl 4,5,6-trichloropicolinate using highly selective C-H borylation/chloroborylation reactions. **Eric Wiensch**, Xiaoyong Li, Jossian Oppenheimer

9:45 AM – Intermission

10:15 AM – 3823127. Process route design of structurally complex agrochemicals. **Fangzheng Li**

TUESDAY AFTERNOON

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Theme: Green Chemistry

Leah Riter, Organizer, Presider

Tobias Harschneck, Lucas Huntimer, David Jones, John Rohanna, Organizers

Oral – Hybrid

Victoria Station C/D, Crowne Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3823614. Investigation of foliar adjuvant impact factors to improve agrochemical product performance.

Ke Min, Neil Foster, Chaoxian Geng, Leandro Cordova, Faiz Khan, Richa Athalye, Suresh Annangudi Palini, Marcella Guerreiro Wehrle, Andrew Bowling, Heather Pence, Mei Li, Michael Bishop, Jinglin Liu, Jaya Borgatta, Sam Shu

2:30 PM – 3817456. Understanding the stability of active ingredients in agrochemical formulations. **Haifeng Gao**, Mei Li

2:55 PM – 3822283. Silk microneedle-mediated drug delivery in plants. **Yunteng Cao**, Sally Koh, Yangyang Han, Javier Tan, Doyoon Kim, Nam-Hai Chua, Daisuke Urano, Benedetto Marelli

3:20 PM – 3819303. Using surface modified leaves as a model to assess attributes of adjuvants used with agrochemical formulations. **Ted Letherer**, Jaya Borgatta, Sam Zhu, Andrew Bowling, Heather Pence

3:45 PM – Intermission

4:15 PM – 3830386. New FTIR method to monitor the micro-encapsulation process in formulation development and manufacturing. **Liwei Yuan**, Wenjin Deng, Junhua Zhang

4:40 PM – 3826400. Predictive safety guided product design and development. **Jinglin Liu**, Mei Li, Jennifer Skelton, Enrica Bianchi, Tamara Lunsman

5:05 PM – 3805113. Liquid flowable formulations of plant beneficial microbes. **John Whitteck**, Michael Frodyma, Aaron Kelley

5:30 PM – 3818658. High throughput workflows for formulation development in agriculture. **Susannah Banziger**

5:55 PM – Concluding Remarks

Midwest Row Crop Revolution: Agrochemistry State of Affairs After a Quarter-Century of Biotech-Enabled Agriculture

Co-Sponsors: AGFD, BIOT, ENVR

Theme: Industry

Financially Supported by Industry Task Force II on 2,4-D Research Data

Thomas Mueller, Kenneth Racke, Fred Whitford, Organizers, Presiders

** Oral - In-person only **

Pennsylvania Station A, Crowne Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3814438 - Herbicide drift and volatility trends. **Thomas Mueller**, Lawrence Steckel

2:30 PM – 3811307. Synthesis of USGS pesticide occurrence, distribution, and toxicity assessments in surface water and groundwater of the U.S. with an emphasis on the Midwest. **Megan Shoda**

2:55 PM – 3807220. Endangered species and the row crop revolution: Finding a balance between agricultural

10:40 AM – 3821120. Expediting novel total synthetic routes to support AI registration. **Douglas Bland**, Neeraj Sane, Serge Fotso, Rohit Bhandari, Chris Brown, Rafael Shapiro

11:05 AM – 3817036. Isotope labeling strategies of picolinamide fungicides to enable metabolite identification and pesticide registrations. **Lindsey Horty**, Elizabeth McCusker, Neeraj Sane, Belgin Canturk, Nicholas Babij

11:30 AM – Concluding Remarks

Midwest Row Crop Revolution: Agrochemistry State of Affairs After a Quarter-Century of Biotech-Enabled Agriculture

Co-Sponsors: AGFD, BIOT, ENVR

Theme: Industry

Financially Supported by Industry Task Force II on 2,4-D Research Data

Thomas Mueller, Kenneth Racke, Fred Whitford, Organizers, Presiders

** Oral - In-person only **

Pennsylvania Station A, Crowne Plaza Union Square

8:00 AM – Introductory Remarks

8:05 AM – 3804861. Evolving agrochemical uses and environmental research priorities in midwestern US row crop agriculture. **Kenneth Racke**

8:30 AM – 3815603. More than 25 years of glyphosate-resistant crops: Triumphs and tribulations. **Stephen Duke**

8:55 AM – 3808899. Biotech herbicide resistance traits in agronomic crops have come full circle. **Bryan Young**

9:20 AM – 3812724. Pros and cons of a preventative paradigm for insect pest management in field crops. **Christian Krupke**

9:45 AM – Intermission

10:15 AM – 3818329. Midwest ag and agchem trends from a conservation perspective. **Larry Clemens**

10:40 AM – 3836619. NextGen sustainable agriculture: A win-win-win for farmers, communities, and the environment. **Jane Stautz**

11:05 AM – 3809397. Monarch butterfly ecology, behavior, and vulnerabilities in Midwest U.S. row crop landscapes. **Steven Bradbury**, Niranjana Krishnan

11:30 AM – 3820409. Surveys of agricultural field-edge milkweed habitats to refine the insect-control maize risk assessment for monarch butterfly. **Joshua Fischer**, Josh Pritsolas, Randall Pearson, Christopher Brown

11:55 AM – Concluding Remarks

AGFD Division

Agri-Food Sustainability at a Crossroads: Challenges of the Food, Energy, and Water Nexus

Co-Sponsor: AGRO

Michael Appell, Lingyun Chen, Vinka Craver, Omowunmi Sadik, Y. Jane Tseng Organizers, Presiders

10:00 AM – 1:05 PM

****Virtual Session ONLY****

efficiency, environmental sustainability, and regulatory stability. **Bernalyn McGaughey**, Tilghman Hall

3:20 PM – 3810700. Did state pesticide regulatory agencies see ESA label mitigation measures coming and do they have a plan for ensuring compliance? **David Scott**

3:45 PM – Intermission

4:15 PM – 3818336. GMO's past, present and future. **S. Eliza Dunn**

4:40 PM – 3810691. Epidemiology across the Midwest U.S.: Science vs. stereotypes. **Carol Burns**

5:05 PM – 3826163. Meeting consumer expectations: How the food and agriculture value chain is changing and what it means for crop protection. **Christy Wright**, Sonia Cavanna

5:30 PM – 3806677. Extension's role in advancing technology: Historical perspective. **Fred Whitford**

5:55 PM – Concluding Remarks

WEDNESDAY MORNING

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT, Theme: Green Chemistry

Lucas Huntimer, Leah Riter, *Organizers, Presiders*
Tobias Harschneck, David Jones, John Rohanna, *Organizers*

Oral – Hybrid

Victoria Station C/D, Crowne Plaza Union Square

8:00 AM – Introductory Remarks

8:05 AM – 3817869. Long-term analytical performance of methods to quantify dicamba off-target movement. **Leah Riter**, Naresh Pai, Christine Allen

08:30 AM – 3819354. Use of alternative metabolite generation methods to aid in metabolite identification of environmental metabolites. Michael Mawn, Elizabeth McCusker, Paul Graupner, Vivek Badwaik, Kundi Yang, Michael Madary, Jeffrey Gilbert, Elizabeth Ibwe, Dr. Deepa D Acharya, Matt Chase, Krishnamoorthy Kuppannan, Jesse Balcer, Chris Brown, **Yelena Adelfinskaya**

8:55 AM – 3820348. Advanced techniques for the separation and quantitation of radioactive metabolites in agrochemical regulatory studies. Ayanna Shoulds, Patrick Hogan, Emily Stern, Joshua Taylor, **Mary Madeline Willis**

9:20 AM – 3813306. Quality-by-design in dry fertilizer impregnation (DFI) processes for pasture applications. Rosemary Onjiko, Ty Storrs, Brandon Downer, Melissa Olds, **Kevin Boksa**

9:45 AM – Intermission

10:15 AM – 3816679. Biomimetic mineralization for smart biosimulant delivery and crop biofortification: Application in agrochemicals and sustainable agriculture. **Katya Michelle Aguilar Perez**

10:40 AM – 3825585. Improving land productivity and ecosystem services through changes in grazing management. **Scott Flynn**

11:05 AM – 3825729. Opportunities to showcase your agricultural inventions through patenting and developing new and existing businesses. **Xavier Pillai**

11:30 AM Concluding Remarks

Advancing Agrochemical Regulation, Education, and Public Policy in an Age of Skepticism and Scientific Illiteracy:

Co-Sponsors: AGFD, CHED, ENVR

Ronda Hamm, *Organizer, Presider*

Genevieve O'Sullivan, Carmen Tiu, *Organizers*

****Oral - In-person****

Pennsylvania Station A, Crowne Plaza Union Square

8:00 AM – Introductory Remarks

8:05 AM – 3826255. Making sense of Americans' attitudes towards science. **Christopher Volpe**

8:35 AM – 3802828. Awareness and impact of the role of agrochemicals in mitigating world hunger. Aaron Gross, **Heidi Irrig**, Qing Li

8:55 AM – 3812484. Are facts even facts anymore? How do we better communicate our message? **Genevieve O'Sullivan**

9:20 AM – 3820676. Climate change is a common goal. William Easterling, Jana Heisler White, **Frederick Salzman**

9:45 AM – Intermission

10:15 AM – 3821912. Creating public engagement in science through access and partnerships. Ayanna Shoulds, **Ronda Hamm**

10:40 AM – 3813754. Building trust in agriculture among science educators. **Daniel Meloy**

11:05 AM – 3819462. Scientific career opportunities in agriculture. Susannah Banziger, **Francis Miguel Admana**

11:30 AM – 3860630. State and SFIREG roles in shaping pesticide regulation, education and public policy. **Gary Bahr**

11:55 AM - Concluding Remarks

ORGN Division

The Challenges and Opportunities of Organic Chemistry in Agricultural and Pharmaceutical Sciences

Co-Sponsor: AGRO

Scott Bagley, Mark Ondari, Tejas Shah, *Organizers, Presiders*

Oral - Hybrid

Sagamore Ballroom 6, Indiana Convention Center

08:00 AM – Introductory Remarks

08:05 AM – 3838255. Natural products: Past challenges and present opportunities for sustainable crop protection solutions. **Negar Garizi**

8:35 AM – 3817656. Spatial repellency and insecticidal activity of substituted N-aryl amides. **Jeffrey Bloomquist**

9:35 AM – 3818656. Discovery and synthesis of danuglipron (PF-06882961): A small molecule GLP-1 receptor agonist – from lead to clinical candidate. **John Curto**, Scott Bagley, Edward Conn, Gajendra Ingle, Wenhua Jiao, Chris Limberakis, Andre Shavnya, Liqing Wei, David Piotrowski, Matthew Dowling, Mark Flanagan, David Edmonds, David Griffith, Vincent Mascitti, Alan Mathiowetz

9:35 AM – 3849429. New developments in (aza) Paternò-Büchi reactions. **Corinna Schindler**

10:05 AM – Intermission

10:20 AM – 3861172. Discovery of Tetflupyrolimet. **Travis McMahon**

10:50 AM – 3820410. Fully continuous multi-step GMP synthesis of drug substance in a fume hood facility.
Joel Calvin

11:20 AM – 3814845. Total synthesis of natural products with potential crop protection applications. **Richmond Sarpong**

11:50 AM – Concluding Remarks

WEDNESDAY AFTERNOON

Innovative Technologies to Support 21st Century Agriculture

Co-Sponsors: AGFD, BIOT

Leah Riter, Organizer, Presider

John Rohanna, David Jones, Lucas Huntimer, Tobias Harschneck, Organizers

Oral – Hybrid

Victoria Station C/D, Crown Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3823084. Microbial bioherbicides for weed management in crops: Status after almost 50 years.
Stephen Duke

2:30 PM – 3825805. Examination of cold atmospheric-pressure plasma technology for sanitization of food processing and seed surfaces. **Dalton Miller**, Ken Cornell, Sarah Kimberley

2:55 PM – 3816928. Open-source chromatographic data analysis for reaction optimization and screening. Rachel Nicholls, Christian Haas, Maximilian Lübbesmeyer, Edward Jin, Matthew McDonald, Brent Koscher, Nicolas Guimond, Laura Di Rocco, Henning Kayser, Samuel Leweke, Sebastian Niefenuehr, Emily Greeves, David Barber, Julius Hillenbrand, **Giulio Volpin**, Klavs Jensen

3:20 PM – Intermission

3:35 PM – 3826620. Withdrawn

4:00 PM – 3824020. Efficient delivery of a DNA aptamer-based biosensor into plant cells for glucose sensing through thiol-mediated uptake. **Quanbing Mou**, Xueyi Xue, Yuan Ma, Mandira Banik, Valeria Garcia, Weijie Guo, Jiang Wang, Tingjie Song, Li-Qing Chen, Yi Lu

4:25 PM – 3820496. Pyrazole-carboxamides as chewing insecticides: Chemistry, structure-activity-relationship and scaffold hop approaches. Brian Struss, Abdallah Diagne, John Herbert, **Arvind Jaganathan**, Martin Walsh

4:50 PM – Concluding Remarks

Advancing Agrochemical Regulation, Education, and Public Policy in an Age of Skepticism and Scientific Illiteracy

Co-sponsor: AGFD, CHED, ENVR

Genevieve O'Sullivan, Organizer, Presider

Ronda Hamm, Carmen Tiu, Organizers

Oral – Hybrid

Pennsylvania Station A, Crowne Plaza Union Square

2:00 PM – Introductory Remarks

2:05 PM – 3822337. Estimating certified limits in pesticide products under OPPTS 830.1750: A better way?
David Miller

2:30 PM – 3814377. Regulatory perspective on the ESA and FIFRA: Challenges and successes. **Reuben Baris**

2:30 PM – 3811018. Communication, cooperation, and collaboration: Industry-led promotion of insecticide resistance management. Alan Porter, Juergen Langewald, Billy Annan, **Nicholas Storer**

3:20 PM – Intermission

3:30 PM – 3827883. Equipping pesticide applicators with knowledge about ESA: Education and outreach concept. Ashlea Frank, Tim Fredricks, Tony Burd, **Leah Duzy**

3:55 PM – 3827387. New CLI MRL e-learning modules: Unofficial movie trailer. **Jane Stewart**

4:20 PM – 3825245. How frequent is synergy to honeybees among pesticide combinations typically used in agricultural operations? Zhenglei Gao, Daniel R Schmehl, Ana Cabrera, Steven Levine, Markus Ebeling, Christian Maus, Arnd Weyers, Verena Taenzler, **Ismael Rodea-Palomares**

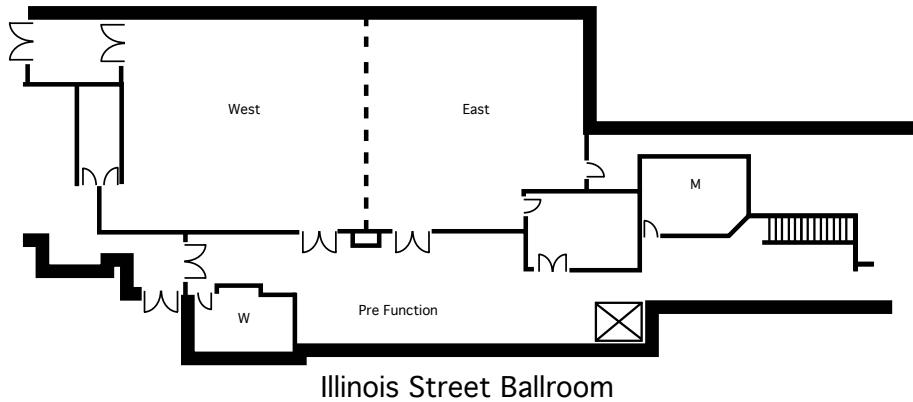
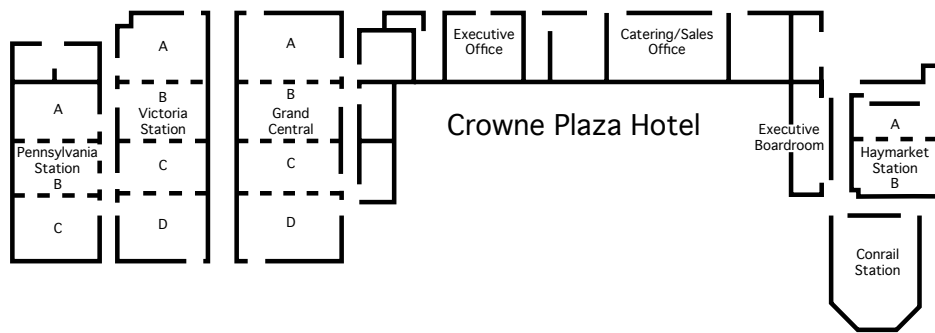
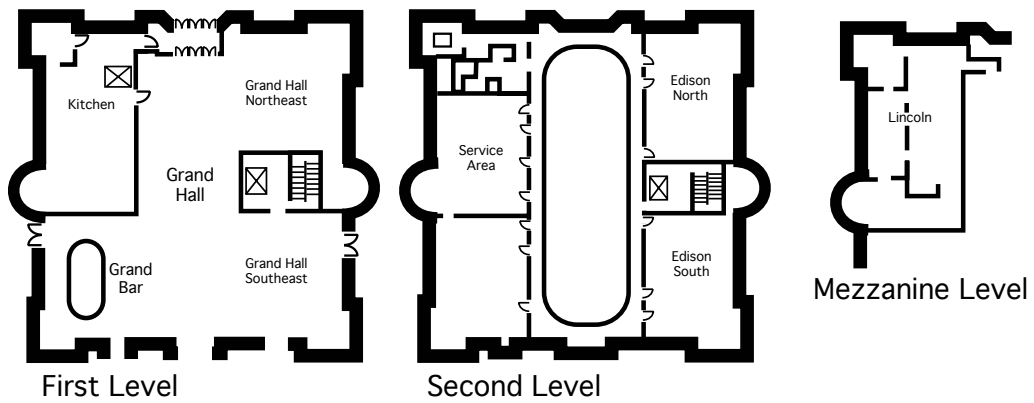
4:45 PM – Panel Discussion

Indiana Convention Center



MEETING SPACE SPECIFICATIONS

CROWNE PLAZA HOTEL & CONFERENCE CENTER AT HISTORIC UNION STATION (continued)





AMERICAN CHEMICAL SOCIETY
 Spring 2023 Hybrid Meeting and Exposition
Crossroads of Chemistry
 March 26 - 30, 2023

AGRO SCHEDULE AT A GLANCE

All oral symposia will be at in the Crown Plaza Union Station

Time EDT	Monday, March 27	Tuesday, March 28	Wednesday, March 29
8:00 AM – 12:00 PM	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>
		Midwest Row Crop Revolution: Agrochemistry State of Affairs after a Quarter-Century of Biotech-Enabled Agriculture <i>Pennsylvania Station A In-person only</i>	Advancing Agrochemical Regulation, Education, and Public Policy in an Age of Skepticism and Scientific Illiteracy <i>Pennsylvania Station A In-person only</i>
12:00 PM – 2:00 PM	AGRO In-Person and Virtual Poster Sessions <i>Convention Center, Hall F-H</i>		
2:00 PM – 6:00 PM	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>	Innovative Technologies to Support 21st Century Agriculture <i>Victoria Station C/D Hybrid</i>
	Understanding Environmental Quality and Health in Agroecosystems <i>Haymarket Station B In-person only</i>	Midwest Row Crop Revolution: Agrochemistry State of Affairs after a Quarter-Century of Biotech-Enabled Agriculture <i>Pennsylvania Station A In-person only</i>	Advancing Agrochemical Regulation, Education, and Public Policy in an Age of Skepticism and Scientific Illiteracy <i>Pennsylvania Station A In-person only</i>
5:00 PM			Symposia end at 5:00 PM Bus departs 5:00 – 5:15 PM to AGRO Social
6:00 PM – 8:00 PM			AGRO Social Networking Event CROSSROADS OF AG INNOVATION
8:00 PM – 10:00 PM	Sci-Mix and Division Row Poster Session <i>Convention Center, Hall F-H</i>		Bus departs when AGRO Social is finished, ca. 8 PM

CROSSROADS OF AG INNOVATION

The **AGRO Social Networking Event** for Indianapolis will be hosted at the Corteva Agriscience R&D facility in Indianapolis from 6:00 to 8:00 PM on Wednesday, March 29. The event is free, but advance registration is required via the ACS Meetings Indianapolis meeting social event system.

Complimentary shuttle buses will depart for the event starting at 5:00 pm from the Indiana Convention Center (Maryland Street Entrance) and will return participants to the Convention Center after the social. Check in with the AGRO Welcome Table at the Crowne Plaza for on-site details and/or contact Ken Racke at kenracke@gmail.com for advance guidance.

Event tickets have sold out as of March 1, but a waitlist has been formed. AGRO members and guests who would like to be added to the waitlist should contact Pat Havens at pat.havens@corteva.com.

PICOGRAM V. 102

and Program



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