

# PICOGRAM v. 106

*With Program*

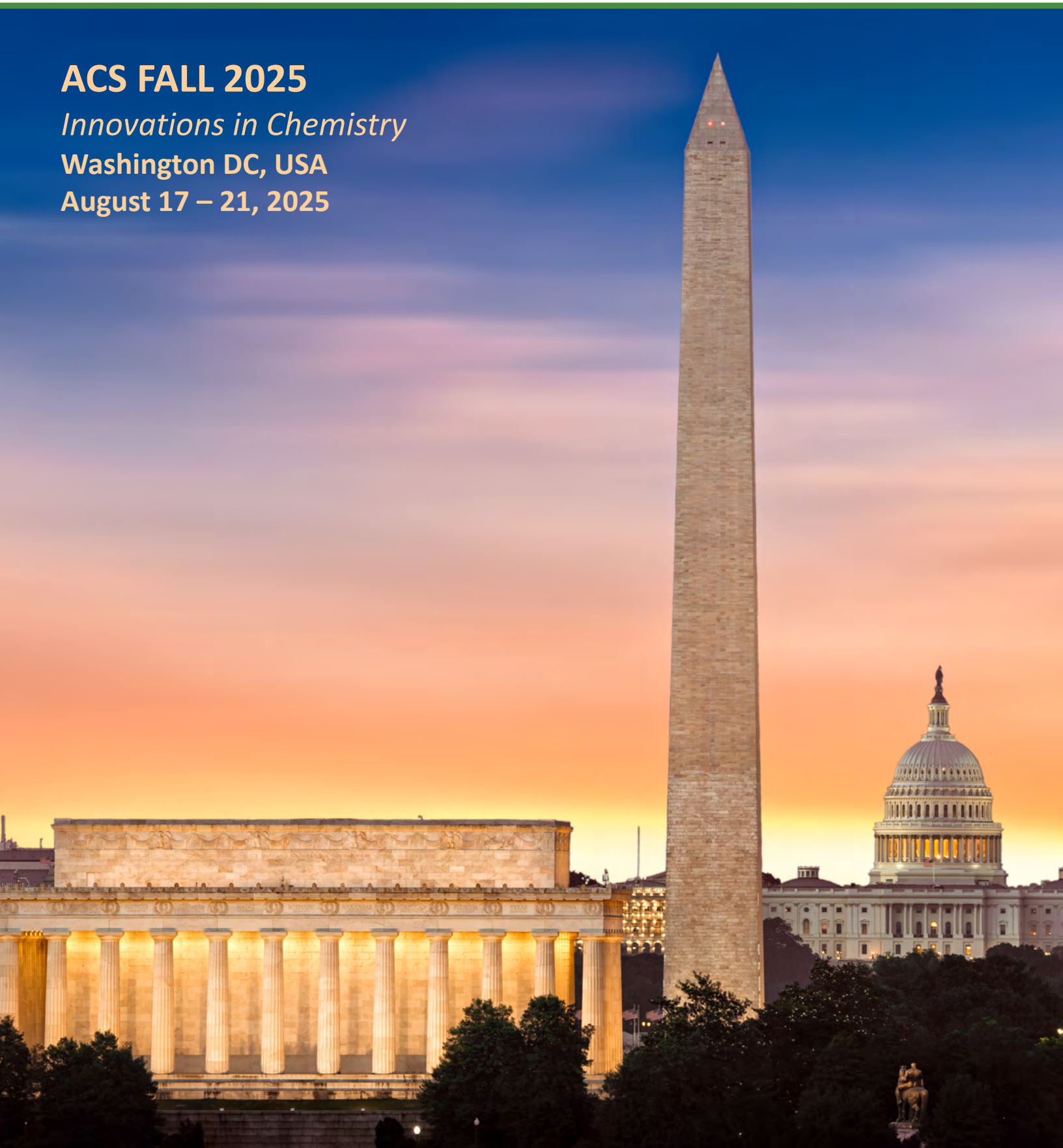


**ACS FALL 2025**

*Innovations in Chemistry*

**Washington DC, USA**

**August 17 – 21, 2025**





## 2025 AGRO DIVISION PATRONS

*Thank you for your continued support!*

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Diamond



Gold



# TABLE OF CONTENTS

<b>PATRONS</b>	<i>inside front cover</i>
<b>FROM THE CHAIR'S DESK – JAMES FOSTER</b>	2
<b>AWARDS AND ANNOUNCEMENTS</b>	
Awards Committee Report	5
Invitation for AGRO Awards Social	7
AGRO Fellows Nomination Process	8
2025 AGRO Fellows	9
2025 ACS International Award for AGRO Research	11
2025 AGRO Innovation Award for Chemistry of Agriculture	13
2025 ACS Kansas City Section Kenneth A. Spencer Award	15
2025 <i>JAF</i> C Research Paper Lectureship Awards	17
Call for Nominations, 2027 ACS International Award for AGRO Research	19
Call for Nominations, 2026 AGRO Innovation Award for Chemistry in Agriculture	21
Call for Nominations, 2026 Kenneth A. Spencer Award	22
Call for Nominations, 2026 USDA-ARS Sterling B. Hendricks Memorial Lectureship Award	23
Call for Nominations, 2026 <i>JAF</i> C Research Paper Lectureship Awards	25
<b>NEW INVESTIGATORS AND STUDENTS</b>	
Invitation to Student and Post-Doc Luncheon	26
2025 AGRO New Investigator Award Finalists	27
2025 AGRO Education Awards for Student Travel – Pictures and List	28
Call for Applicants, 2026 AGRO New Investigator Awards	31
Call for Applicants, 2026 AGRO Education Awards	33
<b>PROGRAMMING</b>	
<b>Notes from the Program Chair – Mingming Ma</b>	35
Strategic Programming with Standing Programming and Champions	36
<b>Comments from the Vice Chair – Dena Barrett</b>	37
Invitation to Brewing for AGRO – Brainstorming for Chicago	37
AGRO Lunch and Learn Webinar Series	38
Future ACS National Meetings, Seven Easy Steps for Organizing a Symposium	38
Programming and Outreach Activities 2025 – 2027	39
IUPAC Crop Protection Congress 2027	40
Report from LAPRW 2025	41
IUPAC Global Women's Breakfast	42
<b>AGRO DIVISION BUSINESS</b>	
AGRO Officers, Councilors, Executive Committee, and Past Chairs List	43
What the AGRO Committees Do	44
AGRO Division Committees	45
ACS-AGRO Ambassadors	46
AGRO Conference Call Minutes	47
Councilor Report	54
<b>AGRO EVENTS AND TECHNICAL PROGRAM</b>	<i>program – 1</i>
Marriott Marquis Map	
Convention Center Map	
Hotel Map	backcover



## FROM THE CHAIR'S DESK

*James Foster*

The AGRO division program at the American Chemical Society Meeting and Exposition will be held August 17 – 20, 2025 at the Walter E. Washington Convention Center in Washington, D.C. There is no AGRO programming on Thursday, August 21<sup>st</sup>. The theme this year is **Innovations in Chemistry**. ACS continues to evolve through the Future of Meetings platform. This year there are two types of symposia, in-person and digital. There are no hybrid meetings. Digital meetings are on-line only and have no in-person designated meeting rooms.

Our Program Chair Mingming Ma has demonstrated great agility to bring forth an exciting and informative Fall program. There are a total of 27 symposia, 5 are joint symposia with other divisions (ORGN, AGFD, and CINF). Registration and meeting details can be found on the ACS website. Please visit <https://www.acs.org/meetings/acs-meetings.html>.

**ACS Fall Meeting Keynote Event.** The ChemLuminary Award and Board of Directors Open Session will occur on Sunday, August 17 from 4:00 – 6:30 PM EDT. The Board of Directors will be hosting the Fall Board Open Session for ACS members. This Open Session will be followed by the ChemLuminary Award reception. Please see the notes from our Program Chair and comments from our Vice Chair, Dena Barrett, for additional program events including the **Vendor Interface Program** and **Brewing Ideas with AGRO**.



**Recognizing Award Winners.** Thank you to the 2025 Awards Committee, and all the members who manage the awards and activities, for your dedicated actions to recognize those that have made great contributions to AGRO. AGRO offers several awards annually. Please consider nominating your colleagues. More information can be found on the AGRO webpage at <https://www.agrodiv.org/awards/>.

The following 2025 award winners will be featured in the Fall Meeting program:

**Thomas P. Selby** is the winner of the 2025 ACS **International Award for Research in Agrochemicals**. Thomas is recognized for his co-invention of the powdery mildew fungicide proquinazid, the broad-spectrum diamide insecticide chlorantraniliprole, the systemic diamide insecticide cyantraniliprole, and the new mode-of-action rice herbicide tetflupyrolimet that have had a profound impact on agriculture. The ACS International Award for Research in Agrochemicals is sponsored by Corteva.

**Spencer Walse** is the winner of the 2025 AGRO Award for **Innovation in Chemistry of Agriculture**. Spencer is recognized for his development of chemical alternatives to postharvest methyl bromide fumigation for the management of quarantine and invasive insect pests. The AGRO Award for Innovation in Chemistry of Agriculture is sponsored by BASF.



The AGRO Division **Research Article of the Year Award Lectureship in the Journal of Agricultural and Food Chemistry** goes to **William Mitch**, Stanford University, for his article entitled Electrochemical Generation of Hydroxide and Hydrogen Peroxide for Hydrolysis of Sulfuryl Fluoride Fumigant. The AGFD award recipient is **Verena Schäfer**, GlaxoSmithKline, Germany, with her article entitled Reactivity of the 2-Methylfuran Phase I Metabolite 3-Acetylacrolein Toward DNA (presented in the AGFD program).

We would also like to acknowledge and congratulate the following award recipients:

- 2025 ACS AGRO Fellows: **Sara Whiting** and **Solito Sumulong**
- Kenneth A. Spencer Award: **Gary List** (AGFD)

**Early Career Opportunities, New Investigator Finalists, and Student Awards.** Thank you to Aaron Gross and Sara Whiting for leading the Early Career Scientists Committee. Thank you to Chris Peterson and Carmen Tiu for leading our latest initiative, the AGRO Ambassadors/Journeymen Program. New Investigator Award Finalists are **Niranjana Krishnan** (University of Maryland, College Park), **Zhilin Li** (University of Florida, Gainesville), and **Na Xie** (University of Florida, Gainesville). Each finalist will present in a symposium of their choice and awards will be announced on Wednesday, August 20 at the Awards Social event 6:00 PM – 8:00 PM EDT. Congratulations to the thirteen awardees of the student travel awards. There are 8 universities, 11 advisors, and 2 international awardees represented. Winners of the poster competition will be announced at the AGRO Awards Social.

**AGRO Journeymen Program Award: Alberto Nunez-Bendinelli**, a PhD student from Spain attending the University of Resenburg in Germany, will be funded for participation in the Washington, DC fall meeting. His presentation will highlight the

significant potential of photodynamic sensitizers for crop protection to both the scientific and industrial communities. ‘

**Why Support ACS AGRO Division?** AGRO brings together a worldwide community of scientists and stakeholders to advance knowledge and promote innovative solutions for the protection of agricultural productivity, public health, and environment. We have a history of impactful scientific and regulatory developments in agrochemicals (<https://www.agrodiv.org/agro-timeline/>).

**AGRO Strategic Plan.** The AGRO Division recently updated its Vision, Mission, and Strategic Plan. Please consider directly contributing to our goals to make AGRO grow.

**AGRO Vision Statement:** Advancing Responsible Agriculture and Global Health

**AGRO Mission Statement:** Growing a Global Community to Create Solutions for Agriculture, Public Health, and the Environment

**AGRO Strategic Plan:**

**GOAL 1: Membership.** Engage and retain new and existing members.

**GOAL 2: Information/Knowledge.** Deliver information through new means of communication.

**GOAL 3: AGRO 2050.** Create a future ready Division that serves as a key resource for the global agrochemical community.

AGRO continues to address agricultural issues that affect lives and our planet with foresight to prepare for future concerns.

**Get Involved.** The AGRO Division runs on volunteers. Our members volunteer to serve in various capacities. We welcome new members and encourage participation from all members in the activities of our Division. Please start now by visiting our webpage at <https://www.agrodiv.org/get-involved/> and fill out the Get Involved form. Contact the Membership Chair Chris Bianca ([chris.bianca@corteva.com](mailto:chris.bianca@corteva.com)) with questions.

**Opportunities.** Please take advantage of opportunities for AGRO to publish in ACS journals! ACS will provide Open Access Discount Tokens, each valued at \$1,000, which may be used by corresponding authors in the AGRO Division to discount article processing fees for publications in the Journal of Agricultural and Food Chemistry, ACS Agricultural Science & Technology, or ACS Food Science & Technology that will be published on or before December 31, 2025. To receive a token, AGRO Division members should email William King at [managing.editor@jafc.acs.org](mailto:managing.editor@jafc.acs.org).

**Elections.** Our Division has intelligent, passionate and dedicated members who promote our success. Each year, AGRO elects members to: 1) the Executive Committee for a three-year term; 2) a Vice-Chair who serves a four-year succession of officer roles from Vice-Chair to Program Chair to Chair and finally Past Chair; 3) one-year terms for Secretary and Treasurer. Every three years, we vote for two Councilors and two alternate Councilors who serve three-year terms. If you are interested in running for an office or the Executive Committee in 2026, please contact me ([james.foster@ejgallo.com](mailto:james.foster@ejgallo.com)), as I will be leading the Nominating and Election Committee and will take nominations for our 2026 elections.

### **2025 ELECTION RESULTS**

#### **2025 - 2026 Vice-Chair**

Beth Lorsbach

#### **2026 Secretary**

Sharon Schneider

#### **2026 Treasurer**

Del Koch

#### **2026 - 2028 Executive Committee Members**

Charles Cantrell, Michael David, Malekani (Malek) Kalumbu, Nakia Smith, Ralph Warren

**Thank You.** I offer my heartfelt thanks to:

- Past Chair Aaron Gross for continuous support and guidance.
- The current Officers, Councilors, Executive Committee, Committee Chairs and Volunteers, Secretary Sharon Schneider and Treasurer Del Koch for your dedication and efforts.
- Cathleen Hapeman and Mary Kirchhoff for continuing to provide our beloved *PICOGRAM*.
- Ed Norris, Pat Havens, and Laura McConnell for timely communications and upkeep of the AGRO website.
- Solito Sumulong for engaging webinar content.
- Mary Kirchhoff for your enthusiasm and willingness to help as Program Administrator. You had big shoes to fill after Peney Patton, whom we still thank. You are doing a great job!
- Our Division members, volunteers, and Fall program participants. You are the best in ACS.

It has been my honor and pleasure to serve as Division Chair. I look forward to continuing to serve and support the AGRO Division.

*Welcome to Washington, D.C. - Enjoy the meeting!*



# GLOBAL AGROCHEMICAL EXPERTISE FOR A CHANGING WORLD

From Data Collection to Decision-Making, Stone Delivers

## Risk Assessment

- Agrochemical regulatory support and stewardship
- Endangered species & pollinator assessments, Pesticide Use Limitation Areas (PULAs)
- Litigation support
- Emerging technologies assessments (e.g., RNAi)
- Data Evaluation Record (DER) generation

## Environmental Fate & Exposure Modeling

- Mitigation and conservation practice analyses
- Surface water exposure (PWC, TOXSWA)
- Spray drift (AgDrift, AGDISP)
- Volatilization & atmospheric transport (AERMOD)
- Watershed analysis (SWAT, APEX)
- Urban modeling (SWMM)
- Vegetative filter strips (VFSSMOD)
- Groundwater exposure (PRZM, LEACHP, RZWQM)
- Higher tier probabilistic exposure assessments
- Custom model development & modification
- Climate change impact analysis

## Field Studies

- Study design and directorship
- Emerging crop protection technologies research
- Spray drift – guideline studies, Unmanned Aerial Systems (UAS), Drift Reduction Technology (DRT) assessments, non-target organisms (including Non-Target Terrestrial Plant [NTTP] drift studies)
- Field volatility
- Terrestrial and aquatic field dissipation
- Ecological monitoring
- Simulated rainfall runoff
- Surface water monitoring

## Quality Assurance (RQAP-GLP, MRQA)

## Spatial Analysis

- Endangered species assessments (proximity, probabilistic co-occurrence)
- Watershed characterization
- High-resolution national assessments
- Spatial uncertainty analysis
- GIS tool development for ERAs
- Web-based GIS solutions

Let's  
Collaborate

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Ben Brayden  
📞 802.578.1043  
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## AGRO AWARDS COMMITTEE REPORT

*Qing X. Li, Sharon Schneider, Jeanette Van Emon*

The Division thanks the members of the Awards Committee, nominators, and sponsors (Corteva for International Award, BASF for Innovation Award, Syngenta for New Investigator Awards, and Bayer Crop Science for Student Travel Awards).

**SENIOR AWARDS.** **Camilla Corsi** is the winner of the 2026 ACS International Award for Research in Agrochemicals. She is recognized for her influential R&D leadership and for her significant contributions to the discovery of the fungicide pydiflumetofen, the insecticides isocycloseram and spiropidion, and the novel SDHI nematocide cyclobutrifluram. A symposium will be held in Camilla's honor at the 2026 ACS Fall Meeting in Chicago, Illinois.

**Thomas P. Selby** is the winner of the 2025 ACS International Award for Research in Agrochemicals. Thomas is recognized for his co-invention of the powdery mildew fungicide proquinazid, the broad-spectrum diamide insecticide chlorantraniliprole, the systemic diamide insecticide cyantraniliprole, and the new mode-of-action rice herbicide tetflupyrolimet, which have had a profound impact on agriculture. A symposium in honor of Thomas at the ACS 2025 Fall Meeting in Washington, DC, will take place on Tuesday, August 19. The ACS International award for Research in Agrochemicals is sponsored by Corteva.

**Spencer Walse** is the winner of the 2025 AGRO Award for Innovation in Chemistry of Agriculture. Spencer is recognized for his development of chemical alternatives to postharvest methyl bromide fumigation for the management of quarantine and invasive insect pests. The award will be presented at the ACS 2025 Fall Meeting in Washington, DC. BASF sponsors the AGRO Award for Innovation in Chemistry of Agriculture.

The *Journal of Agricultural and Food Chemistry* (JAFC) and the AGRO and AGFD Divisions sponsor two lectureships for outstanding papers published in JAFC every year. This year's winners for the AGRO paper are Cindy Weng, Cade Napier, Cedric Katte, Spencer S. Walse, and **William A. Mitch\***. Their paper, Electrochemical Generation of Hydroxide and Hydrogen Peroxide for Hydrolysis of Sulfuryl Fluoride Fumigant, is available at *J Agric Food Chem* 2024, 72: 15133–15141. DOI: 10.1021/acs.jafc.4c00864.

**FELLOWS.** **Sara Whiting** and **Solito Sumulong** are recognized as 2025 AGRO Fellows for their continued and substantial contributions of time, talent, and service to the AGRO Division.

**NEW SCIENTISTS AND STUDENT AWARDS.** Three early career scientists are finalists for the New Investigator Award: **Niranjana Krishnan**, **Zhilin Li**, and **Na Xie**. Thirteen students received the AGRO Student Travel Award and will be considered in the poster competition.

**AWARD NOMINATIONS.** Nominations for the 2027 International Award for Research in Agrochemicals and the 2026 AGRO Award for Innovation in Chemistry of Agriculture are being sought. Please see the AGRO website (<https://www.agrodiv.org/awards/>) and *PICOGRAM* for the calls for nominations. December 31st is the nomination deadline for both these awards. March 30th is the nomination deadline for the AGRO Fellowship and April 1 for the ACS Fellow Award. ACS Fellow nominations must be submitted through the Division Chair.

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

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## 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	2016	Aldos C. Barefoot	2022	Diana Aga
	N. Bushan Mandava	2017	Stephen O. Duke		Kevin L. Armbrust
2012	Jeanette M. Van Emon	2018	Cathleen J. Hapeman		Allan S. Felsot
2014	Kevin Hicks	2019	Joel R. Coats	2023	Qing X. Li
2014	Laura L. McConnell		Steven J. Lehotay		Leah S. Riter
	Kenneth D. Racke		Beth A. Lorschach	2024	John M. Clark

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# AGRO Awards Social



## AGRO Fellow Award

Solito Sumulong and Sara Whiting

## ACS International Award for Research in Agrochemicals

Thomas Selby

## AGRO Award for Innovation in Chemistry of Agriculture

Spencer Walse

## ACS Kansas City Division Spencer Award

Gary List

## AGRO Division JAFCArticle of the Year

William Mitch

## AGRO New Investigator Award Finalists

Niranjana Krishnan, Zhilin Li, and Na Xie

## AGRO Jourmeyers Travel Award

Alberto Nunez-Bendinelli

## AGRO Education Travel Award Winners

*Wednesday, August 20, 6:00-8:00 PM  
Walter E. Washington Convention Center, Room 206*



## AGRO DIVISION FELLOWS

1971	Louis Lykken Tom H. (Bucky) Harris Herman Beckman (Posthumous)	1987	Willa Garner	2014	Aldos C. Barefoot Jeanette M. Van Emon
1972	Wendell F. (Bud) Phillips Don G. Crosby Elvins Y. Spencer	1988	Jan Chambers James Seiber	2016	Kevin J. Armbrust Del A. Koch Sharon K. Papiernik Pamela J. Rice
1973	Mr. Roger C. Blinn Philip C. Kearney Julius J. Menn	1990	Joseph Fenyes	2017	Diana Aga Jay Gan Marja Koivunen Steven J. Lehotay Thomas M. Stevenson
1974	Morton Beroza James P. Minyard, Jr. Joe C. Street	1991	Nancy N. Ragsdale	2018	John J. Beck Julie E. Eble
1975	Hank F. Enos Maurice B. Green Charles H. Van Middlelem	1992	Don Baker Joel Coats Guy Paulson	2019	Leah S. Riter
1976	Marguerite L. Leng Jack R. Plimmer Gerald G. Still	1993	Larry Ballantine	2020	Cheryl B. Cleveland Aaron D. Gross Heidi B. Irrig
1977	Gustave K. (Bob) Kohn	1994	James Heitz Ralph Mumma Willis Wheeler	2021	Michael E. Krolski Qing X. Li Kalumbu Malekani Carmen Tiu
1978	S. Kris Bandal Paul Hedin	1996	John Bourke	2022	Yelena Sapozhnikova
1979	Rodney D. Moss	1998	Hank Cutler Paul Giesler	2023	Mingming Ma Daniel Swale
1980	G. Wayne Ivie John B. Siddall (Posthumous)	2000	Barry Cross	2024	Pat Havens Edmund Norris Amy Ritter Thomas Sparks
1981	Robert M. Hollingworth Gino J. Marco	2001	Robert Hoagland	2025	Solito Sumulong Sara Whiting
1983	John Harvey, Jr.	2003	Judd O. Nelson		
1985	Henry Dishburger Richard C. Honeycutt	2005	Rodney Bennett		
1986	Gunter (Jack) Zweig	2006	Terry D. Spittler		
		2007	John M. Clark Ann T. Lemley R. Donald Wauchope		
		2008	Allan S. Felsot		
		2011	Laura L. McConnell		
		2012	Jeffrey J. Jenkins John J. Johnston		
		2013	Stephen O. Duke Cathleen J. Hapeman Kenneth D. Racke Teresa A. Wehner		

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### CALL FOR NOMINATIONS AGRO DIVISION FELLOW AWARD

The AGRO Division has established the ***Division Fellow Award*** to recognize its members whose dedicated and enthusiastic service has kept the Division moving forward. Criteria shall be –

*Continued and substantial contributions of time, talents, and service to the Division of Agrochemicals, ACS, and to agrochemical science over a period of at least six years.*

Nominations include a letter, noting the contributions to the Division, and a current *curriculum vitae*. The deadline for submitting nominations is March 31 of each year. Contact the Awards Committee for further information.

Submit nominations electronically to:

Qing X. Li  
AGRO Awards Committee Chair  
808-956-2011  
qingl@hawaii.edu



## AGRO DIVISION FELLOW AWARD

*For continued and substantial contributions of time, talents, and service to the AGRO Division and agrochemical science*

*Presented to Solito Sumulong and Sara Whiting*



**Solito Sumulong** is an expert in regulatory strategy and formulation chemistry, with over a decade of experience advancing emerging technologies in the global agricultural marketplace. He currently manages Regulatory Affairs at Solasta Bio, Ltd, a company pioneering peptide-based bioinsecticides for

species-specific pest control with minimal non-target impact. He is also the Founder and Principal of Concerted Innovations, a consultancy focused on assisting innovators navigate technical and regulatory hurdles to bring sustainable technologies to market.

Solito's work spans regulatory dossier development, market positioning, manufacturing scale-up, and global compliance strategies. His past roles at AgriThORITY, Nutrien Ag Solutions, Provivi, and Winfield Solutions (Land O'Lakes) have shaped a reputation for turning complex technologies into viable commercial solutions.

A long-time advocate for formulation chemistry, Solito has been an active contributor to the AGRO Division. He produces the Lunch and Learn Webinar series, organizes annual technical sessions at the ACS Fall Meeting focused on agrochemical formulations, and serves on both the AGRO Executive Committee and Strategic Planning Committee. In the latter role, he has helped identify opportunities for new digital platforms to expand AGRO's global reach and engagement.

Solito earned his chemistry degree from the Johns Hopkins University, where he developed a strong foundation in organic synthesis, analytical methods, and systems thinking. He credits his experience as an orchestral violinist for shaping his leadership style — one grounded in collaboration, adaptability, and ownership of shared success.



**Sara Whiting** is a Senior Scientist on the Exposure Assessment team within the crop protection regulatory group at Bayer Crop Science in Chesterfield, Missouri. She is a graduate of Kansas State University (BS), University of Nevada Las Vegas (MS), and Southern Illinois University Carbondale (PhD). She worked at

Eurofins EAG Agrosience in Columbia, Missouri for seven years and then joined Bayer in 2021. At Bayer, Sara works on environmental fate field studies for products in the development pipeline. Additionally, she works on the exposure side of risk assessments for new products.

Sara has served on the Executive Committee of the AGRO Division since 2019 and co-leads the early career committee. In addition to organizing symposia for the annual meetings, she has enjoyed helping with the various activities organized by the early career committee including the graduate student/post-doc luncheon, the student travel awards and competitions, and the new investigator award competition. She updated the design of the annual student luncheon to be a speed networking session so that early career people/students could network with more people who can talk about their various career paths. As a former student in the AGRO Division, she finds it rewarding to give back to the students and help them on their future career paths.

Outside of work, Sara enjoys tending to her family's vegetable and herb gardens in addition to raising native plants from seeds and restoring her backyard into a native prairie.

*Congratulations Sumulong and Sara!  
Thank you for all you do for AGRO!*

# ANSWERING THE WORLD'S MOST IMPORTANT QUESTION: WHAT'S FOR DINNER?

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## ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS

*Sponsored by Corteva Agriscience*

### ***Highlights from a career at DuPont and FMC in crop protection research***



**Thomas Selby** has pursued a lifelong interest in organic synthesis directed at the discovery of new biologically active molecules. His career in crop protection discovery research spans 45 years working primarily in the field of heterocyclic chemistry, first at DuPont and then at FMC. He received his

B.S. in chemistry from Indiana University of Pennsylvania and his Ph.D. in organic chemistry from Indiana University. His research interests have included all three major agrochemical disciplines: herbicides, fungicides and insecticides.

In the 1990s, Thomas led a chemical discovery effort culminating in the discovery of the new mode-of-action powdery mildew control agent proquinazid (FRAC Group 13), sold as Talius®. In the 2000's, he played an important role on a team that discovered a new class of highly active insecticidal anthranilic diamides that selectively activate insect ryanodine receptors. Breakthroughs in lead optimization led to

unprecedented levels of activity followed by the commercialization of two widely-sold broad-spectrum insecticides: chlorantraniliprole (Rynaxypyr®) and cyantraniliprole (Cyazypyr™), both representing the new IRAC Group 28. More recently, Thomas was instrumental in the discovery of the new mode-of-action rice herbicide tetflupyrolimet (Dodhylex™) that interferes with pyrimidine biosynthesis in plants by inhibiting dihydroorotate dehydrogenase (DHODH) (new HRAC Group 28). Tetflupyrolimet represents the first totally new herbicidal mode-of-action to be commercialized by the agrochemical industry in over 3 decades.

Thomas was a past recipient of the S&P Global Crop Science Lifetime Achievement Award in 2022, the 2015 ACS Kenneth A. Spencer Award for lifetime achievements in the field of agrochemistry, the 2013 ACS Heroes of Chemistry Award, the 2010 ACS National Award for Team Innovation, the 2010 DuPont Pedersen Medal, and the 2010 IPO National Inventor of the Year Award. He holds 65 US patents and has 60 published world patent applications. He has published and lectured widely on diverse areas of agrochemical research, while mentoring younger chemists starting their careers in agrochemical discovery. He holds the unique distinction as a “trifecta” co-inventor of 4 products representing all three of the major agrochemical disciplines.

*Dr. Thomas Selby will present his award lecture  
at the International Award Symposium on Tuesday, August 19, at 8:00 AM  
in the Walter E. Washington Convention Center, Room 143C.*

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*The AGRO Division is grateful for the  
sustained support of the International Award.*



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With a focus on our customers' needs, we bring a connected offer across seeds, crop protection and digital solutions, integrated into farm operations and practices. Through partnerships and collaboration, we deliver innovative solutions faster, supporting our farmers around the world, as they do The Biggest Job on Earth.



## AGRO AWARD FOR INNOVATION IN CHEMISTRY OF AGRICULTURE

Sponsored by BASF Corporation

### Chemistry of phytosanitary treatments for future regulatory demands



**Spencer Walse** earned his B.S. in Chemistry from the University of Illinois at Urbana Champaign and a Ph.D. degree in Analytical Chemistry from the University of South Carolina. He was a Postdoctoral Fellowship at Yale University and currently holds a Research Chemist position at the USDA-ARS-San Joaquin Valley Agricultural Sciences Center. These

experiences led to an understanding of how biologically active compounds, including fumigants, move through the environment.

Spencer uses this expertise to teach classes at UC Davis that cover Environmental Toxicants and Pesticides as well as addressing food security and safety issues for American farmers, shippers, and consumers. He is nationally and internationally recognized for his chemical expertise as related to horticultural pest control and trade, where his research directly contributes to US exports valued at over \$4B annually. His program has received support over \$25M from stakeholders, research, and regulatory entities. He has consulted for over 40 commodity groups located across the U.S. and has been an invited speaker at 80 international as well as approximately 150 other academic, government, and industry venues.

Spencer's innovations are generally related to satisfying consumer and regulatory demands for the global agricultural

marketplace. A major research thrust involves finding strategies that minimize the reliance on postharvest methyl bromide fumigation for assuring food safety and security. He leads a team that develops novel systems-based strategies to manage invasive and quarantine horticultural pests, identifies chemically based host-pest associations that minimize pesticide use, and conducts postharvest treatments with minimal impact on human and environmental health.

Agricultural systems are comprised of chronologic elements, including activities and events, and/or chemical and/or biological concepts that when considered cumulatively reduce pest populations to mitigate risk sufficiently. His key systems-based innovations involve eliminating the need for methyl bromide fumigation by linking the levels of control afforded by field trapping/monitoring with quantification from postharvest practices such as washing, waxing, drying, and cold storage.

Pests controlled with a systems approach include those that jeopardize citrus exports valued at more than \$100M annually to include: Asian citrus psyllid, California red scale, Oriental fruit fly, Mediterranean fruit fly, and brown rot. Host-pest and pheromone-based innovations include a Host Potential Index that is used by regulators to prioritize what hosts pose the greatest risk of spreading pests as well as numerous patented pheromone and host attractants for fruit flies, mealybugs, and stored product insects.

With insects and decay contributing to postharvest losses estimated at 35% annually, Spencer's team is constantly innovating postharvest treatments. Efforts focus on the application of fumigants and physiologically active gases that are highly efficacious, commercially viable, and do not leave residues on foodstuffs. Collectively, over 40 innovations are being implemented by regulatory agencies, domestic and international.

*Dr. Spencer Walse will present his award lecture in the Pesticide Regulation, Global Trade: US Leadership in Food Security Symposium on Wednesday, August 20, at 8:00 AM, in the Walter E. Washington Convention Center, Room 144A.*

*The AGRO Division is grateful for the sustained support of the AGRO Innovation Award.*





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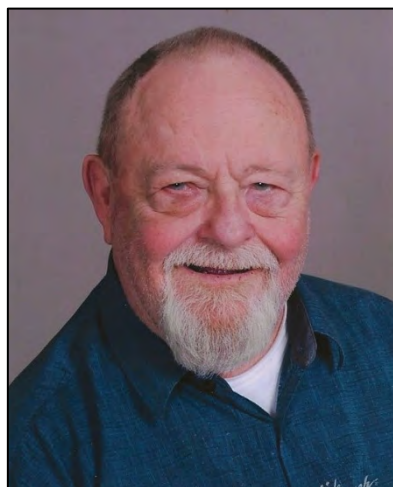




## ACS KANSAS CITY MISSOURI LOCAL SECTION

### KENNETH A. SPENCER AWARD

Co-Sponsored by AGFD & AGRO



**Gary List** is a veteran of the U.S. Army (1960-1963) where he worked as a technician at the U.S. Army medical laboratory at Edgewood Arsenal, Maryland. He was the coauthor of two publications in the *Journal of the American Chemical Society* and the *Archives of Biochemistry and Biophysics*. His contributions were further recognized by a commendation from the

Secretary of Defense and a promotion to E-5.

Gary began his career in 1963 with the Agricultural Research Service (ARS) at the Northern Regional Research Laboratory in Peoria, IL as a GS-4 physical science aid. He was quickly promoted to GS-9. In 1971 he completed an associate's degree with 30 hours of chemistry, and in 1975, he was promoted to GS-11 chemist. By 1981 he reached GS-13 and 17 years later GS-14. He retired in 2007 as a GS-15. Gary was awarded a DSc (honoris causa) by the University of Illinois in 2011 in recognition of his research on soybean oil.

Gary's research has encompassed virtually every phase of oilseed processing and edible fats and oils. He is the author of

490 publications, including 45 book chapters and edited eight books. He has contributed to four revisions of the standard fats and oils textbook *Baileys Industrial Oil and Fat Products* (1985, 1996, 2005, 2020).

Gary has received the top awards in lipids, food, and agricultural chemistry from the American Oil Chemists Society (AOCS), the Institute of Food Technologists (IFT), the American Chemical Society (ACS), and the European Federation for the Science and Technology of Lipids. In 2006 the United Soybean Board honored him with a distinguished service award in recognition of his contributions to the soybean industry. He was selected as the IFT Chicago section Fred W. Tanner lecturer and was only the second bench chemist to receive it in its 50-year history. The Minnesota IFT section presented him with the Harold Macy award for technology transfer activities between government, industry, and academia. Just two other ARS scientists have received the Macy award since 1981. He has been active in AOCS, IFT, and ACS and a fellow in each. Service awards from AOCS include the award of merit and the A.R. Baldwin distinguished service award. He has given invited plenary lectures in Canada, Austria, China, Turkey, and Taiwan.

Gary and his wife have four children and seven grandchildren. His hobbies include military history and the history of the fats and oils industry. Both he and his wife are active in their local church and inner-city ministry. From 1989 to 2002 they were foster and adoptive parents to 20 children.

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## **ACS Publications Open Access Discount Tokens for AGRO Division members**

ACS will provide Open Access Discount Tokens, each valued at \$1,000, which may be used by AGRO Division members as the corresponding author for a discount against the Article Processing Charge for the publication of an Open Access manuscript in *Journal of Agricultural and Food Chemistry*, *ACS Agricultural Science & Technology*, or *ACS Food Science & Technology* that will be published on or before December 31st, 2025. Each AGRO Division member may only use one OA Discount Token as the corresponding author during 2025, however they may be a co-author on another paper where a different AGRO Division member uses an OA Discount Token as the corresponding author.

To receive a token, AGRO Division members can email William King at [managing.editor@jafc.acs.org](mailto:managing.editor@jafc.acs.org) upon submission of their manuscript to the journal to request an Open Access Discount Token.

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## RESEARCH ARTICLE OF THE YEAR LECTURESHIP AWARDS

Recognizing outstanding research work in the areas of agrochemicals and food chemistry

*Co-sponsored by AGFD & AGRO Divisions*

### AGRO AWARD

*Co-sponsored by AGFD*

**Electrochemical Generation of Hydroxide and Hydrogen Peroxide for Hydrolysis of Sulfuryl Fluoride Fumigant.** Cindy Weng, Cade Napier, Cedric Katte, Spencer S. Walse, and **William A. Mitch\*** *J. Agric. Food Chem.* **2024**, 72:15133-15141. DOI: 10.1021/acs.jafc.4c00864

Sulfuryl fluoride (SO<sub>2</sub>F<sub>2</sub>) is a strong greenhouse gas, much more potent than carbon dioxide and methane. This article reports on an electrochemical approach to produce the reagents needed to capture and neutralize SO<sub>2</sub>F<sub>2</sub> fumes from post-harvest fumigation chambers, turning them into harmless salts. This new method provides an easier, cheaper solution for producing the chemicals needed to neutralize SO<sub>2</sub>F<sub>2</sub> fumes, rather than purchasing them directly.



**William (Bill) Mitch** is a Professor in the Department of Civil and Environmental Engineering at Stanford University. His research focuses on conventional drinking water and potable reuse of municipal wastewater. He obtained a BA in Archaeology from Harvard University and MS and PhD degrees in Civil and Environmental Engineering from the University of California at Berkeley. He received the 2004

Outstanding Doctoral Dissertation Award from the Association of Environmental Engineering and Science Professors and Parsons Engineering, and an NSF Career Award in 2007. He served as the Chair of the 2017 Disinfection Byproducts Gordon Conference. He holds a PE license in California.

### AGRO TUESDAY 4:15 PM

*Walter E. Washington Convention Center, Room 144A*

Capturing and degrading sulfuryl fluoride fumigant using an electrochemical reagent generation system. **W. Mitch**, C. Weng, C. Napier, C. Katte, S. Walse

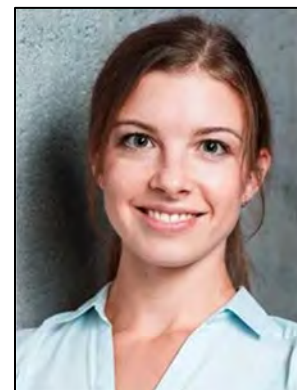
### AGFD AWARD

*Co-sponsored by AGRO*

**Reactivity of the 2-Methylfuran Phase I Metabolite 3-Acetylacrolein Toward DNA.** Verena Schäfer, Simone Stegmüller, Hanna Becker, and Elke Richling\* *J. Agric. Food Chem.* **2024**, 72:25319-25329. DOI: 10.1021/acs.jafc.4c07280

This study explores how 2-methylfuran (2-MF), a chemical found in foods such as coffee and cereal, can form 3-acetylacrolein (AcA) in the body and bind to certain parts of DNA, potentially leading to mutations and increasing the risk of diseases such as cancer. This work helps us to better understand and assess the potential health risks associated with consuming foods containing 2-methylfuran.

**Verena Schäfer** holds a PhD in Food Chemistry from RPTU University Kaiserslautern-Landau (2022). Her research focused on the metabolism and toxicological evaluation of heat-induced food contaminants, particularly 2-methylfuran. She investigated metabolic pathways, identified biomarkers of exposure, and studied structure–activity relationships to better understand the mechanisms



behind toxicity. In 2021, she completed a certified program in Clinical Research Management at the HGA – Gesundheitsakademie Hessen, with a focus on clinical trial conduct, GxP compliance, and medical communication. She currently works in the pharmaceutical industry (GlaxoSmithKline), where she is involved in the interpretation and scientific communication of clinical study data.

### AGFD TUESDAY 2:00 PM

*Walter E. Washington Convention Center, Room 143B*

Heat-induced contaminant 2-methylfuran: Metabolic activation and reactivity towards biomolecules. V. Schäfer, S. Stegmüller, **H. Becker**, E. Richling

*Congratulations to all these creative scientists!*

Excerpts from: Journal of Agricultural and Food Chemistry Research Article of the Year Award

# PAST AWARDEES OF THE ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS

- 1969 John E. Casida, University of California, Berkley  
1970 Richard D. O'Brien, Cornell University, Ithaca, New York  
1971 Robert L. Metcalf, University of Illinois, Champaign-Urbana  
1972 Ralph L. Wain, Wye College, University of London, England  
1973 Hubert Martin, British Crop Protection Council, London, England  
1974 T. Roy Fukuto, University of California-Riverside  
1975 Michael Elliot, Rothamsted Experimental Station, Harpenden, England  
1976 Morton Beroza, USDA-ARS, Beltsville, Maryland, retired  
1977 Francis A. Gunther, University of California-Riverside  
1978 Julius J. Menn, Stauffer Chemical Co., Mountain View, California  
1979 Milton S. Schechter, USDA-ARS, Beltsville, Maryland, retired  
1980 Minoru Nakajima, Kyoto University, Kyoto, Japan  
1981 Philip C. Kearney, USDA-ARS, Beltsville, Maryland  
1982 Jack R. Plimmer, USDA-ARS, Beltsville, Maryland  
1983 Karl Heinz Buechel, Bayer AG, Leverkusen, Germany  
1984 Jacques Jean Martel, Roussel Uclaf, Paris, France  
1985 Junshi Miyamoto, Sumitomo Chemical Co., Japan  
1986 James Tumlinson, USDA-ARS, Gainesville, Florida  
1987 Fumio Matsumura, Michigan State University, East Lansing  
1988 Ernest Hodgson, North Carolina State University  
1989 Toshio Narahashi, Northwestern University, Evanston, Illinois  
1990 David Schooley, University of Nevada, Reno  
1991 Stuart Frear, USDA-ARS, Fargo, North Dakota  
1992 Bruce Hammock, University of California-Davis  
1993 Morifusa Eto, Kyushu University, Fukoka, Japan  
1994 Toshio Fujita, Kyoto University, Japan  
1995 Mohyee Eldefrawi, University of Maryland, Baltimore  
Koji Nakanishi, Columbia University, New York, New York  
1996 Günther Voss, Ciba, Basel, Switzerland  
Klaus Naumann, Bayer AG, Leverkusen, Germany  
1997 Fritz Führ, Institute of Chemistry and Dynamic, Jülich, Germany  
Izuru Yamamoto, University of Tokyo, Japan  
1998 George Levitt, DuPont, Wilmington, Delaware  
Leslie Crombie, University of Nottingham, England  
1999 Don Baker, Zeneca, Richmond, California  
James Seiber, University of Nevada, Reno  
2000 George P. Georghiou, University of California, Riverside  
Herbert B. Scher, Zeneca, Richmond, California  
2001 Donald Crosby, University of California, Davis  
Ralph Mumma, Pennsylvania State University, University Park  
2002 Keith Solomon, University of Guelph, Canada  
Marinus Los, American Cyanamid, Princeton, New Jersey  
2003 Bob Hollingsworth, Michigan State University, East Lansing  
Hideo Ohkawa, Kobe University, Kobe, Japan  
2004 Stephen O. Duke, USDA-ARS, Oxford, Mississippi  
John M. Clark, University of Massachusetts, Amherst  
2005 Robert Krieger, University of California, Riverside  
Janice E. Chambers, Mississippi State University, Starkville  
2006 Joel Coats, Iowa State University, Ames  
Isamu Yamaguchi, Agricultural Chemicals Inspection Station, Tokyo, Japan  
2007 Gerald T. Brooks, University of Sussex, Brighton, United Kingdom, retired  
Fredrick J. Perlak, Monsanto, St. Louis, Missouri  
2008 David M. Soderlund, Cornell University, Ithaca, New York  
2009 R. Donald Wauchope, USDA-ARS, Tifton, Georgia, retired  
2010 Shinzo Kagabu, Gifu University, Gifu, Japan  
2011 George P. Lahm, DuPont Crop Science, Newark, Delaware  
2012 Thomas C. Sparks, Dow AgroSciences, Indianapolis, Indiana  
2013 René Feyereisen, National Institute of Agronomic Research (INRA), France  
2014 Ralf Nauen, Bayer CropScience, Monheim, Germany  
2015 Keith D. Wing, formerly of Rohm and Haas and DuPont Crop Protection, Wilmington, Delaware  
2016 Yoshihisa Ozoe, Shimane University, Japan  
2017 Jeffrey Bloomquist, University of Florida, Gainesville  
2018 Stephen Powles, University of Western Australia  
2019 Vincent L. Salgado, BASF, Research Triangle Park, North Carolina  
2020 Qing X. Li, University of Hawai'i, Mānoa, Hawai'i  
2021 David B. Sattelle, University College, London, England  
2022 Jeffery G. Scott, Cornell University, Ithaca, New York  
2023 Thomas M. Stevenson, FMC, Newark, Delaware  
2024 John M. Clough, Syngenta, Berkshire, UK  
2025 Thomas P. Selby, FMC, Newark, Delaware

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## CALL FOR NOMINATIONS ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS

*Sponsored By Corteva Agriscience*

### ACS Fall 2027 in San Diego, California USA

The ACS International Award for Research in Agrochemicals is given to a scientist who has made outstanding contributions to the field of agrochemicals at the international level. Their vision and sustained contributions will have opened new horizons for other investigators in their field and beyond.

- The **nomination letter** will include the following statement: "I hereby nominate [insert first, middle, last name] as a candidate for the ACS International Award for Research in Agrochemicals." It will also include the **nominee's birthplace, date of birth, citizenship, business address**, and a **description** (200 – 1000 words) of the reasons why the nominee should receive this award, stressing the individual's major accomplishments.
- Include a **curriculum vitae** of the candidate that includes: places and nature of employment, professional affiliations, honors and awards received, and a list of publications and patents.
- Nominations often include **one or two letters of support**, although this is optional.

Electronic nominations (as a single pdf file) containing all the listed items should be emailed to:

Qing X. Li  
AGRO Awards Committee Chair  
808-956-2011  
qingl@hawaii.edu

**Deadline:** Nominations should be received by the committee chair by **December 31** of each year. Balloting will be conducted beginning in January, and results will be announced the following spring.

The **nominating official(s)** should be prepared to assist in organizing a symposium at the ACS Fall 2027 Meeting in honor of the awardee.

*Special thanks to our sponsor for their generous contribution!*



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**New  
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opening in  
Indiana**

**Centralized  
pollinator  
lab in North  
Carolina**

**Increased  
biological testing  
services at  
EAS Easton**

**Certificate of  
Analysis  
recertification  
programs in  
MD and MO**

**DSC  
screening for  
explodability at  
EAS Columbia**

**Increased  
ambient archival  
storage at  
EAS Easton**

**Offering Fish  
Embryo Test  
screening at  
EAS Easton**

**Renovated  
greenhouse  
facility at  
EAS Columbia**



# CALL FOR NOMINATIONS

## AGRO AWARD FOR INNOVATION IN CHEMISTRY OF AGRICULTURE

*Sponsored by BASF Corporation*

### ACS Fall 2026 in Chicago, IL, USA

The ACS Award for Innovation in Chemistry of Agriculture is given to an active researcher working in North America for a chemical innovation that significantly enhances agricultural or veterinary pest management and productivity. The awardee will be asked to give an award address at the ACS Fall 2026 meeting.

The Nomination email will include the following:

1. A **formal letter of nomination** that includes:
  - Name, business address, phone, and email address of the nominator
  - Name, business address, phone, and email address of the nominee
  - A nomination statement (200 – 1000 words) giving reasons why the nominee should receive this award, stressing the chemical innovation and how it has enhanced agricultural or veterinary pest management and productivity
2. The nominee's **current curriculum vitae**
3. One or two **letters of support**
4. Reference or e-mail link to 1 or 2 published **manuscripts that report on the work** which supports the award nomination

Electronic nominations (as a single pdf file) containing all the listed items should be emailed to:

Qing X. Li  
AGRO Awards Committee Chair  
808-956-2011  
qingl@hawaii.edu

**Deadline:** Nominations should be received by the committee chair by **December 31** of each year. Balloting will be conducted beginning in January, and results will be announced the following spring.

The Awardee will be given the opportunity to present his/her work in a special lecture at the ACS Fall 2026 Meeting in August in Chicago, IL.

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### PAST AWARDEES OF THE AGRO AWARD FOR INNOVATION IN CHEMISTRY OF AGRICULTURE

2012	Steven J. Lehotay, USDA-Agricultural Research Service, Wyndmoor, Pennsylvania	2019	Pamela G. Marrone, Marrone Bio Innovations, Davis, California
2013	Jeanette M. Van Emon, US Environmental Protection Agency, Las Vegas, Nevada	2020	Ke Dong, Michigan State University, East Lansing, Michigan
2014	Scott R. Yates, USDA-Agricultural Research Service, Riverside, California	2021	Jeffrey Bloomquist, University of Florida
2015	Thomas C. Sparks, Dow AgroSciences, Indianapolis, Indiana	2022	Joel R. Coats, Iowa State University
2016	Thomas M. Stevenson, DuPont Crop Protection, Newark, Delaware	2023	Kevin G. Meyer, Corteva Agriscience, Indianapolis, Indiana
2017	Qing X. Li, University of Hawai'i, Mānoa, Hawai'i	2024	Leah S. Riter, Bayer, St. Louis, Missouri
2018	Vincent L. Salgado, BASF, Research Triangle Park, North Carolina	2025	Spencer Walse, USDA-Agricultural Research Service, Parlier, California

*Special thanks to our Sponsor for  
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## CALL FOR NOMINATIONS

### 2026 KENNETH A. SPENCER AWARD

*Sponsored by ACS KANSAS CITY SECTION*

The Kansas City Section of the American Chemical Society is soliciting nominations for the 2026 Kenneth A. Spencer Award. The award recognizes meritorious contributions to the field of agricultural and food chemistry. The Kansas City Section presents this award in the hope that it will give added stimulus in research, education, and industry to further progress in agricultural and food chemistry. The award has been awarded annually in Kansas City since 1955 and carries an honorarium of \$6,000. At this meeting the recipient will deliver an address, preferably upon the subject of the work for which they have been recognized. Subsequently, that address will be published, if possible, in an appropriate journal. The Kansas City Section will reimburse the recipient and spouse for round-trip travel expenses to Kansas City for the presentation.

To be eligible for the award, a candidate must be a citizen of the United States and must have done the work for which he or she qualifies as a candidate within the United States. The candidate need not be a member of the American Chemical Society. A candidate's work, whether it be done in education, industry, or research, should have meritoriously contributed to the advancement of agricultural and food chemistry. The nomination

shall include a biographical sketch of the nominee containing minimum vital statistics, education, and professional experience; a list of published papers and patents; a specific identifying statement of the work on which the nomination is based; and an evaluation and appraisal of the nominee's accomplishments with special emphasis on the work to be recognized by the award.

The nomination form can be found here:  
<https://acs-kc.com/spencer-application>

Submit nominations by December 1, 2025 to:  
Tom Hemling, tomhemling@gmail.com  
Sarah Leibowitz, sleibowitzacs@gmail.com  
Gary Clapp, geclapp424@yahoo.com

- or -  
Via USPS:  
Gary Clapp  
2903 Wilshire Court  
St. Joseph, MO 64506

### PAST KENNETH A. SPENCER AWARD WINNERS SINCE 1960

1960	C.H. Bailey, University of Minnesota	1993	Bruce Hammock, University of California, Davis
1961	H.L. Haller, USDA-ARS	1994	William S. Bowers, University of Arizona
1962	A.K. Balls, USDA-ARS	1995	Robert T. Fraley, Ceregen, A Unit of Monsanto Co.
1963	C.C. King, Rockefeller Foundation	1996	James N. BeMiller, Purdue University
1964	Daniel Swern, Temple University	1997	William M. Doane, USDA-ARS
1965	Aaron M. Altschul, USDA-ARS	1998	Mendel Friedman USDA-ARS
1966	Robert L. Metcalf University of California, Riverside	1999	James A. Sikorski, Monsanto Co.
1967	Melville L. Wolfrom, The Ohio State University	2000	Wendell L. Roelofs, Cornell University
1968	Herbert E. Carter, University of Illinois	2001	James Tumlinson, USDA-ARS
1969	Edwin T. Mertz, Purdue University	2002	Daniel W. Armstrong, Iowa State University
1970	Lyle D. Goodhue, Phillips Petroleum Company	2003	Eric Block, University at Albany, State Univ. New York
1971	William J. Darby, Vanderbilt University	2004	Steven D. Aust, Utah State University
1972	Emil M. Mrak, University of California, Davis	2005	Don R. Baker, Berkeley Discovery Inc.
1973	Esmond E. Snell, University of California, Berkeley	2006	Russell Molyneux, USDA-ARS
1974	Roy L. Whistler, Purdue University	2007	David A. Schooley, University of Nevada, Reno
1975	Thomas H. Jukes, University of California, Berkeley	2008	Ron G. Buttery, USDA-ARS
1976	E. Irvine Liener, University of Minnesota	2009	George P. Lahm, DuPont Crop Protection
1977	N. Edward Tolbert, Michigan State University	2010	Clive A. Henrick, Trece, Inc.
1978	John E. Casida, University of California, Berkeley	2011	Michael W. Pariza, University of Wisconsin, Madison
1979	Charles W. Gehrke, University of Missouri, Columbia	2012	James N. Seiber, University of California, Davis
1980	George K. Davis, University of Florida, Gainesville	2013	Attila Pavlath, USDA-ARS, retired
1981	John Speziale, Monsanto Agricultural Products Co.	2014	Ronald Horst, USDA-ARS, retired
1982	Howard Bachrach, USDA-ARS	2015	Thomas Selby, DuPont Crop Protection
1983	Peter Albersheim, University of Colorado	2016	Agnes Rimando, USDA-Agricultural Research Service
1984	Richard H. Hageman, University of Illinois	2017	Bruce German, University of California, Davis
1985	Bruce N. Ames, University of California, Berkeley	2018	Thomas M. Stevenson, FMC
1986	John M. Bremner, Iowa State University	2019	Thomas C. Sparks, Corteva Agriscience, retired
1987	Hector F. DeLuca, University of Wisconsin, Madison	2020	Jerry W. King, University of Arkansas, retired
1988	Boyd L. O'Dell, University of Missouri, Columbia	2021	Takayuki Shibamoto, University of California, Davis
1989	Robert H. Burris, University of Wisconsin	2022	H.N. Cheng, USDA-ARS
1990	John E. Kinsella, University of California, Davis	2023	Joel R. Coats, Iowa State University
1991	George Levitt, DuPont Experimental Station	2024	Atanu Biswas, USDA-ARS
1992	Clarence A. Ryan, Jr., Washington State University	2025	Gary List, USDA-ARS, retired





## CALL FOR NOMINATIONS

### 2026 STERLING B. HENDRICKS MEMORIAL LECTURESHIP

*Sponsored by USDA-Agricultural Research Service*

*Co-Sponsored by AGFD and AGRO Divisions*

The Agricultural Research Service (ARS), USDA's principal in-house scientific agency, is seeking nominations for the 2026 Sterling B. Hendricks Memorial Lectureship Award. This award is also co-sponsored by the American Chemical Society (ACS).

Established in 1981, the Hendricks Memorial Lectureship honors the memory of Sterling B. Hendricks (1902-1981) by recognizing scientists who have made outstanding contributions to the chemical science of agriculture. Hendricks contributed to many diverse scientific disciplines, including soil science, mineralogy, agronomy, plant physiology, geology, and chemistry. He is most frequently remembered for discovering phytochrome, the light-activated molecule that regulates many plant processes. The lecture should address a scientific topic, trend, or policy issue related to agriculture.

The lecture is a forum for a presentation on a scientific topic, trend, or policy issue related to the chemical science of agriculture. Selected nominees will receive a \$5,000 honorarium, a personalized plaque and medal, and recognition from the ARS Administrator, and will be featured on the ARS website and social media platforms.

Awardees will be asked to virtually present on a topic within their expertise to the public via ARS online webcast, and/or in an ARS Podcast interview, and in a roundtable to ARS staff. The 2026 Awardee will also be given the opportunity to present their lecture at the ACS Fall Meeting in Chicago, Illinois. The Divisions of Agrochemicals (AGRO) and Agricultural and Food Chemistry (AGFD) will co-sponsor the lecture.

**Nominees** may be outstanding senior scientists in industry, university, consulting, or government positions. *Current ARS employees are not eligible.* Retired ARS scientists must be retired for at least 2 years prior to nomination.

The **Nomination Package** which includes the following must be sent to [hendrickslecture@usda.gov](mailto:hendrickslecture@usda.gov).

1. The nomination form which is available at <https://forms.office.com/g/ifGUucvaCG>
2. A letter explaining the nominee's contributions to the chemical science of agriculture
3. A current resume/*curriculum vitae*

Please visit the USDA-ARS website for more information. The deadline for nominations is **December 31, 2025**.

### PAST STERLING B. HENDRICKS MEMORIAL LECTURESHIP AWARD WINNERS

1981	Norman E. Borlaug, Nobel Laureate, International Maize and Wheat Improvement Center, Mexico City, Mexico	2004	Robert L. Buchanan, Food and Drug Administration, College Park
1982	Warren L. Butler, University of California, San Diego	2005	Donald L. Sparks, University of Delaware
1983	Melvin Calvin, University of California, Berkeley	2006	Stanley B. Prusiner, Nobel Laureate, University of California, San Francisco
1984	Frederick Ausubel, Harvard Medical School, Boston	2007	Bruce E. Dale, Michigan State University, East Lansing
1985	Alan Putnam, Michigan State University, East Lansing	2008	Fergus M. Clydesdale, University of Massachusetts-Amherst
1986	Ralph Hardy, Cornell University and BioTechnica International, Ithaca	2009	Charles J. Arntzen, Arizona State University, Tempe
1987	Mary-Dell Chilton, Ciba-Geigy Corporation, Research Triangle Park	2010	Chris Somerville, Director of the Energy Biosciences Institute, Berkeley
1988	Bruce N. Ames, University of California, Berkeley	2011	Deborah P. Delmer, University of California, Davis
1989	Sanford A. Miller, University of Texas Health Science Center at San Antonio	2012	Eric Block, University at Albany, State University of New York
1990	Roy L. Whistle, Purdue University, West Lafayette	2013	Keith R. Solomon, University of Guelph, Canada
1991	Peter S. Eagleson, Massachusetts Institute of Technology, Cambridge	2014	Robert T. Fraley, Monsanto, Company, St. Louis
1992	John E. Casida, University of California, Berkeley	2015	James H. Tumlinson, Penn State, University Park
1993	Philip H. Abelson, Deputy Editor, <i>Science</i> , and Scientific Advisor to AAAS, Washington, DC	2016	May R. Berenbaum, University of Illinois, Urbana-Champaign
1994	Wendell L. Roelofs, Cornell University, Ithaca	2017	John A. Pickett, Rothamsted Research, United Kingdom
1995	Winslow R. Briggs, Carnegie Institution of Washington, Stanford, California	2018	James N. Seiber, University of California, Davis
1996	Hugh D. Sisler, University of Maryland, College Park	2019	John W. Finley, Louisiana State University, Baton Rouge
1997	Ernest Hodgson, North Carolina State University, Raleigh	2020	Thomas C. Sparks, Corteva Agriscience, Indianapolis, retired
1998	Morton Beroza, USDA-ARS, Beltsville, MD, retired	2021	Fereidoon Shahidi, Memorial University of Newfoundland
1999	Bruce D. Hammock, University of California, Davis	2022	Stephen O. Duke, USDA-ARS, Oxford, retired
2000	William S. Bowers, University of Arizona, Tucson	2023	Gary List, USDA-ARS, Peoria, Illinois, retired
2001	Malcolm Thompson, USDA-ARS, Beltsville, MD, retired	2024	John M. Clark, University of Massachusetts, Amherst
2002	Irvin E. Liener, University of Minnesota, St. Paul		
2003	Kriton Kleantis Hatzios, Virginia Polytechnic Institute and State University, Blacksburg		



## Providing Innovative Solutions to Meet Regulatory and Environmental Challenges

CSI has been providing technical and regulatory consulting support focused on challenges to crop protection needs, regulatory changes influencing registration and product availability and use, including Endangered Species Act (ESA) mitigation requirements and associated regulatory strategies.

We are very pleased to be serving the Ag Chem industry all these years and want to share with you what were some of our rewarding and successful projects and industry trade association events over the last year - **Thank You to all of our clients!**

- > Pollinator Research Task Force (PRTF) - Development of a global nectar and pollen residue database with a user interface to calculate pesticide residue per unit dose (RUD)
- > Shared up-to-date information about pesticides and ESA at over 20 different association meetings, conferences, webinars, and media outlets
- > Supported registrants by navigating ESA towards successful registration of new active ingredient products, premixes, and registration review actions using information from CSI's Avoidance, Minimization, and other Measures for Protecting Species

 **AMMPS** <https://ammppspecies.com>

- > Built networks and collaborations with diverse stakeholder groups to help increase awareness of ESA and pesticides
- > Developed innovative data displays and tools to help growers understand potential impact of EPA's ESA strategies on their farms
- > Explored the role of offsets in ESA and pesticides in collaborative projects



Antimicrobials & Biocides



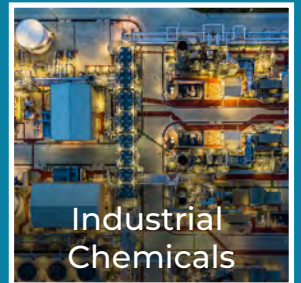
Consumer and I&I Products



Crop Protection



Endangered Species



Industrial Chemicals

### Global Regulatory and Environmental Strategies since 1988

#### North American Headquarters

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#### European Headquarters (UK)

Pentlands Science Park  
Penicuik, Nr. Edinburgh EH26 0PZ  
+44 (0)131-445-6053

#### EU Office (Ireland)

The Greenway, Ardilaun Court  
112-114 St. Stephen's Green, Dublin 2  
+44 (0)131-445-6053

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# JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY

## CALL FOR NOMINATIONS

### 2026 RESEARCH ARTICLE OF THE YEAR AWARD LECTURESHIP AWARDS

*Sponsored by the Journal of Agricultural and Food Chemistry*

*Co-sponsored by AGFD & AGRO Divisions*

The *Journal of Agricultural and Food Chemistry (JAFC)* and the ACS Divisions of Agricultural and Food Chemistry (AGFD) and Agrochemicals (AGRO) are seeking nominations for the Research Article of the Year Award Lectureship.

Two papers will be awarded, one from each category, for an outstanding article published in 2025 (either in an issue of *JAFC* or *ASAP*) that demonstrates creativity and impact on agricultural and food chemistry as a whole.

#### Each winner will receive:

- An award plaque
- \$1000 USD
- Travel expenses up to \$1250 USD to attend the ACS Fall 2026 Meeting in August in Chicago, Illinois

#### Nominations should include:

- Name, affiliation, and e-mail address of the nominator
- Nominee's article title and DOI (hyperlinked to the article if possible)
- Name, affiliation, and e-mail address of the corresponding author (no self-nominations)
- A statement of why the article is outstanding (less than 500 words)
- Suggestion of a category AGFD or AGRO
- The words "JAFC nomination" in the subject of the email

#### Nominees will be divided into two categories:

- Agrochemicals (pesticides, biofuels and biobased products, and related)
- Agricultural and food chemistry (food, health, and related)

This will be subject to the discretion of the Editor-in-Chief.

The winners will be announced in early 2026, and the award will be presented at the ACS Fall Meeting.

Send your nominations to: [managing.editor@jafc.acs.org](mailto:managing.editor@jafc.acs.org)

**Deadline for nominations – January 31, 2026**

INTRODUCING TWO NEW JOURNALS IN THE  
***Journal of Agricultural  
and Food Chemistry*** family

**SUBMIT YOUR ARTICLE TODAY!**





## All Graduate Students & Post-Docs

*Are Cordially Invited to Attend the*

## AGRO Grad Student and Post-Doc Luncheon

**Are you wondering about the different career paths you can take after graduation?**

Visit and network with professionals in academia, consulting, government, and industry to discuss and explore career opportunities.

**Monday, August 18, 12:00 – 1:30 pm EDT  
Marriott Marquis, Judiciary Square Room**

It's free, but reservations are required.  
For more information contact  
Sara Whiting, [sara.whiting@bayer.com](mailto:sara.whiting@bayer.com)



*The AGRO Division is grateful for support of  
the AGRO Student and Post Doc Luncheon*



## AGRO DIVISION NEW INVESTIGATOR AWARD FINALISTS



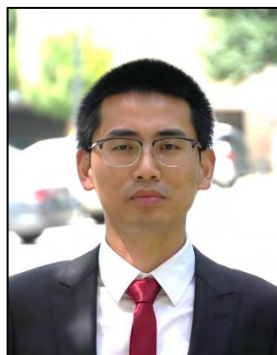
**Niranjana Krishnan** is an assistant professor in the Department of Entomology at the University of Maryland, College Park. Her research focuses on assessing the effects of pesticide exposure on different levels of insect biological organization. She is also serving as Maryland's Pesticide Safety Education Program Coordinator and teaches courses in molecular and

cellular biology and pesticide toxicology and risk assessment.

### MONDAY 3:20 PM

*Walter E. Washington Convention Center, Room 144A*

**NEW INVESTIGATOR AWARD FINALIST.** Elucidating an adverse outcome pathway for sublethal doses of neonicotinoid insecticides. **N. Krishnan**, S. Purtee, A.D. Gross, S. Bradbury, R. Jurenka



**Zhilin Li** received his bachelor's degree in plant protection from Northwest A&F University in 2014. In 2016, he joined the Insect Physiology Laboratory in the Department of Entomology at Louisiana State University to pursue his master's degree under the mentorship of Daniel Swale. His thesis research focused on characterizing the role of potassium conductance

pathways, particularly inward rectifier potassium channels, in arthropod salivary gland and feeding.

After earning his M.S. in 2018, Zhilin continued in the same lab to pursue his Ph.D. He expanded his research by defining pathogen–vector interactions using chemical probes, with the long-term goal of developing novel approaches to reduce vector competence by interrupting pathogen-induced changes within the vector. Zhilin is currently a postdoctoral research associate at the University of Florida, working under the mentorship of Jeffrey Bloomquist and Daniel Swale, with a primary project of characterizing the mode of action of a

natural product insecticide. He is interested in developing new active ingredients and targets for pest management.

### TUESDAY, 11:05 AM

*Walter E. Washington Convention Center, Hall E – Room 14*

**NEW INVESTIGATOR AWARD FINALIST.** Patchouli compound, an alternative natural mosquitocide to synthetic pyrethroids. **Z. Li**, R. Chen, E. Norris, D. Swale, J.R. Bloomquist

**Na Xie** earned her B.S. in Pharmaceutical Engineering from Northwest A&F University in China, followed by an M.S. in Pesticide Science, where she focused on the extraction and isolation of bioactive plant compounds with insecticidal properties. She received her Ph.D. in Entomology from Virginia Tech in May 2022,

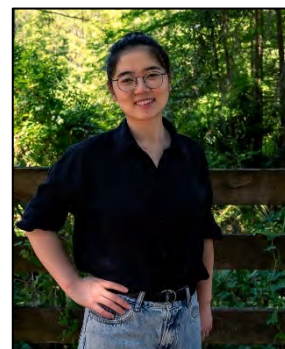
advised by Aaron Gross, and currently serves as a postdoctoral researcher in the Bonning Lab at the University of Florida.

In the Bonning lab, she contributes to a USDA Emergency Citrus Disease Research and Extension project targeting citrus greening disease. Her research utilizes RNA interference (RNAi) to silence gut surface proteins of the Asian citrus psyllid. This work aims to unravel the interaction between gut proteins and *Candidatus Liberibacter asiaticus* (CLas) infection, offering vital insights for developing innovative disease management strategies. The second project that Na is doing involves identifying pathogen receptor binding motifs on the surface of the insect gut using the bait protein aminopeptidase N (APN) with an overall goal to mitigate the resistance to Bt toxins among pest populations.

### TUESDAY, 10:40 AM

*Walter E. Washington Convention Center, Hall E – Room 14*

**NEW INVESTIGATOR AWARD FINALIST.** RNAi-based management of citrus greening disease by targeting pathogen interaction with the gut of the Asian citrus psyllid. **N. Xie**, M. Roy, K. Pelz-Stelinski, B. Bonning



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





# AGRO EDUCATION TRAVEL AWARDS AND POSTER PRESENTATION COMPETITION

*Sponsored by Bayer Crop Science*



Michael Adu-Brew  
University of Maryland,  
College Park



Damalka Balasuriya  
University at Buffalo



Alexandra Cremades  
University of Florida



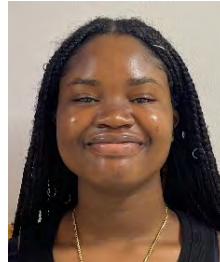
Jessica Griesheimer  
University of Florida



DeZarae Guthrie  
Prairie View A&M  
University



Sunira Marahatta  
Louisiana State University



Alesha Maxwell  
Prairie View A&M  
University



Sarah McComic  
University of Florida



Saifullah Omar Nasif  
University of Newcastle



Flinn O'Hara  
University of Florida



Sujay Paranjape  
The Pennsylvania State  
University



Navjot Singh  
Texas A&M University



Meenal Singh  
Western Sydney  
University



## AGRO EDUCATION TRAVEL AWARDS AND POSTER PRESENTATION COMPETITION

Sponsored by Bayer Crop Science

### AGRO COMBINED POSTER SESSIONS

Walter E. Washington Convention Center, Hall C

TUESDAY and WEDNESDAY, 12:00 PM – 2:00 PM

*Congratulations to our student travel grant winners!*

#### Tuesday, August 19

**Michael Adu-Brew**, Assessing the toxicity and risk of newer synthetic pesticides and biopesticides on monarch butterflies (*Danaus lexippus*). *University of Maryland, College Park, Niranjana Krishnan*

**Damalka Balasuriya**, Total organofluorine analysis of surface water samples in an agricultural watershed by NMR and CIC. *University at Buffalo, Diana Aga*

**Alexandra Cremades**, Discovery of novel inward rectifier potassium channel inhibitors via *in silico* screening for antifeedant aphicides. *University of Florida, Daniel Swale*

**Jessica Griesheimer**, Evaluation of *Anthonomus eugenii*, pepper weevil, pheromone as potential field management strategy. *University of Florida, Xavier Martini*

**Sunira Marahatta**, Revolutionizing soybean fungal disease management strategies with enhanced efficacy of spray induced gene silencing. *Louisiana State University, Zhi-Yuan Chen*

**Alesha Maxwell**, Assessing selective inhibitors for methane mitigation in rice ecosystems. *Prairie View A&M University, Sela Woldensenbet*

**Sarah McComic**, Utilizing optogenetic technology to characterize insect muscle physiology. *University of Florida, Daniel Swale*

**Saifullah Omar Nasif**, Adsorption behavior of pore-expanded MCM-41 with imidacloprid to reveal its potential for controlled release. *University of Newcastle Australia, Ravi Naidu*

**Flinn O'Hara**, Combining single cell transcriptomics and proteomics to identify novel antifeedant targets in the southern green stink bug. *University of Florida, Daniel Swale*

**Sujay Paranjape**, Soil legacy effects on plant defense chemistry. *The Pennsylvania State University, Jared Ali*

#### Wednesday, August 20

**DeZarae Guthrie**, Sustainable soil management: The role of biochar-manure blends in mitigating greenhouse gas emissions and enhancing soil fertility. *Prairie View A&M University, Laura Carson*

**Navjot Singh**, Evaluating machine learning guided spray drone applications in different crop productions. *Texas A&M University, Muthukumar Bagavathiannan*

**Meenal Singh**, Effect of steel slag on plant growth parameters of field crop using artificial soil. *Western Sydney University, A.P. Singh*



*The AGRO Division is grateful for support of  
the AGRO Education Travel Awards*

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In agriculture, being sustainable means being able to grow crops season after season for generations to come while protecting the health of the planet and its people.

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## CALL FOR APPLICANTS

# AGRO DIVISION NEW INVESTIGATOR AWARD

*Sponsored by Syngenta*

### Fall ACS Meeting 2026 in Chicago, Illinois, USA

The AGRO Division seeks nominations for the New Investigator Award (NIA) to be awarded at the ACS meeting in Chicago, Illinois in August 2026. 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 as are nutrients and fertilizers. 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 his or her doctorate no more than five years before the time of the ACS Fall Meeting. Thus, for 2026, applications will be considered from **scientists who have obtained their doctorates no earlier than the year 2021**.
- A panel consisting of at least three AGRO members will choose up to three finalists based on their extended abstracts, 1-page *curriculum 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](mailto:nia@agrodiv.org) no later than **March 31, 2026**.

**Files sent directly to the coordinators will not be accepted.**

#### For more information, please contact the NIA Co-Coordinators:

Sara Whiting, Bayer US LLC, [Sara.whiting@bayer.com](mailto:Sara.whiting@bayer.com)  
Nurhayat Tabanca, USDA-ARS, [nurhayat.tabanca@usda.gov](mailto:nurhayat.tabanca@usda.gov)  
Ashli Brown, Mississippi State University, [ab506@msstate.edu](mailto:ab506@msstate.edu)

#### To Apply for the New Investigator Award:

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 2026 ACS National Meeting in Chicago, IL.

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





We are Committed to  
**Transparency**  
*at Bayer Crop Science*



# Transparency fosters

*an informed, science-based dialog*

Bayer was the first company in the agriculture industry to enable access to crop protection safety studies. We continue to expand our transparency program.

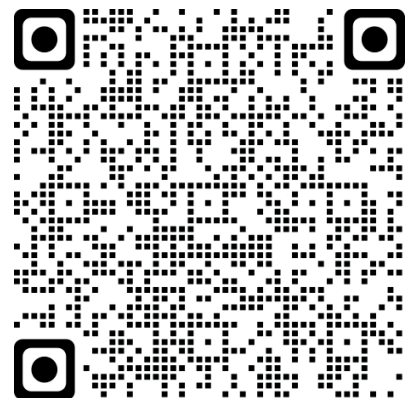
## KEY COMPONENTS ARE:



Access to **full safety study reports** for crop protection, genetically modified crops, and plant breeding including scientific background information.



Open Dialogue Platform “**OpenLabs 360°**”, to discuss Crop Protection product safety testing with our scientists.





## CALL FOR APPLICANTS

# AGRO DIVISION 2026 EDUCATION TRAVEL AWARDS

*Sponsored by Bayer US LLC, Crop Science Division*

## UNDERGRADUATE and GRADUATE STUDENT RESEARCH

*Travel Support for Student Posters*

### Fall ACS Meeting 2026 in Chicago, Illinois, USA

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

Applications are sought for the 2026 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 ACS Meeting, which will be held in August 2026 in Chicago, Illinois. 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 including nutrients and fertilizers. The AGRO Division is also interested in chemical products made from agricultural commodities, byproducts, biofuels, and their production issues.

**PLEASE NOTE:** *Only poster presentations are eligible for this travel award. 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 oral presentation will not be eligible for the travel award. These students should also submit a poster abstract 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  
tel: 540-232-8448  
adgross@vt.edu

**To apply, students should submit the following no later than March 31, 2026:**

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 the name of the applicant, the applicant's address, and the applicant's e-mail address.

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

*posters@agrodiv.org*

**Only abstracts submitted to symposia organized by the AGRO Division are eligible for 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/awards/agro-education-awards-for-student-travel/>
3. A short letter of nomination from the faculty advisor that verifies the current enrollment of the student.  
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*
4. A headshot for public release in a separate file and submitted with the pdf file.

**Files sent directly to the coordinators will not be accepted.**

Sara Whiting  
Bayer R&D Services LLC  
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 2026*

*Special thanks to our sponsor for their generous contribution*





**Support AGRO!**  
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## Notes from the Program Chair

Mingming Ma, [mingming.ma@corteva.com](mailto:mingming.ma@corteva.com)

As we move through 2025, the AGRO Division continues its exciting trajectory of scientific excellence, collaboration, and innovation. This fall, the ACS National Meeting will be held in Washington, D.C., August 17 - 21, under the theme *Innovations in Chemistry*. The AGRO Division will contribute a robust technical program from Monday through Wednesday (August 18 - 20) featuring 27 symposia with 315 presentations, including 241 oral and 74 poster presentations.

A heartfelt **thank you** to all symposium organizers and presenters: your dedication continues to make AGRO a dynamic and impactful division within ACS.

### Future of Meetings Programming

Several format changes have been implemented for the 2025 Fall ACS Meeting. While the broader ACS technical program will span three and a half days (Monday through Thursday morning), AGRO will host all of its programming over three days, Monday through Wednesday. In alignment with ACS meeting format changes, symposia are now offered as either in-person or virtual sessions, but not hybrid. The AGRO program includes three half-day virtual sessions in the Fall meeting.

Of the 27 AGRO symposia, five are **JOINT SYMPOSIA** in collaboration with other ACS Divisions including AGFD, CINF, ORGN, and I&EC. These joint sessions underscore AGRO's commitment to fostering interdisciplinary collaboration and advancing scientific innovation. I am proud to share that AGRO exceeded the ACS target of 10% joint symposia, thank you to all the symposium organizers who helped lead and pilot these efforts.

### Awards and Award Lectures

We are honored to recognize outstanding scientific achievements through our annual awards. This year, we are proud to feature the following honorees:

- **Thomas P. Selby**, recipient of the 2025 ACS International Award for Research in Agrochemicals, sponsored by Corteva Agriscience. His award symposium is organized by Thomas M. Stevenson and Sheng-Ying Hsieh.
- **Spencer S. Walse**, recipient of the 2025 AGRO Award for Innovation in Chemistry of Agriculture, sponsored by BASF.
- **William Mitch**, recipient of the *Journal of Agricultural and Food Chemistry* AGRO Research Article of the Year Award.

Dr. Spencer Walse's and Dr. William Mitch's award lectures will be featured in the symposium titled *Pesticide Regulation, Global Trade: U.S. Leadership in Food Security*.

### Fostering Growth: Student and Early Career Recognition

AGRO remains dedicated to fostering the next generation of scientists. This year, we are proud to present 13 AGRO Education Awards for Student Travel, generously sponsored by Bayer. Awardees will present their work during the AGRO Poster Sessions and Sci-Mix. We are also excited to highlight three New Investigator Award finalists, who will present their work in AGRO symposia. Congratulations to **Niranjana Krishnan**, **Zhilin Li**, and **Na Xie** on this well-deserved recognition.

To further support early-career professionals, the Graduate Student and Postdoc Luncheon will be held on Monday, 12:00–1:30 PM. This event offers a valuable opportunity for students and postdocs to connect, share experiences, and build their professional networks.

### Events & Networking - Connecting the AGRO Community

Networking is a vital part of the AGRO experience, offering opportunities to build professional relationships, share ideas, and foster meaningful collaborations. We invite all members and guests to join us at the following AGRO events designed to support community connection and professional growth:

- **VIP Event** – Tuesday, 6:00–7:00 PM
- **AGRO Brewing Ideas** – Tuesday, 7:00–8:30 PM
- **AGRO Awards Social** – Wednesday, 6:00–8:00 PM

We encourage you to attend these events and take full advantage of the connections and ideas they inspire.

### Your Involvement Matters

The strength of our Division lies in the passion and dedication of our members. I offer my sincere thanks to all symposium organizers, presenters, volunteers, and the AGRO Executive Committee. I am especially grateful for the support and guidance from Aaron Gross and James Foster. Special recognition goes to **Mary Kirchhoff**, AGRO's Technical Program Administrator; her support and leadership have been invaluable throughout this programming cycle.

Whether you're presenting groundbreaking research, exploring new collaborations, or reconnecting with friends and colleagues, I hope you enjoy the meeting and all that AGRO has to offer.

Thank you for making AGRO a vibrant, inclusive, and forward-looking scientific community.

*See you in Washington DC!*



## AGRO Strategic Programming Committee Standing Programming and Champions

*Additional volunteers are always welcome!*

*Dena Barrett, 2025 Programming Committee Chair; dbarrett@agrodiv.org*

### **Agrochemical Residues, Analytical and Metabolism**

#### **Chemistry, and Metabolomics**

Kevin Armbrust, armbrust@lsu.edu  
Lisa Buchholz, lisa.buchholz@corteva.com  
Tao Geng, tao.geng@bayer.com  
Mingming Ma, mingming.ma@corteva.com  
Leah Riter, leah.riter@bayer.com  
Manasi Saha, manasi.saha@basf.com

### **Agricultural Biotechnology**

Jennifer Anderson, jennifer.anderson@pioneer.com  
Jeff Hughes, jeffrey.hughes@bayer.com

### **Impact of Climate Change on Agriculture and Food Security**

Heidi Irrig, heidi.irrig@syngenta.com  
Pam Rice, pamela.rice@usda.gov  
Amy Ritter, rittera@waterborne-env.com

### **Agrochemical Toxicology, Mode of Action, and Omics**

John Clark, jclark@vasci.umass.edu  
Aaron Gross, adgross@vt.edu  
Qing Li, qingl@hawaii.edu  
Ralf Nauen, ralf.nauen@bayer.com

### **Air Quality and Agriculture**

Rod Bennett, rodbennett@dac@gmail.com  
Cathleen Hapeman, cathleen.hapeman@usda.gov  
Patrick Havens, pat.havens@corteva.com

### **Biorational Pesticides, Natural Products, Pheromones, and**

#### **Growth Regulators in Agriculture**

Joel Coats, jcoats@iastate.edu  
Aaron Gross, adgross@vt.edu  
Edmund Norris, edmund.norris@usda.gov

### **Communication**

Jennifer Anderson, jennifer.anderson@pioneer.com  
Cathleen Hapeman, cathleen.hapeman@usda.gov  
Leah Riter, leah.riter@bayer.com

### **Developments in Integrated Pest Management and Resistance Management**

Troy Anderson, tanderson44@unl.edu  
Jeff Bloomquist, jbquist@epi.ufl.edu  
Aaron Gross, adgross@vt.edu

### **Discovery and Synthesis of Bioactive Compounds**

Michael David, michael.david@basf.com

### **Ecosystem Exposure and Ecological Risk Assessment**

Patrick Havens, pat.havens@corteva.com  
Amy Ritter, rittera@waterborne-env.com

### **Environmental Fate, Transport, and Modeling of Agriculturally Related Chemicals**

Jay Gan, jgan@ucr.edu  
Mingming Ma, mingming.ma@corteva.com  
Jayanta Nag, jayanta.nag@upl-ltd.com  
Pam Rice, pamela.rice@usda.gov

### **Formulation and Applications Technology**

Ricardo Acosta Amado, ricardo.acosta-amado@corteva.com  
Danny Brown, dmbrown@landolakes.com  
Patrick Havens, patrick.havens@corteva.com  
Jeff Hughes, jeffrey.hughes@bayer.com  
Erdal Ozkan, ozkan.2@osu.edu

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

Aaron Gross, adgross@vt.edu  
Steve Lehotay, steven.lehotay@usda.gov  
Edmund Norris, edmund.norris@usda.gov

### **Human Exposure, Health, and Risk Assessment**

Mike Krotski, mike.krotski@bayer.com  
Claire Terry, claire.terry@corteva.com  
Amy Ritter, rittera@waterborne-env.com

### **Non-Food/Feed Production and Uses of Ag Commodities and Byproducts**

Tao Geng, tao.geng@bayer.com  
Cathleen Hapeman, cathleen.hapeman@usda.gov

### **Pesticides, Pollinators, and Non-target Arthropods**

Allan Felsot, afelsot@wsu.edu  
John Purdy, johnrpurdy@gmail.com  
Daniel Schmehl, daniel.schmehl@bayer.com  
Joe Wisk, joseph.wisk@basf.com

### **Regulations, Harmonization, and MRLs**

Heidi Irrig, heidi.irrig@syngenta.com  
Ken Racke, kenracke@gmail.com  
Carmen Tiu, carmen.tiu@corteva.com

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

Danny Brown, dmbrown@landolakes.com  
Tao Geng, tao.geng@bayer.com  
Rai Kookana, Rai.Kookana@csiro.au  
Mingming Ma, mingming.ma@corteva.com

### **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

*Dena Barrett, 2026 Program Chair*

*dbarrett@agrodiv.org*

Strong, diversified programming and long-term planning are crucial for the continued success of AGRO. As the Vice-Chair this year, I am excited to transition into the role of **2026 Program Chair in Chicago, IL**. I look forward to working with you to build on our successful programming legacy. AGRO has exciting plans in the works to expand opportunities and access to research advances and educational opportunities drawing from the knowledge base of AGRO members. Look for announcements of new opportunities over this and next year.

**Future of ACS Meeting Programming.** This past January I attended the ACS Future of Meetings Programming Workshop in Houston, affording me a better understanding of the ACS strategy aiming to improve the attendee experience and increase global engagement. This involves incorporating digital experiences, building collaborative programs, and learning from member feedback to continue to make improvements in our strategy. I had an opportunity to meet with and brainstorm with the officers of many other Divisions regarding ideas for future collaboration.

This is a great strategy, and I will continue to work with other AGRO leaders to improve AGRO with respect to each of these pillars of the ACS strategy. AGRO also has its own specific goals, via its recently updated Strategic Planning Committee. These three goals of the AGRO plan will mesh very well with the ACS plan.

1. *Membership.* Engage and retain new and existing members.
2. *Information/Knowledge.* Deliver information through new means of communication.
3. *AGRO 2050.* Create a future-ready Division that serves as a key resource for the global agrochemical community.

Each of these goals aims at building up and increasing the reach of AGRO, expanding AGRO's influence, diversifying membership, and increasing collaboration/networking - creating new synergies along the way. I look forward to working with AGRO to implement actions that will see ACS's and our goals manifested in our Division.

**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. The committee also discusses ways to partner through programming with other ACS Divisions and other national and international partners. A key activity of the Strategic Programming Committee is to maintain a volunteer list of Topic Champions that supports symposium planning. The role of the Topic Champion is to: 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.

For ACS Fall 2026 in Chicago, AGRO has been allocated 25 half-day sessions for divisional or joint programming and 5 half-day sessions exclusively for joint programming. If you are interested in serving on the Programming Committee or organizing a symposium at the August 2026 Chicago meeting or beyond, please reach out to me directly.

We welcome any ideas for expanding AGRO's presence in other ways, including participation at ACS Regional meetings and international meetings that are a good fit with AGRO, and new digital/virtual meetings, such as the existing, highly-successful, and informative AGRO Lunch and Learn webinar series.

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*Be a part of the fun and creativity!*

### **Brewing Ideas with AGRO**

*Program Brainstorming for 2026*

Tuesday, August 19, 2025

7:00 – 8:30 PM

Marriott Marquis, Liberty Salon L & M

- ☞ **Planning for the Chicago, Illinois ACS Fall 2026 Meeting**
- ☞ **Creative brainstorming about future AGRO programming**
- ☞ **Learn more about how easy it is to organize a symposium**

*Free Drinks and Snacks!*

Send your ideas to Dena Barrett  
[dbarrett@agrodiv.org](mailto:dbarrett@agrodiv.org)



## AGRO Lunch and Learn Webinar Series

Co-sponsored by Eurofins Agrosience Services

Recordings of the 2019 – 2025 AGRO Lunch and Learn Webinars and from previous years are freely available on the AGRO website (<https://www.agrodiv.org/category/webinars/>) and on YouTube.

Planning is underway for the 2025 – 2026 AGRO Lunch and Learn Webinar Series.

If you have an idea for a webinar, please contact any of the webinar committee members:

Solito Sumulong, [solito.sumulong@agrithority.com](mailto:solito.sumulong@agrithority.com)  
Amanda Chen, Laura McConnell, Natalia Peranginangin, Tom Sparks, Daniel Swale

*Special thanks to our sponsor for their generous contribution!*



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### Future ACS National Meetings

#### ACS Spring 2026

March 22 – 26  
Atlanta, Georgia

#### ACS Spring 2027

March 21 – 25  
New Orleans, Louisiana

#### ACS Fall 2026

August 23 – 27  
Chicago, Illinois

#### ACS Fall 2027

August 22 – 26  
San Diego, California

### Thinking about organizing a symposium for a National Meeting?

#### AGRO ASSISTS SYMPOSIUM ORGANIZERS 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 2025 – 2027

Activity/Event	Leaders/ Champions	Status	Actions Required
ACS Fall 2025 Meeting August 17-21, 2025 Washington, DC <i>Innovations in Chemistry</i>	Mingming Ma	<ul style="list-style-type: none"> <li><b>Come to the meeting!</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Volunteers at the desk NEEDED!!</b></li> <li>Attend Brewing Ideas with AGRO, Tuesday August 19 for Chicago</li> <li>Send ideas to Dena</li> </ul>
AGRO Lunch and Learn Webinar Series	Solito Sumulong	<ul style="list-style-type: none"> <li>Seminars are being scheduled for 2025 – 2026 academic year</li> <li><b>Submit proposals for webinars</b></li> </ul>	<ul style="list-style-type: none"> <li>Watch for eNewsletter announcements and sign-up to participate</li> </ul>
North American Chemical Residue Workshop 2026 TBD	Kevin Armbrust Steve Lehotay	<ul style="list-style-type: none"> <li>Check website for updates and details <a href="http://www.nacrw.org">www.nacrw.org</a></li> <li>Co-Sponsored by AGRO</li> </ul> 	Submit abstracts ✓ Oral presentations typically due in March ✓ Poster presentations typically due in May
ACS Fall 2026 Meeting August 23-27, 2026 Chicago, Illinois	Dena Barrett	<ul style="list-style-type: none"> <li>Planning underway</li> <li>Symposia proposals (Call for Papers) due November 15, 2025</li> </ul>	<ul style="list-style-type: none"> <li>Volunteers and champions are always NEEDED!!</li> <li>Attend Brewing Ideas with AGRO in DC</li> <li>Send ideas to Dena</li> </ul>
ACS Fall 2027 Meeting August 22-26, 2027 San Diego, California	Beth Lorsbach	<ul style="list-style-type: none"> <li>Planning underway</li> <li>Symposia proposals (Call for Papers) due November 15, 2026</li> </ul>	<ul style="list-style-type: none"> <li>Volunteers and champions are always NEEDED!!</li> <li>Attend Brewing Ideas with AGRO in Chicago</li> <li>Send ideas to Beth</li> </ul>

# SAVE THE DATE



## GWB2026

# February 10, 2026



[iupac.org/gwb](http://iupac.org/gwb)



# Latin American Pesticide Residue Workshop

## Report on the 2025 Meeting

Leah Riter and Kevin Armbrust represented ACS AGRO at the Latin American Pesticide Residue Workshop (LAPRW), in Buenos Aires, Argentina from May 4th to May 8th, 2025. They served as judges and award presenters for AGRO sponsored poster awards, providing a platform to strengthen the relationship between ACS AGRO and LAPRW, reinforcing ACS AGRO's international connections. The committee was excited to select two early career scientists for the AGRO sponsored awards.



### LAPRW 2025 Poster Award Winners

**Grecia Stefanía de Groot** from Instituto de Investigaciones en Biodiversidad y Medio Ambiente (INIBIOMA) Río Negro, Argentina presented the poster *One region, many rules: shifting pesticide approvals in Latin America (2020–2024)*. Grecia and her co-authors assessed changes in regulatory status of active ingredients (AIs) approved for use on ten major crops in eight LATAM countries. This work demonstrated the regulatory heterogeneity in pesticide approvals across LATAM, underscoring the need for a harmonized regional framework to ensure consistent and sustainable management of agricultural inputs.

**Guzman Porley** from Universidad de la República, Facultad de Química, Montevideo, Uruguay presented the poster presentation *Biobeds for pesticide degradation: an effective solution?* Guzman and his co-authors studied the use of biological beds for the disposal of wash water from field application machinery. An analytical method was validated to demonstrate the breakdown of 35 analytes, and overall degradation of each pesticide in the biobed was evaluated.



16<sup>th</sup>

IUPAC



I U P A C

INTERNATIONAL UNION OF  
PURE AND APPLIED CHEMISTRY

# International Congress of Crop Protection Chemistry

“Pesticides and Low-risk Crop Protection Strategies”

**SAVE THE DATE**

**11-15/10.2027**  
Thessaloniki, Greece



# AGRO Division Officers, Councilors, and Executive Committee

## 2025 AGRO DIVISION OFFICERS



**Division Chair**  
**James Foster**  
 james.foster@ejgallo.com



**Program Chair**  
**Mingming Ma**  
 mingming.ma@corteva.com



**Vice Chair**  
**Dena Barrett**  
 dbarrett@agrodiv.org



**Secretary**  
**Sharon K. Schneider**  
 sharon.schneider@usda.gov



**Treasurer**  
**Del A. Koch**  
 dkoch@agrodiv.org

## COUNCILORS

Rodney Bennett, rodbennett dac@gmail.com  
 Kevin Armbrust, armbrust@lsu.edu  
 Leah Riter, Alternate, leah.riter@bayer.com

## EXECUTIVE COMMITTEE MEMBERS

### 2023 – 2025

Dena Barrett, barrett.dena@epa.gov  
 Kalumbu Malekani, kmalekani@smithers.com  
 Natalia Peranginangin, natalia.peranginangin@syngenta.com  
 Daniel Swale, dswale@epi.ufl.edu  
 Ralph Warren, ralph.warren@basf.com

### 2024 – 2026

Andrew Coates, awecoates@gmail.com  
 Ashi Brown, abrown@mscl.msstate.edu  
 Pat Havens, pat.havens@corteva.com  
 Beth Lorsbach, beth.lorsbach@nufarm.com  
 Eden Tesfu, eden.tesfu@bayer.com

### 2025 – 2027

Edmund Norris, edmund.norris@usda.gov  
 Solito Sumulong, solito.sumulong@agrithority.com  
 Thomas Sparks, tcsparks@agrilucent.com  
 Katoria Tatum-Gibbs, katoria.tatum-gibbs@basf.com  
 Sara Whiting, sara.whiting@bayer.com

## AGRO Division Past Chairs

1969	Donald G. Crosby	1990	Willa Garner	2011	Kenneth D. Racke
1970	Elvins Y. Spencer	1991	Guy Paulson	2012	Aldos C. Barefoot
1971	Wendell Phillips	1992	Joel Coats	2013	John M. Clark
1972	Philip C. Kearney	1993	Larry Ballantine	2014	Stephen O. Duke
1973	Roger C. Blinn	1994	Nancy N. Ragsdale	2015	Cathleen J. Hapeman
1974	Charles H. Van Middeltem	1995	Don Baker	2016	Pamela J. Rice
1975	Henry F. Enos	1996	Barry Cross	2017	Jay Gan
1976	Julius J. Menn	1997	Willis Wheeler	2018	Scott Jackson
1977	James P. Minyard	1998	Judd O. Nelson	2019	Julie E. Eble
1978	Gerald G. Still	1999	Richard Honeycutt	2020	Cheryl Cleveland
1979	S.K. Bandal	2000	Ann T. Lemley	2021	Leah S. Riter
1980	Jack R. Plimmer	2001	Jeffery J. Jenkins	2022	Qing X. Li
1981	Marguerite L. Leng	2002	Terry D. Spittler	2023	Heidi Irrig
1982	Gino J. Marco	2003	Jeanette Van Emon	2024	Aaron D. Gross
1983	G. Wayne Ivie	2004	Rodney Bennett	2025	James Foster
1984	Robert M. Hollingworth	2005	Allan Felsot		
1985	John Harvey, Jr.	2006	R. Donald Wauchope		
1986	Henry J. Dishburger	2007	Laura L. McConnell		
1987	James N. Seiber	2008	John J. Johnston		
1988	Paul A. Hedin	2009	Kevin L. Armbrust		
1989	Gustave K. Kohn	2010	Ellen L. Arthur		

# 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

Qing Li, Chair, qingl@hawaii.edu

Jeanette Van Emon, Assistant Chair, jmvanemon@gmail.com

*MEMBERS:* Janice Chambers, John Clark, Joel Coats, Stephen Duke, Bruce Hammock, Hideo Ohkawa, Sharon Schnieder, David Soderlund, Keith Wing, Izuru Yamamoto

### BYLAWS COMMITTEE

Leah Riter, Chair, leah.riter@bayer.com

Rodney Bennett, rodbennett@bayer.com

### COMMUNICATIONS COMMITTEE

Cathleen Hapeman, Chair, *PICOGRAM* Editor  
cathleen.hapeman@usda.gov

Edmund Norris, Website Coordinator  
edmund.norris@usda.gov

Sharon Schneider, Awards Coordinator  
sharon.schneider@usda.gov

Leah Riter, Social Media Coordinator  
leah.riter@bayer.com

Pat Havens, eNewsletter Coordinator  
pat.havens@cordeva.com

### DEVELOPMENT COMMITTEE

Andy Newcombe, Chair, andy.newcombe@arcadis.com

Del Koch, Ex Officio/Treasurer, dkoch@agrodiv.org

*MEMBERS:* James Foster Mingming Ma, Scott Jackson, Laura McConnell, Ralph Warren,

### EARLY CAREER SCIENTIST COMMITTEE

Aaron Gross, Co-Chair, adgross@vt.edu

Sara Whiting, Co-Chair, sara.whiting@bayer.com

*New Investigator Award Co-Coordinators*, nia@agrodiv.org

Sara Whiting, sara.whiting@bayer.com

Ashli Brown, ab506@msstate.edu

Nurhayat Tabanca, nurhayat.tabanca@usda.gov

*Student Travel Award Co-Coordinators*, posters@agrodiv.org

Aaron Gross, adgross@vt.edu

Sara Whiting, sara.whiting@bayer.com

*Early Career Scientist Symposium Mentor*

Kalumbu Malekani, kmalekani@smithers.com

*MEMBERS:* Diana Aga, Troy Anderson, Joel Coats, Steven Lehotay, Edmund Norris, Gareth Thomas

### FINANCE COMMITTEE

Joel Coats, Chair, jcoats@iastate.edu

Del Koch, Ex Officio/Treasurer, dkoch@agrodiv.org

*MEMBERS:* Kevin Armbrust, Al Barefoot, Barry Cross, Scott Jackson, Bernalyn McGaughey, Ken Racke

### HISTORICAL COMMITTEE

Ken Racke, Chair, kenracke@gmail.com

Sharon Schneider

### INTERNATIONAL ACTIVITIES COMMITTEE

Carmen Tiu, Co-Chair, carmen.tiu@cordeva.com

Chris Peterson, Co-Chair, chris.peterson.phd@gmail.com

*MEMBERS:* John Johnston, Steven Lehotay, Chris Peterson, Ken Racke, Amy Ritter, Keith Solomon

### LIASON COMMITTEE

Kalumbu Malekani, kmalekani@smithers.com

*MEMBERS:* Stephen Duke, Sasha Kweskin, Andy Newcombe, Paul Reibach

### MEMBERSHIP COMMITTEE

Chris Bianca, Chair, chris.bianca@jrfamerica.com

*MEMBERS:* Steven Lehotay, Leah Riter, Daniel Swale

### NOMINATING AND ELECTION COMMITTEE FOR 2026

James Foster, Chair, jfoster@agrodiv.org

Aaron Gross, Chair, adgross@vt.edu

Heidi Irrig, heidi.irrig@syngenta.com

### PROGRAMMING COMMITTEE FOR 2025 (see p. 36)

Dena Bennett, Chair, dbarrett@agrodiv.com

**Webinar SubCommittee** (see p. 38)

Solito Sumulong, solito.sumulong@agrithority.com

### STRATEGIC PLANNING COMMITTEE

Leah Riter, Lead Co-Chair, leah.riter@bayer.com

Kevin Armbrust, Co-Chair, armbrust@isu.edu

Edmund Norris, Co-Chair, edmund.norris@usda.gov

# ACS AGRO INTERNATIONAL ACTIVITY COMMITTEE PRESENTS

## INTERNATIONAL OPPORTUNITIES FOR SCIENTISTS

The AGRO International Activities Committee (IAC) strives to advance the science of chemistry for and from agriculture globally by fostering communication and collaboration with researchers and scientific organizations around the world. Facilitating international travel for scientists will foster scientific and cultural insights, increase mutually beneficial scientific interactions and collaborations, while addressing critical needs in agriculture and public health. These opportunities provide a means for AGRO members to reach out to and to communicate with international scientists with common interests.

### AGRO AMBASSADORS

Supports travel for AGRO members to meetings, conferences, workshops etc. taking place outside of the United States and Canada. Applications are accepted on a rolling, year-round basis, but to ensure consideration please submit applications at least 90 days prior to travel. For more information, download the [Call for Applicants here](#). For additional information, email: [chris.peterson.phd@gmail.com](mailto:chris.peterson.phd@gmail.com)

### AGRO JOURNEYERS

Provides travel assistance for graduate students, post-doctoral fellows, or scientists who are not citizens of the United States to attend and present their research at an ACS National Meeting. Applications will be accepted beginning September 1, 2025 to support travel to the ACS Fall 2026 National Meeting in Chicago, Illinois. For more information, download the [Call for Applicants here](#). For additional information, email: [chris.peterson.phd@gmail.com](mailto:chris.peterson.phd@gmail.com)





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## AGRO Division

### Combined Governance Meeting

September 4, 2024

1:00 – 4:00 PM CDT

Sharon Schneider, Secretary

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#### ATTENDANCE

**Officers:** Aaron Gross, Chair; James Foster, Program Chair; Mingming Ma, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Heidi Irrig, Past-Chair; Rodney Bennett, Councilors; Kevin Armbrust, Leah Riter, Alternate Councilors

**Executive Committee Members (EC):** Dena Barrett, Ashli Brown, Andrew Coates, Pat Havens, Beth Lorsbach, Edmund Norris, Natalia Peranginangin, Thomas Sparks, Solito Sumulong, Sara Whiting, Katoria Tatum-Gibbs, Ralph Warren

**Committee Chairs and Guests:** Adam Barlow, Joel Coats, Pravin Dubey, Cathleen Hapeman, Mary Kirchhoff, Qing Li, Laura McConnell, Andy Newcombe, Peney Patton, Chris Peterson, Solito Sumulong, Nurhayat Tabanca, Carmen Tiu, Mateus Vicente Alves

#### 1. Welcome and Introductions – Aaron Gross

#### 2. Fall 2024 national meeting summary – James Foster

- AGRO now has 47 half-day sessions, decreased slightly from Chicago AGRO accepted 277 abstracts, but there were several withdrawals, commonly due to difficulties getting visas. Papers were organized into 27 oral symposia – thank you to all the organizers. AGRO had in-person oral, hybrid, and one virtual session. James Foster thanked all the organizers for their contributions to a successful program.
- There were a few issues with hybrid sessions and there was a fire alarm during the sessions. Some in-person sessions were poorly attended, as was anecdotally noted for other divisions.

#### 3. 2025 Governance Meeting

**MOTION:** The fall 2025 Combined Governance meeting will be held via videoconference after the Washington DC meeting. Passed.

#### 4. Plans for 2025 AGRO Programming – ACS Fall Meeting 2025 – Mingming Ma

- Peney Patton, Mary Kirchhoff, James Foster, and Mingming Ma met during ACS in Denver to discuss the plan to transition from Patton to Kirchhoff, and changes to ACS programming in 2025. A good list of ideas was collected during Blues & Brews session in Denver. Symposia are due in early December.
- Mingming Ma surveyed Standing Topic Champions in August; some asked to step down and some did not respond. She requested the EC's help to recruit additional topic champions – e.g. Agriculture Biotechnology, Non-Food/Feed Production and Uses of Ag Commodities and Byproducts, Human Exposure, Health, and Risk Assessment, Technological Advances and Applications in Agriculture (e.g., Nanotechnology, Biocontrol Agents, Endophytes and Microbiomes). ACTION Send ideas for topic champions to Mingming Ma.
- The ACS is undertaking a strategic and operational reimagining effort that seeks to provide increased value and relevancy to all ACS Meetings stakeholders (including attendees, presenters, exhibitors), and the broader chemical enterprise. The roll-out of the new operational plan will begin at Spring/Fall 2025. The program length will be 3.5 days: Monday through Thursday morning. AGRO may need to have fewer half day sessions,

consider shorter talks e.g. 15 min for some sessions, be more selective in accepting abstracts, and/or use virtual sessions for more programming.

- Beginning in 2025, ACS national meetings will have three programming options
    - Joint symposium (Enhanced program):** target: 10% of each division's program. These are sessions between two or more divisions/committees. Partners provide one (or a fraction) half-day session from their assigned number of sessions for the meeting. Both partners approve structure/speakers. Most importantly, both receive credit in their programs. The goal is to increase joint/interdisciplinary programming and reduce programming redundancies.
    - Innovative program:** ComSci led. These address interdisciplinary frontiers or solutions; prominent experts are invited as speakers. Fall topics are broad, and the intent is high-level applied science of interest to a wide audience. These are intended to use and demonstrate digital and non-traditional formats. One session that has been extremely successful in the Medicinal Chemistry Division is "first reveal" of new therapeutics; they have 2 such sessions at every ACS meeting. AGRO could consider "first reveal" for new traits, new biologics, new products.
    - Digital experience program:** These are intended to drive global/virtual engagement.
  - Mingming Ma asked the EC to establish guidelines for how to fund/support joint symposia. AGRO is planning a joint symposium with ORGN: *Accelerating Discovery & Development in the Agricultural and Pharmaceutical Sciences via Innovations in Organic Synthesis*, and there is potential for joint symposia with AGFD, ENVR, TOXI, ANYL etc. AGRO has provided \$700 per half day session since 2017. ORGN provides up to \$1300 (max 2 days of hotel) with a total reimbursement to not exceed \$4K per invited half day session.
  - ACS leaves financial aspects of co-sponsorship to Divisions to negotiate. In the contracts, we need to negotiate how many half day sessions will be included, how to split costs, availability of grants like CCC, IPGs, sponsorships. To our knowledge, ACS is allocating no additional money for enhanced programming.  
**MOTION:** The Program Chair for annual national ACS meetings in 2025 and beyond should be given authority to negotiate contracts with other divisions with AGRO's contribution being \$700 per half-day session. The Program Chair should be authorized to obligate \$1500 to be used at their discretion to support activities associated with the fall national ACS meeting. Passed.
- #### 5. Pacifichem 2025
- The deadline for symposium proposal submission has passed. Ken Racke and John Johnston led the 2020 programming; meetings are every 5 years. This was discussed at the International Activities Committee meeting; they suggested that someone active should take the lead on Pacifichem; perhaps also serve as a member of the organizing committee of Pacifichem. ACTION: seeking a volunteer to represent AGRO with regard to Pacifichem.
- #### 6. 2025 Western Regional Meeting
- Will be hosted by California and Silicon Valley local sections, <https://wrm2025.org/>, and will include symposia with agriculture-related topics and an ag tour of the San Jose area. ACS encourages divisions to have better connection with regional meetings. Regional/local section activities may have potential to reach more teachers. Mingming Ma received a request for AGRO support, including development of a symposium and/or monetary support for the Ag Tour, or the meeting in general. No action taken.
- #### 7. Councilor's report – Rodney Bennett and Leah Riter
- Overall membership in ACS is stable. Dues will stay the same. ACS Council will be reorganizing into 6 zones including international.

- One council member will be from international zone. About 1000 members are currently not represented by local sections. There will be 28 councilors with some international, but ACS will be adding councilors from divisions to keep the ratio constant of councilors attached to zones vs divisions. International membership is increasing so there is a push to reach international members. International dues are adjusted according to the World Bank. ACS encourages divisions to adopt that practice for division dues as well.

MOTION: Finance committee tasked to explore scaled pricing for AGRO membership for members outside the US; this could align with the process used by ACS. Passed.

- Elections will be coming up this fall for Chair Elect and a couple regions. If you are on an ACS-wide committee, you are encouraged to participate in the ACS Strategy Café to represent AGRO perspective.
- New Code of Conduct is released. Important: If ACS holds an outreach event involving youth, all persons involved must have a background check.

#### 8. Treasurer's report – *Del Koch*

- Del presented several spreadsheets which are on file.

#### 9. Convergent Chemistry Community Grant – *Rodney Bennett*

- AGRO was part of this CCC grant to support sustainability programming "Advancing a Circular Bio-Economy"; partners are PMSE (lead), POLY, and BIOT. Grant was for \$15,000 total over multiple years to start new programming; split is to be determined. Each division, plus regions and local sections are to contribute. This is a good opportunity to work together; Rodney Bennett will bring more information to AGRO.

### COMMITTEE REPORTS

#### AWARDS: *Qing Li; Jeanette Van Emon*

- The Awards Committee report appears in the *PICOGRAM*
- Additional discussion: Review current program and develop set of recommendations for AGRO awards
  - The AGRO awards programs have a proud history and our awards committee has been extremely dedicated in their work over many years. Recently Tom Sparks pulled together a nice article on our international award winners as part of the 50<sup>th</sup> Anniversary special issue. ACS Agrochemical Division (AGRO): Fifty Years as a Catalyst for Innovation (<https://doi.org/10.1021/acs.jafc.4c00708>) His analysis shows that we have reasonable diversity in awardees with respect to sector, but less success with respect to geographic diversity and dismal success with respect to gender diversity (only one woman has won the International award in the more than 50 year history).
  - MOTION: AGRO Chair shall appoint a small team to carry out a review of our current awards structures and procedures with a goal of creating a more open and transparent selection process and to attract a more diverse pool of awards nominees. Passed.
  - Some suggestions:
    - The ACS (see Awards Committee webpage) has two types of committees for their awards.
      1. Canvassing Committees to identify potential new nominees and arrange for their nomination.
      2. People serving on canvassing committees can still be nominated or can participate in nominating people. Selection Committees – these members cannot submit a nomination, provide support letters or be nominated.
    - Potential aspirations as a Division for the long term with respect to awards: (a) Establishment of transparent award committee policies, (b) Diverse awards committee makeup, (c) Creation of a canvassing committee to recruit a more diverse pool of nominations, (d) Detailed, clear criteria for awards, (e) More diverse (gender, geographic, sector, discipline) selection committee, possibly with term

limits for members, and (f) More marketing of AGRO Awards which could support membership increases for the division.

#### STRATEGIC PLANNING: *Leah Riter, Kevin Armbrust, Edmund Norris*

Most goals are on track, with the exception of 3-1.

- 1-1. Student participants selected and awaiting formal invitations to go out.
- 1-2. Early career professionals selected and awaiting formal invitations to go out.
- 1-3. Need to set up meeting with an outside counselor regarding marketing, etc.
- 2.1 Feature more virtual content, at and in between meetings
- 2.2 Obtained resource from PROF regarding online tools for professional development – potential TPG?
- 2.3 Need to work on setting up online system for symposia/long-term storage of presentations/resources
- 3.1 Delayed. Looking for volunteers to develop a long-term vision for AGRO.
- 3.2 Need to develop SOP for storing working documents for leadership and members.
- 3.3 Identify digital repository software that everyone can use.

#### BYLAWS: *Rod Bennett*

- Have not had a chance to meet as a committee of Councilors. Some of the bylaws may be too restrictive.
- In keeping with the Strategic Plan and in accordance with the bylaws and Operations Manual, Chair Gross appointed Leah Riter as Chair of the Bylaws Committee.

#### COMMUNICATIONS: *Cathleen Hapeman*

- *PICOGRAM* distributed at the national meeting in Denver was an abridged copy of the full Picogram which is coming out next week. The style is changed in terms of binding; now limited to 72 pages per edition. Publication is all with the same company.
- Emails are going well; thanks to Pat Havens for working with Program Chair and Chair to provide updates. Website is being updated; thanks to Ed Norris for uploading information timely.

#### DEVELOPMENT: *Andy Newcombe*

- AGRO sponsorship for 2024 included \$28,250 received for awards, \$3,000 for symposia, and \$8,500 for Picogram advertisements. Total sponsorship is \$39,750 from 9 sponsors. Sponsorship request letters (including proposed VIP event) were sent out in May, June, and July 2024. An insufficient number of sponsors committed to the VIP event, so the event was not held in 2024. The Development Committee will send thank you letters to all sponsors in September.

#### EARLY CAREER SCIENTIST: *Aaron Gross; Sara Whiting* Student Travel Awards (Sponsored by Bayer and AGRO)

- For the 2024 ACS Fall Meeting, a total of 12 travel award applications were received with all being granted. Recipients represented 7 universities, multiple advisors, and 2 international universities in South America. Of the 12 awardees, 11 attended the Fall 2024 meeting with one international awardee not able to obtain a visa in time. The number of applications is slightly down from 2023, but an increase from 2022.
- The cost of the student travel awards for 2024 was \$11,000, with each student receiving \$1,000 to defray travel costs and meeting registration. An additional \$600 was given to four poster winners:
  - ✓ First Place (\$300): Sarah McComic (University of Florida)
  - ✓ Second Place (\$200): David Mualen (Ohio State University)
  - ✓ Third Place (\$100): Flinn O'Hara (University of Florida)
- The committee thanks the seven AGRO members that helped judge the poster competition.

#### Student/postdoc Lunch (fully sponsored by Bayer)

- As in recent years, a Student/Postdoc Lunch was organized with a focus on networking with professionals from industry and government. 23 Students/postdocs RSVP'd to attend the lunch

with 19 (83%) showing up. Four professionals from industry and government attended and spent 20 minutes with student and postdoc groups in a speed networking format.

#### New Investigator Award (fully supported by Syngenta)

- There were eight New Investigator Award applications for the 2024 Fall Meeting, this is the same number of applications that were received in 2023. Ashli Brown (Mississippi State University) joined Sara Whiting (Bayer) and Nurhayat Tabanca (USDA-ARS) as the three co-coordinators of the NIA. This year a rubric was used to judge the winner of the NIA (previous years it was based on a discussion between the judges). The committee thanks the six NIA judges. The co-coordinators selected the three finalists:
  - ✓ Felipe Andreezza (Duke University) – 2024 NIA winner
  - ✓ Roxana Coreas (University of California Berkley)
  - ✓ Anais LeMauff (University of Florida)
- The cost of the NIA for 2024 was \$6000 (fully supported by Syngenta).

#### Early Career Symposia (sponsored by AGRO)

There was one Early Career Symposia at the Fall 2024 meeting: *Semiochemicals for sustainable agroecosystems* organized by Nurhayat Tabanca and Gareth Thomas.

#### **Action Items:**

- ACTION: Identify early career scientist(s) to organize symposia at the Fall 2025 meeting (DC).
- ACTION: Reinforce guidelines to have the symposia speakers primarily comprised and lead by early career scientists.
- ACTION: Update the membership of the Early Career Scientist Committee, specifically, student and postdoc members. The committee chairs will work closely with Edmund Norris who is the Champion for Goal 1 of the strategic plan; they are looking at forming a committee of students and early-to-mid career individuals. The goal is to have this newly formed committee recommend or appoint members of the ECS committee.

#### **FINANCE: Joel Coats**

- The AGRO Division Education Trust Fund is managed by J. P. Morgan. That fund now has a total of \$422,595 in it, as of July 31. The Equity sub-account (stocks) has \$347,248, up 7% since a year ago. The Cash & Fixed Income sub-account (money markets and bonds) is showing a balance of \$75,347, which is down 29% from last September. The Equity portion is designed for growth, while the Cash & Fixed Income portion is the more conservative portion. At this point, 82% of the total is in the Equity fund, while the Cash & Fixed Income part represents 18% of the total funds.
- The other major fund that the AGRO Division has is our Spectrum Income Fund, which is managed by T. Rowe Price. The balance in that account is \$213,268 as of August 31. This stock fund has gained 11% since last year's report.
- The total in these two major investment funds is now \$635,863. That represents an increase of 2% in the past year.
- The Finance Committee has been charged with examining the high expense totals that AGRO had to pay for the 2022 (Chicago) and the 2023 (San Francisco) meetings. Both cities were notably expensive in the amounts for which ACS had to invoice us. New members of the Finance Committee are Leah Riter and Jane Tang.

#### **HISTORY: Ken Racke**

- A revision of the AGRO Operations Manual was prepared but is not yet finalized.  
ACTION: Sharon Schneider will send revised Operations Manual to current committee chairs with a request for updates.

#### **INTERNATIONAL ACTIVITIES: Carmen Tiu; Chris Peterson**

##### 2023-2024 Activities

- The committee added one new team member, Kevin Armbrust. The updated AGRO strategic plan includes increasing global

participation, and the IAC will work with the Strategic Plan team to bolster AGRO's efforts on this front.

- The committee was approved by AGRO for IUPAC International Congress of Pesticide Chemistry and associated workshops 2024-2027 (\$5K), for which work has kicked-off. AGRO co-sponsored (\$1K) the Global Minor Use Summit 2024 to increase visibility and gain international members for AGRO.
- The Journeymen Program sponsored Mateus Alves from Pelotas University in Brazil to participate in the ACS 2024 national meeting in Denver (\$2K). Two applicants were declined for not complying with requirements (request from Pakistan was not eligible for the program; request from Nigeria was submitted past the deadline).
- The Ambassador's Program sponsored Amy Ritter (\$2K) to gain support in EU while presenting at XVII Symposium in Pesticide Chemistry, Advances and New Challenges at Università Cattolica del Sacro Cuore, Piacenza, Italy, September 4-6, 2024 and (b) Carmen Tiu (\$3K, with AGRO approval) for ACS-AGRO dedicated session at EPRW-2024 in Zurich, Geneva, Sept.16-20, 2024, to advocate for scientific harmonization with US and gain IAC members from EU.

#### Plans for 2024-2025

- Based on progress on Journeymen & Ambassador's programs, the committee recommended to continue the pilot through 2025 with increased emphasis for all EC members to promote AGRO at all upcoming events and explore possibilities for a formal collaboration agreement and cross-membership on other chemical society's international activities committees (for example, through mutual membership recognition, events, etc.).  
MOTION: An additional \$8,000 shall be allocated to continue the pilot of the AGRO Journeymen and AGRO Ambassadors Program to occur through 2025, contingent on receiving matching funds from ACS or other sources. Passed.
- A full proposal for the development of an AGRO International Exchange program will be circulated to AGRO EC by spring 2025. They are seeking feedback from AGRO EC on next steps.

#### **LIAISON: Kalumbu Malekani; Sasha Kweskin**

- To improve liaison readiness, effectiveness, and consistent AGRO branding, the liaison committee proposed assembling go kits to include

##### **Round Trip Go Kits** – materials to be mailed back

- Instructions on how to mail back
- AGRO tablecloth –an extra (not the ones that go to ACS)
- AGRO poster – print an extra copy (not the one that goes to ACS)
- 50 postcards
- 1 *PICOGRAM* – if available
- Giveaways – Inform liaison that they should contact current chair, treasurer, and liaison committee chair to ask for funds to purchase chocolates for giveaway. Suggested funding for a booth is \$30.
- 2-3 acrylic 8.5x11 tabletop frames (for the Qr Code / AGRO signage)
  - ✓ One page with Qr code – APPLY NOW for AGRO AWARDS - <https://www.agrodiv.org/awards/> - with descriptions of AGRO Awards
  - ✓ One page with Qr code – BECOME AN AGRO MEMBER -<https://www.agrodiv.org/membership/> - with Qr codes for how to join with and without your ACS ID
  - ✓ One page with ACS Future meetings page - <https://www.acs.org/meetings/acs-meetings/future-meetings.html> - or other relevant content

##### **One Way Go Kits** - No need to mail back

- 25 postcards
- 1 *PICOGRAM* – if available

- Giveaways – only if the liaison will have a booth / table set up. If so, inform recipient that they should contact current chair, treasurer, and liaison committee chair to ask for funds to purchase chocolates for giveaway. Suggested funding for a booth is \$30.
- Color paper printouts – or emailed files -
  - ✓ One page with Qr code – APPLY NOW for AGRO AWARDS - <https://www.agrodiv.org/awards/> - with descriptions of AGRO Awards
  - ✓ One page with Qr code – BECOME AN AGRO MEMBER -<https://www.agrodiv.org/membership/> - with Qr codes for how to join with and without your ACS ID
  - ✓ One page with ACS Future meetings page - <https://www.acs.org/meetings/acs-meetings/future-meetings.html> - or other relevant content
- Considerations for Phase 2: Adding more sophisticated Qr codes – call for papers etc., would require online targets that are maintained and up to date. This would take some coordination. Adding AGRO shirt for liaison?  
MOTION: EC approve up to \$1,225 for initial set up of go-kits (for AGRO poster, tablecloth and postcards) and \$25 for each instance of use of one way go-kit and \$50 for each use of go-kit to cover giveaways and return shipping costs. Passed.

**MEMBERSHIP:** *Chris Bianca*

- The Membership committee has sent emails to remind current active members of all the value their membership offers and to ensure they continue their support and participation. Members who cancelled their membership cited reasons related to cost (85% of answers), with others divided between value and interest in the topics.
- Committee activities have been limited by a low budget and low participation in the Membership Committee. We hope to plan for some activities during the Lunch and Learn which was an activity, proposed by the membership committee. We would like to engage our current members with interesting topics and possible interviews and podcasts of our members who may have interesting careers, research or ideas that can be displayed to engage existing members and attract new members to the AGRO division. The committee wishes to create an article publication division within AGRO to highlight our members and their accomplishments to bring in new members.
- We have written code and used AI to organize the list of members and graph membership data, making it easier than using the Excel sheet. The roster records are being kept and uploaded every month and added to the Python code to be updated and keep track of numbers in a more efficient way. This data currently is being kept and updated only by the Membership Committee chair and there is no centralized place to gather and control the data; request a digital repository.
- The committee intends to conduct a survey this year to determine member satisfaction and feedback on improvements and new ideas on how we can do things better. There is a need to come up with new recruiting tools, because our numbers continue to be flat. Propose to reach out to new members, which will need to include students, professors, government, and industry, to help increase our numbers and visibility for the upcoming years.

**NOMINATIONS FOR 2025 ELECTION:** *Aaron Gross*

- Dena Barrett's election and acceptance of the Vice Chair leaves a vacancy in the EC members-at-large for the remainder of her term (expires December 31, 2025). In keeping with past practice, the Chair proposed filling the vacancy with the person receiving the sixth-highest votes for the EC in the current year's election. The 2024 election results showed Michael David as that candidate.

MOTION: Michael David is appointed to the Executive Committee as a member-at-large, with a term September 4, 2024 – December 31, 2025. Passed.

- Nominations are being sought for the 2025 ballot. Elections will include Vice Chair (will become Program Chair, Chair, and Past Chair in subsequent years), Treasurer, Secretary, 5 members of the Executive Committee,  
ACTION: Please inform Aaron Gross of nominees for 2025 ballot; self-nominations are welcome.

**PROGRAMMING:** *Dena Barrett*

- As the ACS meeting structure changes, AGRO will need to be proactive to maximize our reach at the national meeting by optimizing both in person and virtual symposia.
- Virtual symposia may be more feasible when we want a diverse international set of papers for certain topics – for example for regulatory related topics. We need to vigorously promote the virtual events along with the in-person events, all should be seen as an integral part of the meeting. Ideas (contingent on how ACS rolls out virtual sessions) are to have primarily in person symposia Sun-Wed or Mon-Wed and virtual symposia only on Thursday of the week, or to have a one-day virtual seminar (in October of each year?) featuring follow-up presentations by an invited selection of authors who gave papers at the national meeting.
- AGRO may benefit from more utilization of virtual platforms for technical programming and training at other times of the year. The Strategic Planning team has been working on this. The AGRO webinar series has been a great and still-growing success and shows us a lot of the potential benefits for AGRO members for virtual events.
- AGRO should continue to broaden the scope of our technical program to cover all areas of agrochemical science. This includes the science of pesticides and biologically based products for pest management, bio-based fuels, and development of practical ecologically friendly products of agricultural origin providing alternatives to plastics and other products. Also, AGRO should continue to promote co-hosting with other divisions for selected symposia.

**ACS-SQA Cooperative Cosponsorship Agreement**

- An MOU is required when non-ACS entities wish to co-sponsor symposia at ACS meetings. Aaron Gross approved an agreement with the Society of Quality Assurance (SQA) to co-sponsor symposia relating to Good Laboratory Practices for agrochemical professionals and similar topics.

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## AGRO Division Executive Committee and Committee Chairs Meeting

December 4, 2024 (virtual)

12:00 – 1:30 PM CST

Sharon Schneider, Secretary

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**ATTENDANCE**

*Officers:*, James Foster, Chair; Mingming Ma, Program Chair; Dena Barrett, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Aaron Gross, Past-Chair; Leah Riter, Alternate Councilor

*Executive Committee Members (EC):* Andrew Coates, Michael David, Pat Havens, Kalumbu Malekani, Ed Norris, Natalia Peranginangin, Katoria Tatum-Gibbs, Ralph Warren  
*Committee Chairs and Guests:* Joel Coats, Cathleen Hapeman, Qing Li, Laura McConnell, Andy Newcombe, Solito Sumulong

#### **1. Welcome – James Foster**

#### **2. ACS Fall 2025 – Mingming Ma**

- Total of 26 symposia submitted to ACS (due December 3); call for papers sent to Cathleen Hapeman. Thanks to Mary Kirchhoff for her help with this!
- AGRO agreed to 5 joint symposia: 1 with ORGN, 1 with ORGN and I&EC, one with CINF, 1 with ENVR, and one with AGFD, ANYL, COMSCI, and ENVR. (One may be a duplicate.) Other nominally co-sponsored symposia are expected.
- ACS granted AGRO a total of 30 half day in-person sessions and 8 virtual sessions. So far, the Program Chair has allocated all 30 in-person and 11 virtual sessions.
- The Program Chair had no volunteers for early career symposium organizers, so there will be no special early career symposia, but one could be added if another symposium is cancelled. Both organizer and majority of speakers should be early career. Members are encouraged to mentor early career members in organizing sessions.

#### **3. Conference registration fee increases – James Foster**

- A new fee structure was announced for 2025, with costs increasing from last year. The ACS has different fees depending on the membership package, registration date, and whether the registration is for in-person or digital meeting participation.
- Full meeting division sponsored promo codes are available upon request from the ACS. They will be billed at the applicable rate of the registrant using the code. As before, divisions will be billed for sponsored registrations using the promo code at the conclusion of the meeting.

#### **4. Bylaws update – Leah Riter**

- To align with ACS practices, the terms of office for all elected officers will begin on January 1. Previously, Secretary, Treasurer, Councilors, and Alternate Councilors terms began January 1 while the Vice Chair, Chair-Elect, Chair, and Immediate Past Chair terms began after the fall ACS meeting. The roles of each office will not change. This is relevant for the incoming Vice-Chair and incoming Chair-Elect/Program Chair, who will be responsible for program planning subsequent year meetings, which will likely involve activities to be completed before they are officially in that office.
- The by-laws were updated to allow for flexibility.
  - The allowable dates for the AGRO elections are widened, allowing AGRO the opportunity to hold the election before, during or after the fall meeting. All results must still meet ACS mandated reporting deadline of November 15.
  - The only committees defined in the by-laws are the Executive Committee and standing Nominating Committee, which is default required by ACS. Note that the by-laws stipulate that Executive Committee may establish committees, as necessary. Committees and their scope are included in AGRO operations manual.
- Next steps: The Secretary will send the revised bylaws to the Executive Committee by January 13 and comments from the EC will be due February 13. The EC will vote on revised bylaws at the spring EC meeting. After approval by the EC, the Secretary will send the EC-approved bylaws to all AGRO members by May 15; member comments will be due June 15. The entire Division will be able to vote on the bylaws at the fall Combined Governance meeting, 2025.

#### **5. AGRO Operations Manual update – Sharon Schneider**

- The Operations Manual is mostly updated. Some committees – especially Awards and Communications – still have pending

updates. The Secretary will continue to follow-up to get the manual to a post-2020 state. The manual is intended to be reviewed and updated frequently, perhaps every 5 years, with the Bylaws Committee bearing the responsibility for coordinating revisions. If new bylaws are adopted, the manual will be revised to reflect those changes when they become effective.

#### **6. ACS Leadership Institute attendance – James Foster**

- Vice Chair Dena Barrett will attend the ACS Leadership Institute. The ACS encourages divisions to send just one representative but may be able to send two. Get in touch with James Foster if you wish to nominate someone.

#### **7. Treasurer's update – Del Koch**

- *Fate of JP Morgan account:* JP Morgan contacted Joel Coats and the Treasurer, indicating that they planned to close AGRO's investment account. The AGRO Finance Committee submitted additional information that satisfied JP Morgan and allowed us to keep the account open.
- *Debit card replacement:* Request to replace AGRO debit card with credit card to protect from fraud
  - There were a couple unauthorized charges debiting the AGRO checking account which showed up on October 30 and 31. The Treasurer was able to dispute this and have the charges reversed. However, he requested replacing the AGRO debit card with a credit card to provide more protection from fraud. The Treasurer will apply and accept on AGRO's behalf one credit card, with no annual fee and the potential for cash back.
  - Is there an opportunity to use something besides checks to reimburse people? PayPal allows international currencies.
  - The Treasurer was notified of an opportunity to participate in a class action lawsuit for some past action regarding AGRO accepting credit card payments. The settlement amount for AGRO would be small; this was left to the Treasurer's discretion.
- *Expenses for 2024 fall meeting:* Invoice received dated November 8 reflected a total invoice amount of \$27,391.34. This is much, much less than San Francisco. Charges included ~\$23K for food and beverages; ~\$2300 for A/V equipment for the Awards Social and Blues & Brews; and ~\$2400 for registration charge-backs.

#### **8. Strategic Planning update – Edmund Norris**

- The committee finalized a letter formally inviting student members to participate in a student planning committee. The goal of this committee is for students to advocate for students in supporting the needs of young professionals in AGRO, to improve their understanding of AGRO's structure and function, and to better integrate students in AGRO.
- The committee would like to increase virtual programming. For example, highlighting certain talks from AGRO to be presented on the webinar series throughout the year. Speakers who participated in the national meeting could be invited to give high-profile, interesting talks again in the virtual format.

#### **9. Other business**

- Kalumbu Malekani will represent AGRO at the National Alliance of Independent Crop Consultants (NAICC) Jan 20-24, 2025. He will get in touch with Leah Riter to arrange for an AGRO Go Kit.
- Awards are open for nominations through the end of the month for the Innovation Award and International Award. There is an IUPAC Harmonization Award; nominations are due February 1. Nominations for AGRO Fellow are due March 31. Please nominate qualified candidates. Qing Li will coordinate an e-mail blast requesting nominations and Edmund Norris will highlight award nominations on AGRO's webpage.

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# AGRO Division

## Executive Committee and Committee

### Chairs Meeting

March 12, 2025 (virtual)

1:00 – 2:30 PM CST

Sharon Schneider, Secretary

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#### ATTENDANCE

*Officers.*, James Foster, Chair; Mingming Ma, Program Chair; Dena Barrett, Vice-Chair; Sharon Schneider, Secretary; Aaron Gross, Past-Chair; Kevin Armbrust, Rodney Bennett, Councilors; Leah Riter, Alternate Councilor

*Executive Committee Members (EC):* Ashli Brown, Andrew Coates, Michael David, Pat Havens, Beth Lorsbach, Kalumbu Malekani, Ed Norris, Thomas Sparks, Solito Sumulong, Katoria Tatum-Gibbs, Ralph Warren

*Committee Chairs and Guests:* Mary Kirchhoff, Qing Li, Laura McConnell, Andy Newcombe

#### 1. Welcome – James Foster

#### 2. Venues for scientific communication

- *ACS e-books series* – Presenters at symposia can prepare contributions to books that would be a peer-reviewed, edited publication. These can be electronic or printed. AGRO has a long history of publishing ACS Symposium Series and has used that format successfully.
- At the most recent strategic planning retreat, attendees discussed more streamlined methods to present AGRO symposium highlights. A number of symposia were selected for ES&T Viewpoint articles that provide summaries of AGRO symposia.
- AGRO will continue to use multiple avenues to provide scientific information.

#### 3. Bylaws presented

- Bylaws vote by EC. No questions or comments on revised bylaws.  
MOTION: Accept revised bylaws as written; these were distributed to the Executive Committee on February 14, 2025. Passed.

#### 4. Fall 2025 program – Mingming Ma

- So far only 29 abstracts have been received but in past years, most abstracts are submitted in the final two weeks. There may be an extension of the abstract deadline given the disruptions in the federal government scientific system.
- Thanks to Mary Kirchhoff for help in training Program Chair and preparing calls for papers. Pat Havens will send another reminder regarding abstracts for e-mail blast. Please continue to publicize the calls for papers.
- Authors who are uncertain about travel can indicate that they are willing to present in-person or virtually.

#### 5. 2025 Election – Aaron Gross

- Aaron Gross, Heidi Irrig, Qing Li are accepting nominations for Vice Chair, Secretary, Treasurer, and 5 Executive Committee members-at-large.
- Pat Havens will send an e-mail blast requesting nominations.
- If the bylaws are adopted by the full AGRO membership, terms of the chair succession will be extended to the end of 2025 rather than the end of the ACS Fall 2025 meeting.

#### 6. Ambassadors program

- The International Activities committee received an application from John Johnston, and believes it should be approved. However, he has asked for more money (\$4000) than currently authorized per applicant (\$2000).
- Discussion: This program is in its infancy and the impact is undetermined. The intent of the program was not to fully fund international travel but to offset some of the costs. Previous decisions of AGRO were that AGRO funding of the Ambassadors program would require matching funds. The EC would like an assessment and more information from the International Activities Committee before deciding.
- This item was tabled because no members of the International Activities Committee were present.

#### 7. Early Career Awards Committee updates – Aaron Gross

- The committee has met 3 times so far and had good discussions.
- Information for the New Investigator and Education Travel Awards were updated on the AGRO website and flyers were developed and distributed. James Foster was able to get the flyers to all 1890 Land Grant universities with a network of about 9000 students. In the future, it would be helpful to assemble a list of awards contacts to ensure continuity in notifications.
- Thanks to Laura McConnell for streamlining submissions so that they can be submitted online, accessed by committee members, and able to be exported at the end of the submission period.

#### 8. 2025 Award winners – Qing Li

- The Division thanks awards committee members, nominators, and sponsors (Corteva for International Award; BASF for Innovation Award, Syngenta for New Investigator Awards, and Bayer Crop Science for Student Travel Awards).
- Camilla Corsi is the winner of the 2026 ACS International Award for Research in Agrochemicals. She is recognized for her impactful contribution to the discovery of the pesticides pydiflumetofen, isocycloseram, cyclobutrifluram and spiropidion. A symposium will be organized in honor of Dr. Corsi at the ACS fall 2026 Meeting in Chicago, IL.
- Thomas P. Selby is the winner of the 2025 ACS International Award for Research in Agrochemicals. Dr. Selby is recognized for his co-invention of the powdery mildew fungicide proquinazid, the broad-spectrum diamide insecticide chlorantraniliprole, the systemic diamide insecticide cyantraniliprole, and the new mode-of-action rice herbicide tetflupyrolimet that have had a profound impact on agriculture. A symposium will be organized in honor of Dr. Selby at the ACS 2025 fall Meeting in Washington, DC.
- Spencer Walse is the winner of the 2025 AGRO Award for Innovation in Chemistry of Agriculture. Dr. Walse is recognized for his development of chemical alternatives to postharvest methyl bromide fumigation for the management of quarantine and invasive insect pests. The award will be presented at the ACS 2025 fall Meeting in Washington, DC.
- The Journal of Agricultural and Food Chemistry (JAFC) and the AGRO and AGFD Divisions sponsor two lectureships for outstanding papers published in JAFC every year. This year's winners for the AGRO paper are Cindy Weng, Cade Napier, Cedric Katte, Spencer S. Walse, and William A. Mitch for their article "Electrochemical Generation of Hydroxide and Hydrogen Peroxide for Hydrolysis of Sulfuryl Fluoride Fumigant: published in *JAFC* 2024, 72(27):15133–15141. DOI: 10.1021/acs.jafc.4c00864
- Please consider nominating AGRO members for the AGRO Fellow or ACS Fellow Award; 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.

## 9. Development committee updates

- The committee has sent e-mails and invitations for sponsorship for the 2025 meetings. Bayer and BASF have indicated their commitment to sponsor. The committee is seeking 12 VIP sponsors at \$750 each; 3 parties have indicated interest in sponsoring at the VIP event. Refreshments will be provided at VIP scheduled for Tuesday of the national meeting, just before Brewing Ideas with AGRO.
- An ACS-wide committee is tasked with facilitating industry involvement in ACS, including providing ACS marketing materials to use in industry engagement. Divisions can learn from each other in this regard. Leah Riter serves on this ACS-wide committee, and she will engage with AGRO's Development and Membership committees.

## 10. Future meetings

Spring 2026, March 22-26, Atlanta, GA  
Fall 2026, August 23-27, Chicago, IL  
Spring 2027, March 21-25, New Orleans, LA  
Fall 2027, August 22-26, San Diego, CA

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# AGRO Division Executive Committee and Committee Chairs Meeting June 17, 2025 (virtual)

2:00 – 3:30 PM CST

Sharon Schneider, Secretary

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## ATTENDANCE

*Officers:*, James Foster, Chair; Mingming Ma, Program Chair; Dena Barrett, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Aaron Gross, Past-Chair; Kevin Armbrust, Rodney Bennett, Councilors

*Executive Committee Members (EC):* Ashli Brown, Andrew Coates, Michael David, Pat Havens, Beth Kalumbu Malekani, Ed Norris, Solito Sumulong, Katoria Tatum-Gibbs, Ralph Warren, Sara Whiting

*Committee Chairs and Guests:* Joel Coats, Cathleen Hapeman, John Johnston, Qing Li, Laura McConnell, Andy Newcombe,

### 1. Welcome – James Foster

### 2. ACS Fall 2025 – Mingming Ma

- Programming this year is from Monday-Wednesday. AGRO has 27 symposia with 315 presentations, including 241 oral and 74 poster presentations. 5 joint symposia with ORGN, I&EC, CINF, and AGFD; 3 virtual sessions; 2 days of posters. Acceptance notices were sent May 27; scheduling notice sent June 9; program is now frozen.
- Award lectures are scheduled: International Award (Selby) Tuesday; Innovation Award (Walse) Wednesday; JAFCLecture (Mitch) Tuesday
- Events scheduled: Graduate student and postdoc luncheon Monday; SciMix and Division row Monday; AGRO VIP Tuesday; Brewing Ideas for AGRO Tuesday; AGRO Awards Social Wednesday.

### 3. AGRO Ambassadors & Journeymen programs – John Johnston on behalf of International Activities Committee

Discussion: The International Activities Committee proposed to continue the pilot Ambassadors and Journeymen programs without matching funds, which have proved difficult to secure. They proposed transitioning the program to become permanent

in 2026, funding one Ambassador and One Journeyer at \$4K each per year, with the flexibility to shift yearly funding between these two programs. They suggested opportunities to better publicize the programs and to increase their impact.

- Group discussion: \$4K/person is 4x the amount provided for student travel awards and 2x higher than the New Investigator Award finalists. But the goal of this program is more than someone attending a meeting. These programs can develop membership, develop collaborations, increase networking. To request to give more money to the program without better publicity and a plan to increase impact/clear expectations is premature.
- Expectations for Ambassadors are to advertise the Journeymen program, solicit applicants, attend oral and poster sessions, and provide them with appropriate information about AGRO. Expectations for Journeymen are less clear. Could a sponsor substitute for a match? Could the committee partner with the ACS International Programs? Could the amount be reduced per person?  
MOTION: The International Activities Committee proposes that the IAC Program be extended for 2026 without the requirement for matching funds. The \$8K will be split as two \$2K for the Ambassador's Program and two \$2K for the Journeyer's Program. The IAC committee will continue to seek matching funds and will work on increasing the publicity and awareness of the program. Passed.

### 4. Latin America Pesticide Residue Workshop update – Kevin Armbrust

- The workshop was very successful and well attended. Two AGRO members attended and promoted the AGRO division at this workshop in May 2025.

### 5. Bylaws update – Sharon Schneider

- Post-meeting update: The deadline for AGRO member comment in the proposed AGRO bylaws was June 15; no comments or amendments were received. The full membership will vote on the bylaws at the fall Combined Governance meeting.

### 6. 2025 nominating committee/elections update – Aaron Gross

- The committee reports very successful recruitment this year! They requested to have the electronic ballot distributed by ACS; awaiting a reply. It is anticipated that the ballots will be open for voting from Monday, June 23 through Monday, July 21, 2025.
- As soon as the winners are contacted, results will be shared with the Communications Committee and shared via the PICOGRAM, e-mail blast, and posting on the AGRO website.

### 7. Award webinars, Virtual symposium – Dena Barrett

- Proposal to continue and expand the Webinar series for 2026 by hosting a one-day digital program with notable speakers, and making this available in real time and archived through ACS and/or our AGRO Website.
- This is consistent with the AGRO Long Range Planning Committee regarding making more AGRO programming available in a digital format. This also aligns with the AGRO Archival needs for storage and retrieval.
- Recommended working with ACS Digital Programming as this is one area that the Programming Committee of ACS is interested in developing as part of the Virtual Sessions at ACS Meetings. Suggested talking with the Division of Environmental Chemistry to learn from their program. Laura McConnell, James Foster, and Dena Barrett will work on this.

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# AGRO Councilors' Report

March 26, 2025

Kevin Armbrust and Rodney Bennett, Councilors

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**Summary of Attendees:** There were 15,332 registrations (14,251 were in-person and 1,081 virtual) for the ACS Spring 2025 meeting. The ACS Fall 2025 meeting will be held in Washington, DC, from August 17-21, 2025.

## ACTIONS OF THE COUNCIL

- The following nominees were selected as candidates for President-Elect, 2026: Christina Bodurow and Dawn Mason. Candidates for Directors for Districts II and IV to serve on the Board of Directors for the term 2026-2028 were Kimberly Agnew-Hearl and Mary Engelman for District II and Lisa Houston and Milagros (Milly) Delgado for District IV. Candidates for Director-at-Large for the 2026-2028 term were Anna Cavinato, Donna Friedman, Malika Jeffries-EL, and Will Lynch. The election of two Directors-at-Large from among these four candidates and any selected via petition will be conducted in the fall.
- On the recommendation of the Committee on Committees (ConC), Council voted to continue the Committee on Chemical Technical Professionals and, subject to the concurrence of the ACS Board of Directors, the Committees on Budget & Finance, Education, International Activities, and Patents and Related Matters. Council voted to amend the duties of the Committee on Patents and Related Matters (CPRM) and change its name to the Committee on Intellectual Property (CIP), subject to the concurrence of the ACS Board of Directors.
- ConC announced that the committee preference form for all ACS members opened on March 3 and will run through July 3, 2025. Councilors interested in serving on an ACS Committee in 2026 should go to <https://www.acs.org/about/governance/committees/committees/information/preferences.html> to complete their preferences.
- On the recommendation of the Committee on Nominations and Elections (N&E), and with the concurrence of the CPC, Council voted in favor of increasing the number of Councilors on N&E to 19, subject to the concurrence of the ACS Board of Directors. These additional committee members will support the increased workload from the addition of six Zone Councilor slates to N&E's duties.
- On the recommendation of the Committee on International Activities (IAC), Council voted to approve the creation of new International Chemical Sciences Chapters in Ghana, Ecuador, and Northeast China subject to the concurrence of the ACS Board of Directors.
- On the recommendation of the Committee on Local Section Activities (LSAC), Council voted to dissolve the Penn/Ohio Border Local Section. This takes effect on January 1, 2026, and members are being contacted about joining neighboring sections.
- On the recommendation of the Committee on Membership Affairs (MAC), Council voted to approve the 2026 Schedule of Dues and Benefits, subject to the concurrence of the ACS Board of Directors.

## COMMITTEE REPORTS

- The **Committee on Constitution and Bylaws** (C&B) reported the certification of 21 unit bylaws since the fall 2024 meeting. They include 14 Local Sections: Akron, California, Connecticut Valley, East Alabama/West Georgia, Joliet, Kalamazoo, Lehigh Valley, Mississippi, Ole Miss, Orlando, San Gorgonio, San

Joaquin Valley, Sierra Nevada and South Carolina; three Divisions: Cellulose and Renewable Materials (CELL), Chemistry and the Law (CHAL), and Medicinal Chemistry (MEDI); and four International Chemical Sciences Chapters: Australia, Bangladesh, East and Northeast India, and West India.

- The **Committee on Economic and Professional Affairs** (CEPA) reported on the state of the evolving employment landscape for the chemistry enterprise. ACS Careers programs have seen continued growth and remain a valuable resource for members experiencing career transitions. The updated *Professional Employment Guidelines* will be up for action at the fall Council meeting.
- The **Committee on Education** (SOCED) reported on their continued efforts to advance chemistry education for all. The *ACS Policy Statement on Science Education* is currently under revision and the revised ACS Guidelines and Recommendations for Teaching Middle and High School Chemistry will be available soon for the upcoming academic year.
- The **Committee on Local Section Activities** (LSAC) has completed its review of non-represented areas in the USA and has compiled a list of recommendations for assigning these areas and members. A copy of the recommendations is on the LSAC website. LSAC will present its recommendations to Council for a vote at the ACS Fall 2025 meeting.
- Council Resolutions:** The Council passed several resolutions: In memory of deceased Past President Attila Pavlath; in memory of deceased Councilors; and in sincere appreciation of the San Diego Section, host Local Section for the ACS Spring 2025 meeting, as well as the Divisional program chairs, symposium organizers, and ACS staff for the planning and execution of the meeting.

## ACTIONS OF THE BOARD OF DIRECTORS:

- The ACS Board of Directors met in Executive Session on March 21-22, 2025, in San Diego, CA. The Board considered several key strategic issues and responded with numerous actions. The meeting opened with a reflection on Inclusion and Belonging. Board Actions:
- Upon the recommendation of the Editor Search Committee, the Board voted to approve the appointment of an Editor-in-Chief of the journal ACS Earth and Space Chemistry. The appointment will be announced after the individual has been notified and appropriate arrangements for their service have been made.
- Upon recommendation of the Society Committee on Publications, the Board voted to approve the reappointment of several ACS journal editors. The reappointments will be announced after the individuals have been notified and appropriate arrangements for their continued service have been made.
- Upon recommendation of the Board Committee on Professional and Member Relations, the Board voted to approve a screened list of nominees for the 2026 Award for Volunteer Service to the ACS.
- Upon recommendation of the Board Committee on Professional and Member Relations, the Board voted to approve a screened list of nominees for the 2026 Priestley Medal.
- The Board received an extensive briefing and approved several recommendations from the Committee on Executive Compensation. The compensation of the Society's executive staff continues to be reviewed regularly by the Board.
- The Board approved minutes from the Board Executive Session on December 6-7, 2024, and ratified interim Board actions to approve member appointments for the Board Committee on Executive Compensation for the 2025-2027 term.
- Board Chair Wayne Jones facilitated a discussion about opportunities to increase efficiency and agility and modernize



Board operations while ensuring the Society's long-term strategic success. The discussion focused on an ongoing review of the Board's standing committee structure. He also provided an opportunity for the Board to discuss themes emerging from feedback Board members have received from the ACS member community.

- CEO Albert Horvath facilitated a strategic discussion with the Board on a new approach to increase ACS impact through philanthropy.

## REPORTS

- CEO Albert Horvath and his staff reported on organizational updates, financial and audit results, the 150th anniversary of ACS, rebranding efforts, talent management and other ACS activities. He shared the strong performance of ACS in 2024 and growth across many areas. He highlighted:
  1. Strengthening and deepening engagement with our global community;
  2. Holding virtual annual member gathering, allowing our global members from Southeast Asia, the Middle East, Africa, and Latin America to connect and learn about ACS activities, member benefits, region-specific programs, and career-related sessions;
  3. Increasing the global reach of our ACS journals across all key regions by 24 percent compared to the prior year;
  4. Publishing through our more than 90 journals, over 74,000 peer reviewed articles, a 15 percent increase from 2023;
  5. Delivering 346 million article downloads, up 13 percent over

2023;

6. Releasing the CAS BioFinder platform, marking an expansion of CAS products into the life sciences sector.

- The presidential succession shared updates with the Board on their significant activities and initiatives on behalf of the Society and its members.
- Committee on Budget and Finance Chair Natalie LaFranzo reported on the strong financial position of the organization.
- Committee on Public Affairs and Public Relations Chair Carolyn Ribes provided an update on plans for the Board to visit with legislators in June to advocate for science.
- Committee on Strategic Planning Chair Will Lynch assembled a working group of directors to shape the June Board meeting strategic discussion topic.
- Committee on Professional and Member Relations Chair Katherine Lee brought recommendations forward to the Board.
- The Governing Board for Publishing provided updates from the Presidents of ACS Publications and CAS, including the full launch of BioFinder in 2025.
- Written reports were reviewed from the 2024 CEO Initiative Fund, General Counsel, Human Resources, Treasurer, and the Committees on Chemical Safety, Education, International Activities, Minority Affairs, Publications, Senior Chemists, Strategic Planning, and Women Chemists

## ***NOTES***

# AGRO Division

ACS Fall 2025

August 17 – 21, 2025 (EDT)

Walter E. Washington Convention Center

Washington, DC, USA

Mingming Ma, *Program Chair*; James Foster, *Division Chair*

## PROGRAM

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### DIVISION BUSINESS, PROGRAM PLANNING, POSTER SESSIONS, AND SOCIAL ACTIVITIES

#### AGRO Business Meeting

- Wednesday, August 27, 1:00-5:00 PM EDT
- Check the website and watch for email blasts

#### AGRO Coffee Breaks

Walter E. Washington Convention Center, Room 143 Foyer

ALL DAYS: 9:45 – 10:15 AM; 3:45 – 4:15 PM

#### AGRO Graduate Student/Post-Doc Luncheon MONDAY, 12:00 – 1:30 PM

Marriott Marquis, Judiciary Square Room

- Network with scientists and explore career and AGRO opportunities
- Reservations required, contact Sara Whiting at sara.whiting@bayer.com

#### SCI-MIX

MONDAY, 8:00 – 10:00 PM

Walter E. Washington Convention Center, Hall C

- Engage with AGRO poster presenters
- Visit AGRO's table on Division Row

#### AGRO POSTER SESSIONS

TUESDAY AND WEDNESDAY, 12:00 – 2:00 PM

Walter E. Washington Convention Center, Hall C

#### AGRO Vendor Interface Program (VIP)

TUESDAY, 6:00 – 7:00 PM

Marriott Marquis, Liberty Salon N/O/P

- Vendor face-to-face meet-and-greet event

#### Brewing Ideas with AGRO

TUESDAY, 7:00 – 8:30 PM

Marriott Marquis, Salon L and M

- Members and others with programming ideas are welcome
- Free beverages and snacks

#### AGRO Award Social

WEDNESDAY, 6:00 – 8:00 PM

Walter E. Washington Convention Center, Room 206

- Celebrate with new and old friends
- Announcement of NIA and Poster winners
- Hors d'oeuvres, cash bar (beer and wine only)

### MONDAY MORNING

#### Characterizing Non-Extractable Residues of Pesticides in Soil and Sediment: Challenges, Approaches, and Regulation

P. Dubey, K. Lynn, C. Wijntjes, *Organizers*  
X. Huang, *Organizer, Presiding*

Walter E. Washington Convention Center - Room 143C

8:00 AM – Opening remarks.

8:05 AM – Effects of fomesafen residue in soil on Maize (*Zea mays* L.) and microbial communities. **J. Gao**, L. Shen

8:30 AM – Differentiating unextracted and non-extractable pesticide residues in soil. **L. Gui**, M.S. Curren, J. Zhu, C. Hart

8:55 AM – Characterization and regulatory consideration of non-extractable residues in soil, an EU perspective. **T. Junge**, M. Namini-Moritz, M. Telscher

9:20 AM – Evaluation of non-extractable residues (NER) in soils using different extraction processes. **R. Bhandari**, M. Pierce, M. Swift, B. Blakeslee

9:45 AM – Intermission.

10:15 AM – Identifying the bound compounds of non-extractable residues of pesticides in soil by 4-pool kinetic analysis. **X. Huang**, K. Lynn, S. Cryer, C. Wijntjes

10:40 AM – Speciation of non-extractable residues of pesticides in water/sediment by 4-pool kinetic analysis. **X. Huang**

11:05 AM – Panel discussion.

11:30 AM – Concluding remarks.

#### Pesticide Use in Non-Agricultural Sector: Regulatory Trends and Sustainable Innovations

S. Bennett, M. R. Blessing, P. Sharma, *Organizers, Presiding*

Walter E. Washington Convention Center – Room 144A

8:00 AM – Introductory remarks.

8:05 AM – IPM strategies for rodent management: Integrating Prelontra™ rodent monitoring soft block with Selontra® rodent bait use for increased efficacy and reduced non-target effects. **J.A. Argentine**, S. Kenmuir, A. Wade, N. Sanders, Z. Mundy, W.E. Barton, P. Sharma

8:30 AM – Development of new, fast-acting daily disinfection solutions to protect against Healthcare Acquired Infections (HAIs). **K.E. Janak**, L. Dreilinger, X. Jiang, L. Osei-Owusu, M. Dimitriadis

8:55 AM – Evolution of liquid pesticide applicators for the residential consumer. **L.A. Dillard**, A. Anspaugh, R. Goodwin, A. Davis, K. Miller, B. Schultz

**9:20 AM** – Science behind Termidor® termiticide/insecticide. **F. Medina**, D. Straubinger, J. Meyers, R.W. Davis, S. Kenmuir, J.F. Schuh

**9:45 AM** – Intermission.

**10:15 AM** – Strategies to mitigate the public health impacts of cockroaches. **C. Schal**

**10:40 AM** – Mitigating antibiotic resistance: The role of quaternary ammonium compound disinfectants and biocide application. C. Pettigrew, L. Dreilinger, P. McGeechan, J. Petkov, **K.E. Janak**

**11:05 AM** – Rodents, rodenticides, and sustainable management efforts. **M. Bentley**

**11:30 AM** – Q&A discussion.

**11:55 AM** – Concluding remarks.

### **Refined Risk Assessment and Implementation of Pesticide Mitigation Practices for Species Protection**

E. Arnold, R. Muñoz-Carpena, *Organizers*

H. Chen, C. Hassinger, A. M. Ritter, J. Stryker, *Organizers, Presiding*

M. Ranville, *Presiding*

*Walter E. Washington Convention Center Hall E – Room 14*

**8:00 AM** – Introductory remarks.

**8:05 AM** – Evaluating EPA's Tier-3 scenarios for refining pesticide exposure and mitigation needs under ESA. **L. Ghebremichael**, M. Winchell, N.J. Snyder, F. Donaldson, G. Hoogeweg

**8:30 AM** – Geospatial refinement of pesticide aquatic exposure modeling to improve the risk characterization and mitigation analysis for endangered species. **H. Rathjens**, M. Winchell, C.M. Holmes, L. Ghebremichael, R. Warren, H. Chen, P.L. Havens, T. Hall, S. Teed, P. Whatling, R. Haynie

**8:55 AM** – EPA's runoff/erosion ecological mitigation menu: An overview of efficacy evaluation. **M. Guevara**, F. Farruggia, K. Garber

**9:20 AM** – Spatial analysis of EPA's mitigation point system in the final herbicide strategy: Practical implications for compliance and impact on key crop systems. **C. Hassinger**, D. Campana, J. Brausch, M. Ranville

**9:45 AM** – Intermission.

**10:15 AM** – Leased farmland: Challenges and solutions for ESA compliance. **M. Ranville**

**10:40 AM** – Pesticide Mitigation Assessment Tool: Quantitative evaluation of field level mitigation practice effectiveness on pesticide loss. **J. Stryker**, M. Winchell, L. Ghebremichael, T. Burd, Z. Tang, R. Brain, T. Hall, R. Sur

**11:05 AM** – Development of a mitigation support tool to assist growers with ESA compliance. **A. Jacobson**, Z. Stone, N. Guth, M. White, R. Brain

**11:30 AM** – Closing remarks.

### **Peptides: New Tools in Crop Protection**

R. Kennedy, K. D. Wing, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 144B*

**8:00 AM** – Introduction.

**8:05 AM** – Engineering Av3, a sea anemone toxin, as a novel commercial insecticide. **L. Bao**, J. Wheeler, C. Foune, J. Ladd, K. Schneider, B. Davis, W. Valbon, F. Andreazza, K. Dong, R. Kennedy

**8:30 AM** – Elucidation of the nicotinic acetylcholine receptor binding site of shiva family hexatoxins. **B. Kennedy**, B. DeVree, A. Haase, J. Tourtois, L. Bao, K. Schneider

**8:55 AM** – Development of a peptide bioinsecticide from spider venom that modulates the insect voltage-gated sodium channel. **B. Kennedy**, L. Bell, K. Schneider

**9:20 AM** – Micropep's innovation in emergent directly applied crop protection peptides. **M. Courbot**

**9:45 AM** – Intermission.

**10:15 AM** – Accelerating the leap to nature-positive agriculture with Invaio Biologicals by Design™. **E. Mallick**, **J. Kraemer**, **S. Ramachandran**, **J. Prasad**

**10:40 AM** – Vismax®'s peptide-fueled mode of action and grower benefits. **A. Siegel**, M. Leslie, S. Schumer, J. Bailey, B. Wahle, B. Baechle, L. Rocha, C. Sayer, T. Enders, J. Harrison, B. Gygi, G. Ekanayaker, A. Cristea, S. Cheerla, N. Kramer, L. Klasek, B. Thompson

**11:05 AM** – Panel discussion.

**11:30 AM** – Concluding remarks.

### **Precision Application of Agricultural Pesticides**

A. Barlow, S. Hovinga, B. Young, *Organizers*

T. S. Ramanarayanan, M. Ranville, *Organizers, Presiding*

*\*\*\* Digital Meeting – Digital Session \*\*\**

**10:00 AM** – Introduction remarks.

**10:05 AM** – Precision application of pesticides and environmental implications: Insights from field-level microdata. **J. McFadden**

**10:30 AM** – Spray drift reduction as a result of established precision ag technologies. **A. Gellings**

**10:55 AM** – Retrofit of laser-guided intelligent spray control system on orchard sprayers to reduce pesticide waste. **H. Zhu**, H. Jeon, E. Ozkan, L. Zhao, A. Fulcher, G. Vandenbark

**11:20 AM** – Evaluation of application coverage for targeted spray technologies in field settings. **A. Althaus**, B. Smith, M. Darr

**11:45 AM** – Adoption of precision application tools: Barriers and incentives. **M. Ranville**

**12:10 PM** – Panel discussion.

**12:35 PM** – Closing remarks.

### **JOINT PROGRAMMING**

## **ORGN**

### **Organic Process Research and Development**

K. P. Cole, T. Rosenthal, S. Vasquez Cespedes, *Organizers*

Q. Yang, *Presiding*

*Walter E. Washington Convention Center – Room 145A*

**8:00 AM** – Introductory remarks.

**8:05 AM** – Development of a robust process for the synthesis of the Mk-2870 drug linker. **P. Moon**

**8:35 AM** – New efficient synthesis and process development of lenacapavir. **D. Guthrie**, A.H. Shinde, R. Vedyappan, R. Sayini, N. Asad, A. Souza, J. Saathoff, N. Sakkani, P. Khairnar, C. Busic, R.S. Moazeni-Pourasil, S. Hochstetler, J. Burns, S. Ahmad, M. Laidlaw, F. Gupton, D. Klumpp, R. Littich, L. Jin

**9:05 AM** – Break.

**9:20 AM** – SOLATENOL® technology. Evolution of chemical routs - a spectacular example of successful product

life cycle management. **D. Gribkov**, A. Luettin, A. Robinson, M. Terinek

**9:50 AM** – Process development of a key building block for a KRAS G12C brain penetrant inhibitor. **Y. Zhou**, L. Deng, C. Han, F. Gosselin

**10:20 AM** – Break.

**10:35 AM** – Simplifying synthesis with radical cross-coupling. **P.S. Baran**

**11:25 AM** – Concluding remarks.

## COSPONSORED AGRO PROGRAMMING

### AGFD

#### Using Artificial Intelligence to Improve Agriculture and Food Systems

Sponsored by AGFD, Cosponsored by AGRO

#### MONDAY AFTERNOON

#### Endangered Species Pesticide Risk Modifiers: Effects, Exposure, and Species-Specific Considerations

A. Colon-Santiago, B. McGaughey, *Organizers*  
E. Arnold, K. Bissell, N. Krishnan, A. Krueger, C. Priest, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 143C*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Risk modifier definition and use from the perspective of the U.S. Fish and Wildlife Service. K. Bissell, **C. Kilheffer**

**2:30 PM** – Integrating modifiers into pesticide evaluations under the Endangered Species Act and their use in determining potential mitigations. **A. Wray, K. Garber**

**2:55 PM** – Agronomic risk modifiers for threatened and endangered species on crop lands. E. Arnold, **C. Myers**

**3:20 PM** – Risk modifiers for species and use sites: Collaborating for consistency. **A. Krueger**, L.M. Duzy, A. Frank, C. Douglass, G. Wuthnow

**3:45 PM** – Intermission.

**4:15 PM** – Role of mask layers in UDL refinement. R. Vamshi, **G. Hoogeweg**

**4:40 PM** – ESA risk modifiers in golf course management. **J. Tapp**, C. McKeel

**5:05 PM** – Comparing the sensitivity of listed lepidopterans and coleopterans to honeybees. **N. Krishnan**, M. Kato

**5:30 PM** – Panel discussion.

**5:55 PM** – Closing remarks.

#### Legacy and Leadership: Honoring Transformative Work in Insecticide Science & Environmental Chemistry

A. D. Gross, E. Norris, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 144A*

**2:00 PM** – Opening remarks.

**2:05 PM** – Environmental chemistry of PFAS: Assessing exposure and effects in wildlife. **T. Anderson**

**2:30 PM** – Exposure to glyphosate in applicators and the general population: The environmental chemistry drives the risks. **K. Solomon**

**2:55 PM** – Start with the end in mind: Building safe, effective agricultural products from the ground up. **K. Carstens**

**3:20 PM** – **NEW INVESTIGATOR AWARD FINALIST**  
Elucidating an adverse outcome pathway for sublethal doses of neonicotinoid insecticides. **N. Krishnan**, S. Purtee, A.D. Gross, S. Bradbury, R. Jurenka

**3:45 PM** – Intermission.

**4:15 PM** – Determining the mode of action of insecticidal essential oils: Nicotinic acetylcholine receptor ACR-16 from *Ascaris suum* as a model. **C. Wong**, S. Choudhary, M. Abongwa, A. Robertson, R. Martin, J.R. Coats

**4:40 PM** – Mechanisms of spatial repellency by plant-derived repellents against *Aedes aegypti*. **K. Dong**

**5:05 PM** – Innovations in vector control: Success stories made possible through collaborations with Joel Coats. **L. Bartholomay**

**5:30 PM** – *Aedes* mosquitoes infected with arboviruses modify their response to repellent chemistry. **A.D. Gross**, K. Chan, S.L. Paulson

**5:55 PM** – Concluding remarks.

#### Navigating the Maze: Pesticide Registration Challenges in Modern US Agriculture

K. Davis, R. Haynie, R. Lattimore, A. McCaskill, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 144B*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Panel discussion with EPA and USDA.

**2:55 PM** – Regulatory and legal challenges in the pesticide registration process. C. Sanson, **A. Symonds**, R. Haynie

**3:20 PM** – Challenges for growers in the pesticide regulatory process: The impact of Endangered Species Act compliance efforts. **C. Paisley-Jones**, C. Myers

**3:45 PM** – Intermission.

**4:15 PM** – Challenges with U.S. EPA's framework on antibacterial and antifungal resistance associated with pesticide use. **T.S. Ramanarayanan**, A. Pecquet, H. Sierotzki

**4:40 PM** – Former EPA perspective on the pesticide regulatory process. **A. Dunn, M.Z. Leopold**

**5:05 PM** – EPA perspective on regulatory process, vision, and path forward. **N. Beck**

**5:30 PM** – Pesticide registration process: Challenges and opportunities. **J. Nyangulu, J. Cummings**

**5:55 PM** – Concluding remarks.

#### Precision Application of Agricultural Pesticides

T. S. Ramanarayanan, M. Ranville, *Organizers*  
A. Barlow, S. Hovinga, B. Young, *Organizers, Presiding*

*Walter E. Washington Convention Center Hall E – Room 14*

**2:00 PM** – Introduction to session.

**2:05 PM** – Benefits of targeted application technologies for improving stewardship of herbicide chemistries. **W.L. Patzoldt**, M. Houston, J. Moraes, T. Avent, N.K. Jason, M. Zimmer, B. Young, D. Contreras, W. Everman, W. Stutzman, M. Flessner, J. Buck, L. Steckel

## MONDAY EVENING

### Sci-Mix Poster Session

8:00 – 10 PM

Walter E. Washington Convention Center Hall C

#### AGRO Division

Mingming Ma, *Organizer, Presiding*

Smart nano biopesticides: Engineered diatom biogenic silica with essential oils for Fusarium disease control. **S. Dhali**, A. Malik, R. Raliya

\*\*\* Adsorption behavior of pore-expanded MCM-41 with imidacloprid to reveal its potential for controlled release. **S. Nasif**, M. Nuruzzaman, R. Naidu

\*\*\* Revolutionizing soybean fungal disease management strategies with enhanced efficacy of spray induced gene silencing. **S. Marahatta**

Developing a mechanistic model to predict the selection rate of antifungal resistance in critically important human fungal pathogens. **T.S. Ramanarayanan**, Y. Wu, F. van den Bosch, A. Pecquet, M. Grimmer

Effects of metallic oxide nanoparticles on lettuce seedlings in biochar-amended soil. **Y. Zhang**

\*\*\* Total organofluorine analysis of surface water samples in an agricultural watershed by NMR and CIC. **D. Balasuriya**, J. Aguilar, T. Tennakoon, L.M. Abaya, S. Ahmed, L. Long, A. Howe, A.C. Hoepker, M. Soupir, D.S. Aga

Optimizing combustion ion chromatography for PFAS analysis: Implications for biosolid-associated mobility and environmental fate. **J. Aguilar**, M. Wijayahena, J.S. Wallace, D.S. Aga

Evaluation of models to assess leachability of pesticides into groundwater in Hawaii. **K.A. Axelbank**, Z. Hoi Lam, Y. Yuan, Z. Tang, E. Riechert, A. Yamamoto, Q.X. Li

Development of pesticide in water calculator Hawaiian scenario for pesticide leachability assessment. **Z. Hoi Lam**, K.A. Axelbank, Y. Yuan, Z. Tang, E. Riechert, A. Yamamoto, Q.X. Li

\*\*\* Evaluation of *Anthonomus eugenii*, pepper weevil, pheromone as potential field management strategy. **J. Griesheimer**, X. Martini, P. Hahn, D. Seal, B. Rathinasabapathi, A. Gaffke

\*\*\* Soil legacy effects on plant defense chemistry. **S. Paranjape**, A. Richter, G. Jander, J.G. Ali

\*\*\* Combining single cell transcriptomics and proteomics to identify novel antifeedant targets in the southern green stink bug. **F. OHara**, S. Arya, R. Mishra, S.R. Palli, D. Harrison, B. Bonning, D. Swale

\*\*\* Utilizing optogenetic technology to characterize insect muscle physiology. **S. McComic**, D. Swale

\*\*\* Discovery of novel inward rectifier potassium channel inhibitors via *in silico* screening for antifeedant aphicides. **A. Cremades**, F. OHara, D. Swale

FTIR Spectral Analysis of plant proteins and correlation with functional properties. **J. Patel**, Z. Gao, L. He

Harnessing multiple-enzyme potential in mango peel-adapted microbial fermentation for sustainable glycosidase production. **J. Dzikunoo**, F. Offei, N. Affrifah, W. Dorleku, E.J. Blessie, F.k. Saalia

Machine learning enabled microneedle-based colorimetric pH sensing patch for meat spoilage detection and wound health monitoring. **S. Kadian**, R. Narayan

\*\*\* Effect of steel slag on plant growth parameters of field crop using artificial soil. **M. Singh**, A. Singh, R. Kumar, S. Pachauri, V. Bora

2:30 PM – Optimizing agriculture: Targeted spraying and variable rate applications using the SenseApply™ Camera. **B. Young**, **N. Michael**, K. Karakoula, N. Georgiadis

2:55 PM – Targeted application standardized performance project. **A. Barlow**

3:20 PM – Assessment of target coverage in spraying using ASABE X665. **R.L. Panini**, M.P. Da Silva, M.N. Nishikawa, H.R. Lemos, L.F. Dudek, A.F. Rufino Tamara, V.P. Trevisan, G.M. Franco, I.S. Lopes

3:45 PM – Intermission.

4:15 PM – Evaluating spray deposition accuracy of unmanned aerial spray systems: Implications for vector control and agricultural applications. **A. Thistle**, J. Bonds, H. Thistle, B. Fritz

4:40 PM – Regulatory and labeling considerations for adoption of robust weed management strategies with targeted herbicide application systems. **B. Young**

5:05 PM – Panel discussion with all in-person speakers.

5:55 PM – Closing Statements.

### JOINT PROGRAMMING

#### ORGN

##### Organic Process Research and Development

K. P. Cole, T. Rosenthal, Q. Yang, Organizers  
S. Vasquez Cespedes, Presiding

Walter E. Washington Convention Center – Room 145A

2:00 PM – Introductory remarks.

2:05 PM – Development of a scalable route for ABBV-576 leveraging multiple process technologies. **A. Holownia**

2:35 PM – In silico tools and automation to accelerate route selection for manufacturing of pharmaceutical API. **A. Kukor**, A. Ramirez, N. Nazemifard, C. Papageorgiou

3:05 PM – Break.

PM – F. Li

3:50 PM – Process improvements towards Olomorasib. **H.L. Vonesh**

4:20 PM – Break.

4:35 PM – Accelerated reaction development with automated transient flow experiments. **A. Nambiar**

5:05 PM – Development of a commercial manufacturing process for Danuglipron. **A.L. Puchlopek**

5:35 PM – Wrap-up.

### AGRO COSPONSORED PROGRAMMING

#### AGFD

##### Using Artificial Intelligence to Improve Agriculture and Food Systems

Sponsored by AGFD, Cosponsored by AGRO

##### Innovations in Natural Polymer Science for Sustainable Agriculture and Food Security

Sponsored by Joint Programming, Cosponsored by AGRO

- \*\*\* Sustainable soil management: The role of biochar-manure blends in mitigating greenhouse gas emissions and enhancing soil fertility. **D. Guthrie**, L. Carson, A. Shembo, A. Geremew, G. James
- \*\*\* Assessing the toxicity and risk of newer synthetic pesticides and biopesticides on monarch butterflies (*Danaus plexippus*). **M. Adu-Brew**, N. Krishnan
- \*\*\* Evaluating machine learning guided spray drone applications in different crop productions. **N. Singh**, B. Gurjar, U. Torres, M. Bagavathiannan
- \*\*\* Assessing selective inhibitors for methane mitigation in rice ecosystems. **A. Maxwell**, R. Hu, H. Carlson

## TUESDAY MORNING

### Advances and Innovations in Formulation Science

R. Acosta Amado, S. Sumulong, N. Vitorazzi de Castro, *Organizers, Presiding*

Walter E. Washington Convention Center – Room 144A

- 8:50 AM** – Introductory remarks.
- 8:55 AM** – Nanocarrier-mediated insecticide delivery through tarsi enhances stink bugs mortality. **S. Sharma**, T.M. Perring, S. Jeon, H. Huang, W. Xu, E. Islamovic, B. Sharma, Y.M. Giraldo, J. Giraldo
- 9:20 AM** – HTP formulation sample analysis in crop protection formulation development. **X. Liu**
- 9:45 AM** – Intermission.
- 10:15 AM** – Smart herbicides: The power of nanocarriers in optimizing agrochemical performance. **A. Preisler**, L. Bragança de Carvalho, V. Takeshita, E.V. Campos, P. Luiza de Freitas Proença, H. Caixeta de Oliveira, **L. Fraceto**
- 10:40 AM** – Aldehydes as solvents for agrochemical formulations. **R. Acosta Amado**
- 11:05 AM** – Building stable biological formulations through optimized selection. **N. Vitorazzi de Castro**, B.K. Bhowmik
- 11:30 AM** - Panel discussion.
- 11:55 AM** - Concluding remarks.

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## 2025 ACS International Award for Research in Agrochemicals

### AGRO International Award for Research in Agrochemicals: Symposium in Honor of Dr. Thomas P. Selby

Cosponsored by ORGN  
Financially supported by CORTEVA Agriscience

S. Hsieh, T. M. Stevenson, *Organizers, Presiding*

Walter E. Washington Convention Center Room 143C

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- 8:00 AM** – Introduction and Award Presentation.
- 8:05 AM** – Highlights from a career at DuPont and FMC in crop protection research. **T.P. Selby**
- 8:55 AM** – Discovery of rimisoxafen. **A. Levens**, T.M. Stevenson, R. Reddy, P. Sharpe, N.R. Deprez, S. Chittaboina, R. Dao

- 9:20 AM** – Rimisoxafen inhibits both phytoene desaturase and solanesyl diphosphate synthase as a dual mode-of-action herbicide. **R.P. Emptage**, I. Kang, C. Brabham, J. Lee, L. Wu, S. Gutteridge
- 9:45 AM** – Intermission.
- 10:15 AM** – Open chain 4-chloro-2-arylpyrimidines as herbicides. **M. Holmes**, R. DeBergh, T.M. Stevenson, N.R. Deprez, R. Reddy, P. Sharpe, A. DeAngelis, Z. Ganie, A. Chandi
- 10:40 AM** – Rhein as a natural herbicide targeting photosystem I. **F. Dayan**, A. Twitty, H. Barnes, N. Levy, Y. Mizrahi, Y. Geva, Y. Phillip
- 11:05 AM** – Effects of mevalocidin, fungal phytotoxin, on the mevalonic acid pathway of plants. **S.O. Duke**, J. Bajsa-Hirschel, H. Lata, M. Wang, J. Lee, A.G. Chittiboyina, P. Pandey, C. Pearce
- 11:30 AM** – Herbicidal N-diheteroaryl(methyl)-3-pyridazinones. **T.M. Stevenson**
- 11:55 AM** – Concluding remarks.

### Increasing Importance of the USDA APHIS Permit to Set Up Research and Commercialization of Microbes in the US

D. Sinning, S. Sumulong, *Organizers, Presiding*

Walter E. Washington Convention Center – Room 144B

- 8:50 AM** – Introductory remarks.
- 8:55 AM** – USDA APHIS PPQ 526 permit requirements for researchers. **B. Nordmark**
- 9:20 AM** – USDA APHIS Biotechnology Regulatory Services microorganism permitting overview. **G. Goodman**
- 9:45 AM** – Intermission.
- 10:15 AM** – Agricultural microbial products: Where EPA and APHIS permitting regulations intersect. **K. Warkentien**
- 10:40 AM** – Obtaining and maintaining the USDA APHIS PPQ permit: History and experiences from a contract research laboratory. **M. Schick**
- 11:05 AM** – Navigating the EPA Notice of Arrivals process for the importation of microbial pesticides. **G. Latronico**
- 11:30 AM** – Panel discussion.
- 11:55 AM** – Concluding remarks.

### Leveraging Biological Interactions for Pest and Pathogen Management

N. Tabanca, G. Thomas, *Organizers*  
A. D. Gross, *Presiding*

Walter E. Washington Convention Center Hall E – Room 14

- 8:50 AM** – Introductory remarks.
- 8:55 AM** – In silico, *in vitro*, and *in vivo* approach for the identification of volatile compounds of natural origin as potential insecticides. A. Torres, F. Victoria, N. Sánchez-Cruz, E. Plazas, **C.A. Sierra**
- 9:20 AM** – Harnessing semiochemicals: Using the oviposition deterrent pheromone of *Anthonomus eugenii*, pepper weevil, as an integrated management program. **J. Griesheimer**, X. Martini, P. Hahn, D. Seal, B. Rathinasabapathi, A. Gaffke
- 9:45 AM** – Intermission.
- 10:15 AM** – Transgenic introduction of maize antifungal pathogen defense genes can interfere with the

efficacy of the fungal insect pest biocontrol agent *Beauveria bassiana*. **P. Dowd**

**10:40 AM – NEW INVESTIGATOR AWARD FINALIST**

RNAi-based management of citrus greening disease by targeting pathogen interaction with the gut of the Asian citrus psyllid. **N. Xie**, M. Roy, K. Pelz-Stelinski, B. Bonning

**11:05 AM – NEW INVESTIGATOR AWARD FINALIST**

Patchouli compound, an alternative natural mosquitocide to synthetic pyrethroids. **Z. Li**, R. Chen, E. Norris, D. Swale, J.R. Bloomquist

**11:30 AM** – Discussion.

**11:55 AM** – Concluding remarks.

**Water Monitoring Study Design and Interpretation for Agrochemical Exposure Assessment**

D. Barrett, P. Moran, A. M. Ritter, *Organizers, Presiding*

*Walter E. Washington Convention Center Hall E – Room 13*

**8:50 AM** – Introductory remarks.

**8:55 AM** – Real-time nitrate monitoring in tile-drained fields in Central Illinois. **S. Meyer**, P. Glaum, R. Krueger, J. Trask, L. Gentry, D. Schaefer, L. Gentry

**9:20 AM** – Fungicides occur widely in small United States streams and are important predictors in invertebrate health. **P. Moran**, L.H. Nowell, I. Waite, T. Schmidt

**9:45 AM** – Intermission.

**10:15 AM** – Model-based vulnerability mapping to contextualize surface water pesticide monitoring on large scales. **J. Kiesel**, H. Rathjens, R. Sur

**10:40 AM** – Next generation of spatially distributed pesticide leaching models. **C. Hoogeweg**, A. Poot, A. Tiktak, B. Jene

**11:05 AM** – Machine learning approach to integrate aquatic modeling and monitoring data for exposure assessment. **Y. Wu**, **Z. Stone**, **A.M. Ritter**, **W. Chen**

**11:30 AM** – Panel discussion.

**11:55 AM** – Closing remarks.

**Surrogates and Extrapolation Among Species in Arthropodan Pollinator Exposure and Effects Assessment**

**R. Prather**, **T. Steeger**, **K. White**, *Organizers*  
**J. R. Purdy**, *Presiding*

*Digital Meeting – Digital Session*

**10:00 AM** – Opening remarks.

**10:05 AM** – Pesticide drift and solitary bee fitness: A case study for rethinking environmental risk assessments. **L.M. Jeker**, D. Camenzind, D. Grossar, C. Kast, L. Straub

**10:30 AM** – Coordinating international academia, government, and industry research to develop standardized testing and evaluation methods for assessing exposure and effects affecting bee health through the ICPPR Bee Protection Group. **J. Pistorius**

**10:55 AM** – Understanding the potential and the limitations of bumble bee microcolonies. **A.R. Cabrera**, R.J. Ripperger, D. Schmehl

**11:20 AM** – Role of pollinators and reproductive strategies in risk assessments of threatened and endangered plants. **A. Schmolke**, S. Hinarejos, A.R. Cabrera, A. St. Clair, T. Joseph, M. Vaugeois, M. Feken

**11:45 AM** – Integrating allometric scaling in solitary bee risk assessment: A mechanistic approach. **V. Roeben**, Z. Gao, M. Miles, T. Pamminer, T.G. Preuss

**12:10 PM** – Status of pollinators in the United States and Canada. **T. Cornelisse**

**12:35 PM** – Lives of bees that pollinate US crops. **J. Cane**

**1:00 PM** – Flawed generalizations: Sex- and species-specific susceptibility to a neonicotinoid insecticide in bees. **L. Straub**, D. Camenzind, L.M. Jeker

**1:25 PM** – Closing remarks.

**JOINT PROGRAMMING**

**AGFD**

**Agricultural Transformations with AI and ML: Collaboration, Innovation, and Data-Driven Insights**

R. J. Bienstock, W. O'Sullivan, L. Riter, *Organizers*  
A. Barlow, *Organizer, Presiding*

*Walter E. Washington Convention Center – East Salon C*

**8:00 AM** – Introductory remarks.

**8:05 AM** – Insights powered by AI: Analyzing the extent of method validation in pesticide residue literature. **L. Riter**, S.J. Lehotay, J. Swarthout

**8:30 AM** – Bridging the AI adoption gap in agriculture: Why AI will only transform organizations who can meet the pre-conditions for success. **W. O'Sullivan**

**8:55 AM** – Machine learning approach to pesticide crop residue forecasting. **W. Chen**

**9:20 AM** – Intermission.

**9:50 AM** – Meta-analysis of available data sources for agrochemical modelling. **K. Doddakula**

**10:15 AM** – Antimicrobial peptides identification from a complex chicken cruor hydrolysate via regression-based machine learning: Impact of hydrolysis duration and discoloration on bioactive peptide present. **D. Rahimi**, M. Bazinet, Z. Sanchez-Reinoso, J. de Toro-Martín, I. Fliss, S. Mikhaylin, L. Bazinet

**10:40 AM** – Artificial intelligence for accelerating the discovery of sustainable agrochemicals. **Y. Djoumbou Feunang**

**11:05 AM** – Closing remarks.

**COSPONSORED AGRO PROGRAMMING**

**AGFD**

**Innovations in Natural Polymer Science for Sustainable Agriculture and Food Security**

Sponsored by Joint Programming, Cosponsored by AGRO



**AGRO POSTER SESSION – Part 1**

Walter E. Washington Convention Center Hall C

**12:00 PM – 2:00 PM**

**\*\*\* Student Travel Award Winner**

**Advances and Innovations in Formulation Science**

R. Acosta Amado, S. Sumulong, N. Vitorazzi de Castro, *Organizers*

\*\*\* Adsorption behavior of pore-expanded MCM-41 with imidacloprid to reveal its potential for controlled release. **S. Nasif**, M. Nuruzzaman, R. Naidu

Smart nano biopesticides: Engineered diatom biogenic silica with essential oils for Fusarium disease control. **S. Dhali**, A. Malik, R. Raliya

\*\*\* Revolutionizing soybean fungal disease management strategies with enhanced efficacy of spray induced gene silencing. **S. Marahatta**

Fractionated kraft lignin as a bio-based stabilizer for PCL nanocarriers: Enhanced photoprotection and sustainable atrazine delivery. J. Rodrigues, A. Freitas, A. Espirito Santo Pereira, A. Pereira, M. de Jesus, M. Ferreira, **L. Fraceto**

\*\*\* Assessing selective inhibitors for methane mitigation in rice ecosystems. **A. Maxwell**, R. Hu, H. Carlson

**Environmental Fate, Transport, and Modeling of Agriculturally Related Chemicals**

R. Bhandari, S. Hafner, R. Warren, S. Whiting, *Organizers*

Parameterization of PWC with site specific data from field studies. **C. Roy**, S. Crawford, A.M. Ritter, D.A. Desmarteau, W. Chen

Developing a mechanistic model to predict the selection rate of antifungal resistance in critically important human fungal pathogens. **T.S. Ramanarayanan**, Y. Wu, F. van den Bosch, A. Pecquet, M. Grimmer

SERS driven label free rapid identification of residual dithiocarbamate fungicide from farm soil. **A. Singh**

Effects of metallic oxide nanoparticles on lettuce seedlings in biochar-amended soil. **Y. Zhang**

Improving the procedure for fitting degradation rates in water sediment studies. S. Payvandi, D. Patterson, I. Hardy, W. Chen, **I. Khanijo**

\*\*\* Total organofluorine analysis of surface water samples in an agricultural watershed by NMR and CIC. **D. Balasuriya**, J. Aguilar, T. Tennakoon, L.M. Abaya, S. Ahmed, L. Long, A. Howe, A.C. Hoepker, M. Soupir, D.S. Aga

Optimizing combustion ion chromatography for PFAS analysis: Implications for biosolid-associated mobility and environmental fate. **J. Aguilar**, M. Wijayahena, J.S. Wallace, D.S. Aga

Investigation of polycyclic aromatic hydrocarbons (PAHs) in agricultural soil in South Carolina. **J. Vogle**, P. Ferguson

Evaluation of models to assess leachability of pesticides into groundwater in Hawaii. **K.A. Axelbank**, Z. Hoi Lam, Y. Yuan, Z. Tang, E. Riechert, A. Yamamoto, Q.X. Li

Development of pesticide in water calculator Hawaiian scenario for pesticide leachability assessment. **Z. Hoi Lam**, K.A. Axelbank, Y. Yuan, Z. Tang, E. Riechert, A. Yamamoto, Q.X. Li

**Legacy and Leadership: Honoring Transformative Work in Insecticide Science and Environmental Chemistry**

A. D. Gross, E. Norris, *Organizers*

Rapid spread of amitraz resistance linked to a unique T115N mutation in the octopamine receptor of *Varroa* mites in Korea. J. Lee, J. Lee, Y. Lim, S. Cho, K. Moon, S. Kim, Y. Kim, **S. Lee**

**Leveraging Biological Interactions for Pest and Pathogen Management**

A. D. Gross, N. Tabanca, G. Thomas, *Organizers*

\*\*\* Evaluation of *Anthonomus eugenii*, pepper weevil, pheromone as potential field management strategy. **J. Griesheimer**, X. Martini, P. Hahn, D. Seal, B. Rathinasabapathi, A. Gaffke

\*\*\* Soil legacy effects on plant defense chemistry. **S. Paranjape**, A. Richter, G. Jander, J.G. Ali

\*\*\* Discovery of novel inward rectifier potassium channel inhibitors via *in silico* screening for antifeedant aphicides. **A. Cremades**, F. OHara, D. Swale

\*\*\* Utilizing optogenetic technology to characterize insect muscle physiology. **S. McComic**, D. Swale

\*\*\* Combining single cell transcriptomics and proteomics to identify novel antifeedant targets in the southern green stink bug. **F. OHara**, S. Arya, R. Mishra, S.R. Palli, D. Harrison, B. Bonning, D. Swale

**Peptides: New Tools in Crop Protection**

R. Kennedy, K. D. Wing, *Organizers*

Natural products as insecticides: Sigillins from Springtails. **R. Vallinayagam**, S. Schulz

**Precision Application of Agricultural Pesticides**

A. Barlow, S. Hovinga, T. S. Ramanarayanan, M. Ranville, B. Young, *Organizers*

Discovery and optimization of a novel class of pyrimidine scaffold as insecticide. **J. Song**, Y. Jang, S. Lee, H. Lee, H. Yeom

**Refined Risk Assessment and Implementation of Pesticide Mitigation Practices for Species Protection**

E. Arnold, H. Chen, C. Hassinger, R. Muñoz-Carpena, A. M. Ritter, J. Stryker, *Organizers*

\*\*\* Assessing the toxicity and risk of newer synthetic pesticides and biopesticides on monarch butterflies (*Danaus plexippus*). **M. Adu-Brew**, N. Krishnan

Integrating trait-based approaches and effect modeling for enhanced species protection. M. Vaugeois, **E. Peterson**

**Pesticide Regulation, Global Trade: US Leadership in Food Security**

D. J. Miller, *Organizer*

A. Gore, H. B. Irrig, J. M. Stewart, C. Tiu, *Organizers, Presiding*

Walter E. Washington Convention Center – Room 144A

**2:00 PM** – Introduction.

**2:05 PM** – Monitoring food pesticide residues in support of pesticide regulation and global trade. **B. Foos**, S. Abubeker

- 2:30 PM** – Overview of the FDA pesticide residue monitoring program and recent findings. **S.C. McGrath**, C. Liang, L.P. Robin
- 2:55 PM** – U.S. FDA's total diet study and total diet exposures using FDA's food disaggregation database. **D. Hoffman-Pennesi**, J. Spungen, A. Gavelek, S. Santillana
- 3:20 PM** – Semi-automated approach to updating the food commodity intake database (FCID). **D. Hoer**, A. Niman
- 3:45 PM** – Intermission.

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## 2025 JAFC Best Paper Award

William Mitch et al.  
Financially sponsored by BASF

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- 4:15 PM** – Capturing and degrading sulfuryl fluoride fumigant using an electrochemical reagent generation system. **W. Mitch**, C. Weng, C. Napier, C. Katte, S. Walse
- 5:05 PM** – Comparative analysis of dietary risk assessment models across global regulatory frameworks. **M. Wang**
- 5:30 PM** – Hazard versus risk: Comparative analysis of global food safety assessment approaches. **M. Charles**
- 5:55 PM** – Closing remarks.

### Surrogates and Extrapolation Among Species in Arthropodan Pollinator Exposure and Effects Assessment

R. Prather, T. Steeger, K. White, *Organizers*  
J. R. Purdy, *Presiding*

*Walter E. Washington Convention Center Hall E – Room 13*

- 2:00 PM** – Opening remarks.
- 2:05 PM** – Use of quantitative weight of evidence as a tool for assessing risks of pesticides to pollinators. **K. Solomon**, J. Giesy, J.R. Purdy
- 2:30 PM** – Global nectar and pollen pesticide residue database with a user interface tool for calculating residue per unit dose for different pesticide application methods. L. Brewer, B. Warren-Hicks, S. Hinarejos, M. Feken, T. Joseph, B. O'Neill, D. Catanzaro, **A. Krueger**, T. Fredricks
- 2:55 PM** – Investigating potentially higher exposure scenarios for non-Apis pollinators: Case studies with *Megachile* and *Bombus*. **S. Knäbe**, O. Klein, J. Fricke, A. Kling
- 3:20 PM** – Panel discussion.
- 3:45 PM** – Intermission.
- 4:15 PM** – Evaluating the painted lady butterfly (*Vanessa cardui*) as a model and surrogate species for non-target lepidopteran pollinators in pesticide toxicity studies. **C. Sieg**, F. Green, E. Peterson, M. Vaugeois, P. Smith
- 4:40 PM** – Assessing surrogacy options for listed Lepidoptera: A trait-based approach. P. Glaum, M. Roberts, **E. Peterson**, M. Vaugeois
- 5:05 PM** – Challenge of selecting surrogate species for hymenopteran pollinator risk assessment. **J.R. Purdy**
- 5:30 PM** – Panel discussion.
- 5:55 PM** – Closing remarks.

### Environmental Fate, Transport, and Modeling of Agriculturally Related Chemicals

R. Bhandari, S. Hafner, R. Warren, S. Whiting, *Organizers*,  
*Presiding*

*Walter E. Washington Convention Center Hall E – Room 14*

- 2:00 PM** – Introductory remarks.
- 2:05 PM** – Cross-validation of flux estimates: Evaluating AERMOD, IHF, and AD models in pesticide vapor exposure assessments. **M. Propato**, J. Dunne, N. Pai
- 2:30 PM** – Agrochemicals: Soil fumigation flux studies for registration and determination of emissions. **R. Sullivan**
- 2:55 PM** – Refinement of AgDRIFT ground spray models using contemporary field deposition studies. **M. Winchell**, S. Castro-Tanzi, A. Rice, C. Hassinger, N. Pai, P.L. Havens, M. Ledson, R. Haynie
- 3:20 PM** – Evaluating off target movement of several different dicamba herbicide uses. **S. Whiting**, D.G. Dyer, N. Pai, L. Schuler, W. Griese, A. Olmstead, R.J. Ripperger
- 3:45 PM** – Intermission.
- 4:15 PM** – Non-target identification of organic contaminants in biosolid-amended soils across the United States. **N. Hamdan**, C. Prasse
- 4:40 PM** – Uptake and metabolism of wastewater-derived psychoactive pharmaceuticals in edible crop plants. **D. Sanchez**, C. Prasse
- 5:05 PM** – Prediction and evaluation of phorate and terbufos uptake in crops using DGT. **W. Jeong**
- 5:30 PM** – Green solutions: Insights into pesticide degradation on grass versus bare soil. **S. Whiting**
- 5:55 PM** – Closing remarks.

### AGRO International Award for Research in Agrochemicals: Symposium in Honor of Dr. Thomas P. Selby

Cosponsored by ORGN

S. Hsieh, T. M. Stevenson, *Organizers*, *Presiding*

*Walter E. Washington Convention Center – Room 143C*

- 2:00 PM** – Introductory remarks.
- 2:05 PM** – Naphthalene bioisosteric replacements for broadleaf weed and grass control in corn and soybeans. **E. Marshall**, R. DeBergh, A. DeAngelis, B. Kamireddy
- 2:30 PM** – Development of a commercial synthesis process for the novel Dodhylex™ active herbicide. C. Hoffmann, **R.M. Corbett**, J. Hong, J. Hicks, L. Tran, W. Palmer, J. Riley
- 2:55 PM** – Fenmezoditiaz: Challenges and solutions during process development, part 2. **C. Koradin**
- 3:20 PM** – Design and synthesis of fused heterocyclic isoxazolines for crop protection utility. M. Xu, G.P. Lahm, **A. DeAngelis**, R. Slack, J.K. Long, T.A. Briddell, J. Alvarez, L. Wu, D. Nabb
- 3:45 PM** – Intermission.
- 4:15 PM** – Synthesis and fungicidal activity of novel 2,4-diaminoquinazolines as dihydrofolate reductase inhibitors. **B. Sam**, V. Chikwana, W.H. Dent, J. Herrick, M. Parker, N. Wang, W. Wang, C. Yao
- 4:40 PM** – 5-sulfonyl thiadiazoles and the derivatives for Asian soybean rust control. D. Akwaboah, J. Berezna, Z. Feng, **S. Hsieh**, A. Trivellas, D.A. Yuhas

**5:05 PM** – Fighting fungal resistance with novel photodynamic fungicide conjugates. **A. Nunez Bendinelli**, B. Koenig, S. Nonell, K. Plaetzer

**5:30 PM** – Concluding remarks.

## JOINT PROGRAMMING

### AGFD

#### **Agricultural Transformations with AI and ML: Collaboration, Innovation, and Data-Driven Insights**

A. Barlow, R. J. Bienstock, Organizers

W. O'Sullivan, L. Riter, Organizers, Presiding

*Walter E. Washington Convention Center – East Salon C*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Leveraging AI-driven imputation for agrochemical design and development. **L.A. Christianson**, E. Hoffmann, M. Holmes, **T. Mansley**, B. Montefiore, M.D. Segall, R. Slack

**2:30 PM** – Enhancing drug design with Uni-QSAR: A multi-dimensional feature fusion solution. **Y. Cui**, X. Ji, Z. Gao

**2:55 PM** – Development and application of in-silico models for prediction of Dislodgeable Foliar Residue (DFR) in plant protection products. **E. Chikwana**

**3:20 PM** – Intermission.

**3:50 PM** – Mapping soil carbon in the US with machine learning. **H. Rubin**

**4:15 PM** – Machine learning model for predicting new plant cell-penetrating peptides. **A. Yadav**, H.J. Squire, M. Landry, L. Vukovic

**4:40 PM** – Integrating machine learning and molecular modeling to design and optimize PROTAC protein degraders as agrochemicals. **D. Furches**

**5:05 PM** – Panel discussion.

**5:30 PM** – Closing remarks.

## WEDNESDAY MORNING

#### **Agricultural Biostimulants: Science and Regulations for Growing Markets**

M. D. David, M. E. Koivunen, Organizers, Presiding

*Walter E. Washington Convention Center – Room 143C*

**8:00 AM** – Introductory remarks.

**8:05 AM** – Terrasym VT, a new microbial biostimulant for specialty crops. **T. Neumann**, A. Phillips, A. Haddox, A. Jack, N. Breakfield, S. Semones

**8:30 AM** – Upstream and downstream development of biostimulative pink pigmented facultative methylotrophic bacteria that enable commercial uses. **J.T. Whitteck**, J. McLane, M.E. Frodyma

**8:55 AM** – Biostimulant amino acid derivatives result in enhancement of photosynthetic and genetic potential in *Zea mays* as elucidated using molecular techniques. **A. Bhargava**, K. Qin, A. Burton

**9:20 AM** – Ecological strategy using biostimulants to improve nitrogen use efficiency across multiple crops. **G. Gillette**

**9:45 AM** – Intermission.

**10:15 AM** – When bio stimulants don't work: Understanding the dependencies of crop nutrition and biostimulant performance. **T. Eyrich**

**10:40 AM** – Biostimulants regulation in the era of de-regulation: Implications and outlook under Trump 47. **K. Warkentien**

**11:05 AM** – Biostimulants from the state regulatory perspective. **E. Thomas**, N. Young

**11:30 AM** – Panel discussion.

**11:55 AM** – Closing remarks.

#### **Identification of Environmental Metabolites: New Trends and Best Practices**

J. Balcer, R. Mumford, Organizers

Y. Adelfinskaya, Organizer, Presiding

*Walter E. Washington Convention Center Hall E – Room 14*

**8:00 AM** – Introductory remarks.

**8:05 AM** – Utilizing modern tools and alternative methods to identify environmental metabolites. J. Balcer, Y. Adelfinskaya, C. Brown, **J.R. Gilbert**, K. Kuppannan, R. Athalye, D. Robbins, J. Bas Concepción, M. Chase, L. Horthy, K. Yang

**8:30 AM** – Can your IM-MS system provide you with residue specific isomerization prior to MS/MS analysis?. **C.M. Crittenden**

**8:55 AM** – Metabolite identification workflow for mammalian toxicity metabolism studies of agrochemical products. **L. Cai**, M.P. Mawn

**9:20 AM** – Utilizing high resolution mass spectrometry and isotope labelling of agrochemicals to aid metabolite identification. **D. Williams**, M. Simmonds, W. Tuffnail

**9:45 AM** – Intermission.

**10:15 AM** – Utilizing New Approach Methodologies (NAMs) for environmental degradation product identification. **C. Zu**, L. Chen, K. Yang, J. McKenna

**10:40** . Assessing transformation products from drinking water treatment: Implementing new regulatory guidance. **B. Ciszewski**, Y. Cooney

**11:05** . Advanced metabolite identification using a novel Q-TOF mass spectrometer and molecule profiler software. **R.J. Arnold**

**11:30** Concluding remarks.

#### **Pesticide Regulation, Global Trade: US Leadership in Food Security**

D. J. Miller, Organizer

A. Gore, H. B. Irrig, J. M. Stewart, C. Tiu, Organizers, Presiding

*Walter E. Washington Convention Center – Room 144A*

**8:00 AM** – introduction.

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## 2025 AGRO Innovation Award

Spencer S. Walse

*Financially sponsored by BASF*

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**8:05 AM** – Chemistry of phytosanitary treatments for future regulatory demands. **S.S. Walse**

**8:55 AM** – Overview of the U.S. Department of Agriculture's (USDA's) Office of Pest Management Policy (OPMP) and OPMP's collaboration with stakeholders, including the U.S. Environmental Protection Agency (EPA). **J. Van Alstine**

**9:20 AM** – Navigating the USDA global agricultural trade System (GATS): A practical guide for researchers and analysts. **S. Ahsan**

**9:45 AM** – Intermission.

**10:15 AM** – Updates on assisting specialty crop exports (ASCE). I. Burgoa, E. Johnston, E. Leonardi, L. Malecha, J. Luxenberg, **W. Barney**

**10:40 AM** – Codex standards and global trade. **J. Chao**, M. Maratos Bhat

**11:05 AM** – Overview and update on Codex from the U.S. delegation to the Codex Committee on pesticide residues. **A. Niman**

**11:30 AM** – Overview and update on the FAO/WHO joint meeting on pesticide residues. **A. Leahigh**, M. Doherty

**11:55 AM** – Closing remarks.

#### All Things ESA

H. Chen, C. Hassinger, A. M. Ritter, *Organizers*

C. Priest, *Organizer, Presiding*

*Walter E. Washington Convention Center – Room 142*

**8:00 AM** – Introductory remarks.

**8:05 AM** – What's all the chatter about core maps?. **C. Priest**, G. Hoogeweg

**8:30 AM** – Core map development for ESA-listed species: Implications for pesticide evaluations and mitigation. **D. Campana**, A. Frank, C. Hassinger

**8:55 AM** – Development of pesticide use limitation areas (PULAs) informed by our familiarity with species spatial data in support of carbamate biological opinion development. **D. Christian**

**9:20 AM** – Recent experiences with risk assessment refinements for endangered species and the implementation of mitigation for carbamate insecticides. **M.E. Kern**, C.M. Holmes, D. Christian, J. Cowles, K.S. Henry

**9:45 AM** – Intermission.

**10:15 AM** – Importance of a digital label infrastructure for supporting emerging technologies and site-specific risk assessment. **S. Hovinga**

**10:40 AM** – Terrestrial predator-prey model for potentially bioaccumulative pesticides and rodenticides. **D. Moore**, R. Layton

**11:05 AM** – Conclusion remarks.

#### Protection of Agricultural Productivity, Public Health, and the Environment

K. Brown, *Organizer*

D. Barrett, *Organizer, Presiding*

*Digital Meeting – Digital Session*

**10:00 AM** – Introductory remarks.

**10:05 AM** – Lessons learnt from pesticide monitoring studies in Central European streams. **R.B. Schaefer**

**10:30 AM** – Compound repurposing as a new, effective antifungal development strategy for food crop protection. **J.H. Kim**, K.L. Chan, D. Ford

**10:55 AM** – Withdrawn

**11:20 AM** – AAFC – PMC regulatory experimentation to compare pesticide residues and spray deposits after applications from Remotely Piloted Aerial Application Systems (RPAAS) vs conventional application methods. **M. Trudeau**

**11:45 AM** – USDA- Agricultural Research Service support of sanitary-phytosanitary (SPS) chemistries. **S.S. Walse**, W.A. Hall

**12:10 PM** – Nano-innovative materials for food security and socioeconomic development. **S. Adewuyi**

**12:35 PM** – Closing remarks.

#### JOINT PROGRAMING

##### Accelerating Discovery & Development in the Agricultural & Pharmaceutical Sciences via Innovations in Organic Synthesis

Cosponsored by AGRO, ORGN, and MEDI

F. Li, P. Mukherjee, *Organizers*

C. B. Kelly, *Organizer, Presiding*

*Walter E. Washington Convention Center – East Salon A*

**8:00 AM** – Welcome.

**8:05 AM** – Choose your own adventures in metal-hydride catalysis. **V.M. Dong**

**8:50 AM** – Unlocking high FSP3 scaffolds: Accelerating drug discovery via harnessing industry-academia collaborations. **R. Merchant**

**9:25 AM** – Organic synthesis serving the discovery of crop protection products: Discovery of picolinamide fungicides. **K. Bravo-Altamirano**, Z. Buchan, R. Heemstra, D.M. Jones, F. Li, B. Loy, K.G. Meyer, B.M. Nugent, B. Sam, J. Wilmot, C. Yao

**10:00 AM** – Break.

**10:15 AM** – Enabling innovation through academic collaborations. **M. Schmidt**

**10:50 AM** – Fluorine introduction for fine physico-chemical tuning of Medchem relevant compounds. **D. Volochnyuk**, A. Chernykh, K. Melnykov, O. Grygorenko, **S. Ryabukhin**

**11:25 AM** – Small molecules, big impact: Navigating synthetic complexity in ligand efficient space. **D.A. Rankic**

#### JOINT PROGRAMING

##### Sustainable Agriceuticals

H. Kim, Y. Wu, W. H. Yokoyama, Y. Zhang, *Organizers*

L. Liu, *Organizer, Presiding*

*Walter E. Washington Convention Center – Room 143B*

**8:00 AM** – Introduction remarks.

**8:05 AM** – In vitro study on correlation between dietary fiber and gut microbiome. S. Das, C. Fletcher, **Y. Wu**

**8:30 AM** – Probiotic-driven mitochondrial biogenesis enhances longevity in *Caenorhabditis elegans*. **P. Li**

**8:55 AM** – Triple activation of germinated seeds diversifies protein breakdown. **I. Bera**, R. Fernandez-Diaz, M. O'Sullivan, J. Jacquier, C. Scaife, G. Litovskich, K. Wynne, D. Shields

**9:20 AM** – Precise horticulture, superfruits, superfoods, and four generations of STEM in agriculture advocates. E.E. Cable, S. Lahoff, R. Buzzetto-More, T. Addison, W.L. Weaver, A.G. Ristvey, **V. Volkis**

**9:45 AM** – Intermission.

**9:55 AM** – Electrospun biomimetic periosteum promotes diabetic bone defect regeneration through regulating macrophage polarization and sequential drug release. **X. Shi**, J. Yang, Y. Zhuang

**10:20 AM** – Faecalibacterium prausnitzii promotes LCA derivatives enterohepatic circulation to alleviate colonic inflammation. **M. Yao**, B. Qiu, L. Li

10:45 AM – Valorisation of organic acids recovered from cranberry juice deacidification as natural sanitizer for fresh-cut lettuce preservation within a circular economy strategy. **R. Canuel**, L. Bazinet

## WEDNESDAY AFTERNOON

### AGRO POSTER SESSION – Part 2

Walter E. Washington Convention Center Hall C

12:00 PM – 2:00 PM

\*\*\* Student Travel Award Winner

#### Agrochemicals Residue Analytical and Radiolabeled Metabolism Studies: From Regulation to Execution

D. Delinsky, P. Dubey, S. Perez, M. Saha, *Organizers*

Crop metabolism to crop trials: Why conduct radiovalidation?. **S. Brewin**, R. Unsworth

Residue levels of metconazole in welsh onions following various cooking methods. **J. Im**, M. Cho, M. Kim, C. Seo, P. Changhyeon, D. Lee, E. Seo, M. Im

Monitoring and risk assessment of pesticide residues in seafood using GC and LC-MS/MS. **P. Changhyeon**, M. Cho, M. Kim, J. Im, C. Seo, D. Lee, E. Seo, M. Im

Multimode inlet injection decreases limits of detection of pesticide residues in gas chromatography-tandem mass spectrometry. **X. Yuan**, Z. Hoi Lam, K.A. Axelbank, J. Chen, Q.X. Li

Modified QuEChERS approach for pesticide residue analysis in edible insects. **H. Noh**, C. Kim, S. Kim, H. Eun, Y. Shin, W. Jeong

#### Protection of Agricultural Productivity, Public Health, and the Environment

M. Ma, *Organizer*

Colorant: The most active inert ingredient in agrochemicals. **V. Shing**

\*\*\* Sustainable soil management: The role of biochar-manure blends in mitigating greenhouse gas emissions and enhancing soil fertility. **D. Guthrie**, L. Carson, A. Shembo, A. Geremew, G. James

Using new approach methods in weight of evidence, now and in the future. **K. Morris-Schaffer**, A. Pecquet, K. Solomon, E. Freeman, A. Goetz-Bouchard

Exploiting historical herbicide evaluation datasets for new insights about weeds and their management in crops. **M. Williams**, C. Landau, J. Khan, A. Hager

Machine learning enabled microneedle-based colorimetric pH sensing patch for meat spoilage detection and wound health monitoring. **S. Kadian**, R. Narayan

Mechanistic insights into how surface coating on nanoparticles affects their fertilization effect on plant growth. **Y. Wang**, C. Deng, L. Zhao, C. Dimkpa, W. Elmer, S. Sharma, Z. Wang, O. Dhankher, B. Xing, J.C. White

\*\*\* Effect of steel slag on plant growth parameters of field crop using artificial soil. **M. Singh**, A. Singh, R. Kumar, S. Pachauri, V. Bora

Improving crop yield through soil microbiome engineering: A sustainable approach for agriculture. **T.M. Woldegebriel**

Data-driven modeling of forward osmosis for the sustainable processing of agricultural resources and bioactive compound recovery. **H. Park**

Recent progress in MIP-based electrochemiluminescence and surface plasmon resonance sensors for food safety. **A. Soubramaniam**

Sustainable and environment friendly approach for high phytocompound recovery from ethnomedicinal plant *E. fluctuans* L.. **P. Prabhakar**, A. Kumar, D. Verma, M. Banerjee

Evaluation of antineurodegenerative properties of coffee pulp procyanidins. **M.B. Bamikale**

Dextrose-conjugated plant-protein 2D scaffolds for improved cultivated meat applications. **J. Zou**, I. Choi, N. Nitin

Structure-function characterization of sustainably extracted protein isolates from Canadian dry beans. **M. Bane**, C. Erkinbaev, N. Bandara

Optimizing air classification conditions for lentil protein concentrates for functionality improvement. **S. Attygale**, N. Bandara

Micro-thermography technology as a tool to improve frozen food quality. L. Polinsky, **R. Drori**

Biocontrol of aflatoxigenic moulds in maize using lactic acid bacteria-based formulations. **I. Ilboudo**

Utilizing acid whey retentate as an efficient fat replacer in fat-free cream cheese. D.A. Limit, D. Chen, **S. Ghosh**

Harnessing multiple-enzyme potential in mango peel-adapted microbial fermentation for sustainable glycosidase production. **J. Dzikunoo**, F. Offei, N. Affrifah, W. Dorleku, E.J. Blessie, F.k. Saalia

FTIR Spectral Analysis of plant proteins and correlation with functional properties. **J. Patel**, Z. Gao, L. He

Harnessing pressure-tunable properties of liquid propane for extraction of corn kernel oil. **P. Kothinti**, A.M. Allgeier, T.P. Binder, B. Subramaniam, K.V. Camarda

Effect of water content on structure and functionality of fava bean proteins extracted by choline chloride and glycerol-based deep eutectic solvent system. **N. Bandara**, A. Hewage, R. Aluko, M. Aliani

Bioinspired surfaces with anti-microbial properties for sustainable crop protection. **H. Abu Hamad**, E. Prudnikov, N. Ben-Arie, I. Polishchuk, E. Segal, B. Pokroy

#### Unmanned Aerial Systems (aka Drones): Pesticide Spraying and Other Agricultural Applications

U. Antuniassi, R. Breckels, F. Donaldson, Z. Tang, *Organizers*

Minimum plot for UAS Sprayer: Flow accuracy vs. area size. **R.L. Panini**, M.P. Da Silva, M.M. Zambrano, M.N. Nishikawa, H.R. Lemos, L.F. Dudek, A.F. Rufino Tamara, V.P. Trevisan, G.M. Franco, I.S. Lopes

\*\*\* Evaluating machine learning guided spray drone applications in different crop productions. **N. Singh**, B. Gurjar, U. Torres, M. Bagavathiannan

Unmanned aerial pesticide application systems task force: Analysis of drift deposition data from unmanned aerial vehicles (UAVs). **F. Donaldson**, Z. Tang, R.R. Sinha, J. McDonald, J. Davies, R. Barbosa, T. Gullen, F. Carey, S. Hovinga, T. Bui

## JOINT PROGRAMMING

### AGFD

#### Sustainable Agriceuticals

H. Kim, L. Liu, Y. Wu, W. H. Yokoyama, Y. Zhang,  
Organizers

Transcriptomic analysis of hypothalamus-pituitary-ovarian tissues reveals key genes and signaling pathways associated with brooding behavior in Taihe black-boned silky fowls. X. Huang, **Z. Yin, D. Ren**

Development of multifunctional washing solutions for reducing pesticide residuals and postharvest losses in fresh produce. **T. Jin**, G. Wijaya, S. Park, D. Han, T. Yang

Biogenic metallic nanoparticles: Innovative, sustainable solutions for agricultural applications. **R. Lima**, N.B. José, B.B. Migliorini, V.A. Antunes, J.G. Silva, S.d. Santos

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#### Agrochemicals Residue Analytical and Radiolabeled Metabolism Studies: From Regulation to Execution

D. Delinsky, *Organizer*

P. Dubey, S. Perez, M. Saha, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 143C*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Significance of 14C-labeled studies in evaluating true incurred residue extractability in animal tissues. **D. Safarpour**

**2:30 PM** – Stereoisomeric plant protection products and human health risk assessment: Planning and execution. **P. Dubey**, A. Blewett

**2:55 PM** – Release and characterization of unextracted bound residues in plant and animal matrices. **K. Ahn**, A. Bautista, B. Osterman, J. Sun, C. Estrellan, R. Breikaa

**3:20 PM** – Panel discussion.

**3:45 PM** – Intermission.

**4:15 PM** – Overcoming the analytical challenges when supporting fumigation studies and ensuring effective residue analysis across diverse matrices. **S. Brewin**

**4:40 PM** – Considerations and progress in developing multiresidue analysis methods for the residues of postharvest and preplant fumigants. **W.A. Hall**, K. Stiglmeier, A. Guerrero

**5:05 PM** – Quantitation of cyclic dicarboxylic anhydride in rat milk using LC-MS/MS with ion exchange SPE clean-up. **P. Trivedi**, H. Patel, A. Patel, N.A. Khan

**5:30 PM** – Panel discussion.

**5:55 PM** – Concluding remarks.

#### Unmanned Aerial Systems (aka Drones): Pesticide Spraying and Other Agricultural Applications

R. Breckels, *Organizer*

U. Antuniassi, F. Donaldson, Z. Tang, *Organizers, Presiding*

*Walter E. Washington Convention Center Hall E – Room 14*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Overview and update of the unmanned aerial pesticide application system Task Force (UAPASTF). **S. Hovinga**, T. Bui, A. Nestor, R. Willis, R. Layton, H. Portillo, P. Turner, L. Garcia

**2:30 PM** – Unmanned aerial pesticide application systems Task Force update on off-target movement studies

conducted globally. **F. Donaldson**, Z. Tang, R.R. Sinha, J. McDonald, J. Davies, R. Barbosa, T. Gullen, F. Carey, S. Hovinga, T. Bui

**2:55 PM** – Quality criteria for UASS off target movement. **J. Bonds**, N. Pai

**3:20 PM** – Characterization of the spray distribution of Unmanned Aerial Spray Systems (UASS) and the development of turnkey systems for vector control. **J. Bonds**, B. Fritz, H. Thistle

**3:45 PM** – Intermission.

**4:15 PM** – UAV pattern testing design, methods, data analysis and results from UAV spray drift studies conducted in 2023 and 2024 for the Unmanned Aerial Pesticide Application Systems Task Force (UAPASTF). **T. Dupuis**, B. Brayden, A. Rice, B. Toth

**4:40 PM** – Evolution and challenges of the spraying drone fleet in Brazil: Growth, regulation, and obsolescence. **V. Cornago Junior**, U. Antuniassi, A. Mota, R. Chechetto, F. Carvalho

**5:05 PM** – Evaluation of the droplet spectrum generated in drone applications using a wind tunnel. **U. Antuniassi**, A.A. Barbieri Mota, F. Carvalho, R. Chechetto

**5:30 PM** – Comparison between the droplet spectrum reported by the drone controller and results obtained through wind tunnel evaluations. **A.A. Barbieri Mota**, U. Antuniassi, R. Chechetto, F. Carvalho

**5:55 PM** – Concluding remarks.

#### Pesticide Regulation, Global Trade: US Leadership in Food Security

D. J. Miller, *Organizer*

A. Gore, H. B. Irrig, J. M. Stewart, C. Tiu, *Organizers, Presiding*

*Walter E. Washington Convention Center – Room 144A*

**2:00 PM** – Introduction remarks.

**2:05 PM** – Crop grouping systems, extrapolation, and enhancements. **W. Barney**

**2:30 PM** – Impact of American risk-based, data-driven agrochemical policy on global food security. **K. Doddakula**

**2:55 PM** – Chemical residue issues for straw and hay exports. **J. Szczepanski**

**3:20 PM** – Approach to cumulative risk in EPA's pesticide human health risk. **J. Camp**

**3:45 PM** – Intermission.

**4:15 PM** – Envisioning efficiency: How digital tools can streamline regulatory processes. **E. Urbanczyk-Wochniak**, T. Ruts, C.J. Kuester, L. Riter

**4:40 PM** – Predictive residue models: Optimizing pesticide use for compliance with international food standards. **J. Barnekow**, P. Geurs, C. Wake

**5:05 PM** – Panel discussion.

**5:30 PM** – Closing remarks.

## JOINT PROGRAMMING

### ORGN

#### Accelerating Discovery & Development in the Agricultural & Pharmaceutical Sciences via Innovations in Organic Synthesis

Cosponsored by AGRO<sup>†</sup> and MEDI

C. B. Kelly, Organizer

F. Li, P. Mukherjee, Organizers, Presiding

*Walter E. Washington Convention Center - East Salon A*

**2:00 PM** – Welcome.

**2:05 PM** – Inserting, deleting, and replacing atoms. **M.D. Levin**

**2:50 PM** – Synthesis of complex heterocycles to discover a novel treatment for heart failure. **J. Curto**

**3:25 PM** – Bicyclic scaffold-containing novel compounds for the control of hemipteran pests. **A. DeAngelis**, J. Hamm, G.P. Lahm, D. Cordova, L. Wu, D. Nabb, Z. Feng

**4:00 PM** – Break.

**4:15 PM** – Enabling late-stage functionalization of peptides through innovation in small molecule reactivity. **R. Padilla-Salinas**

**4:50 PM** – Designing and developing scalable processes to crop protection active ingredients from renewable feedstocks. **N.R. Babji**

**5:25 PM** – Sustainability in process chemistry at BASF Agricultural Solutions. **C. Koradin**

## JOINT PROGRAMING

### AGFD

#### Advances in Food Technology for a Sustainable Future

A. Rulka, Organizer, Presiding

Q. Wang, Presiding

*Walter E. Washington Convention Center – East Salon B*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Ultrasonic non-thermal drying as a sustainable solution for preserving plant-based food systems. **H. Feng**, R. Kapoor, A. Malvandi, J. Liu, V. Mundada

**2:30 PM** – Chitin nanofibers derived from deep eutectic solvent extraction and ammonium persulfate oxidation as a seed nanoprimer agent for microgreen growth enhancement. H. Zhu, **Z. Xiao**, Y. Luo

**2:55 PM** – Complementary analysis of chemical and microbial fingerprints for enhanced identification of end of shelf-life in spinach juices. **M. Singh**, X. Liu, V.P. Parreira, O.U. Lawal, M. Zhang, X. Jun, J. Shi, L. Goodridge, M. Corradini

**3:20 PM** – AI-driven 3D food printing with food by-products: Advancing sustainability and personalized nutrition. **C. Xu**, R. Huang, G. Zhu

**3:45 PM** – Intermission.

**4:05 PM** – Development of phytochemical-loaded nanocomplexes and active edible coatings for enhancing food safety and strawberry shelf-life. X. Wang, Z. Xiao, **Y. Luo**

**4:30 PM** – Metal-organic frameworks-based advanced active packaging system generating reactive oxygen species and metal ion. **S. Hong**, J. Kim, Y. Kim

**4:55 PM** – Enhanced fruit drying through atmospheric-plasma pretreatment. **Y. Wang**

**5:20 PM** – Innovations in plant protein structuring: enhancing functionality for future food systems. **L. Chen**

**5:45 PM** – Conclusion remarks.

## JOINT PROGRAMING

### AGFD

#### Sustainable Agriceuticals

H. Kim, L. Liu, Y. Wu, Y. Zhang, Organizers

W. H. Yokoyama, Organizer, Presiding

*Walter E. Washington Convention Center – Room 143B*

**2:00 PM** – Introductory remarks.

**2:05 PM** – Green extraction method of xanthenes from mangosteen peels and their bioactivity. **D. Huang**, N. Zhan

**2:30 PM** – Enhancing the nutritional and functional properties of microalgal protein with atmospheric cold plasma. **A. Mirzapour Kouhdasht**, J. Huang

**2:55 PM** – In vitro and ex vivo methods for assessing the effect of agriceuticals on the gut microbiota. **L. Liu**, A. Narrowe, J. Firman, K. Mahalak, J.M. Lemons

**3:20 PM** – Laser-driven sprout enhancement: Boosting growth, bioactive compounds, metabolic and physicochemical properties in broccoli, radish, and kale. **G. Yildiz**, Y. Li, J. Sun, B. Zhou, H. Feng

**3:45 PM** – Intermission.

**3:55 PM** – Withdrawn

**4:20 PM** – Nanoclays as sustainable carriers for essential oil-based biopesticides: Balancing efficacy and phytotoxicity. **H. Abu Hamad**, O. Prinz Setter, S. Sharma, M. Atias, E. Segal

**4:45 PM** – Harnessing zinc oxide nanoparticles for PFOS mitigation in agricultural soils: A nano-phytoremediation approach integrating alfalfa physiology, soil chemistry, and microbial community shifts. **Y. Mohammadi**

**5:10 PM** – Design and manufacturing of nano-NPK: A smart fertilizer for modern agriculture. **A. Ghosh**, S. Ranjan

## COSPONSORED PROGRAMMING

### AGFD

#### Using Artificial Intelligence to Improve Agriculture and Food Systems

Sponsored by AGFD, Cosponsored by AGRO

### ANYL

#### A Diverse Path to Success in Analytical Chemistry

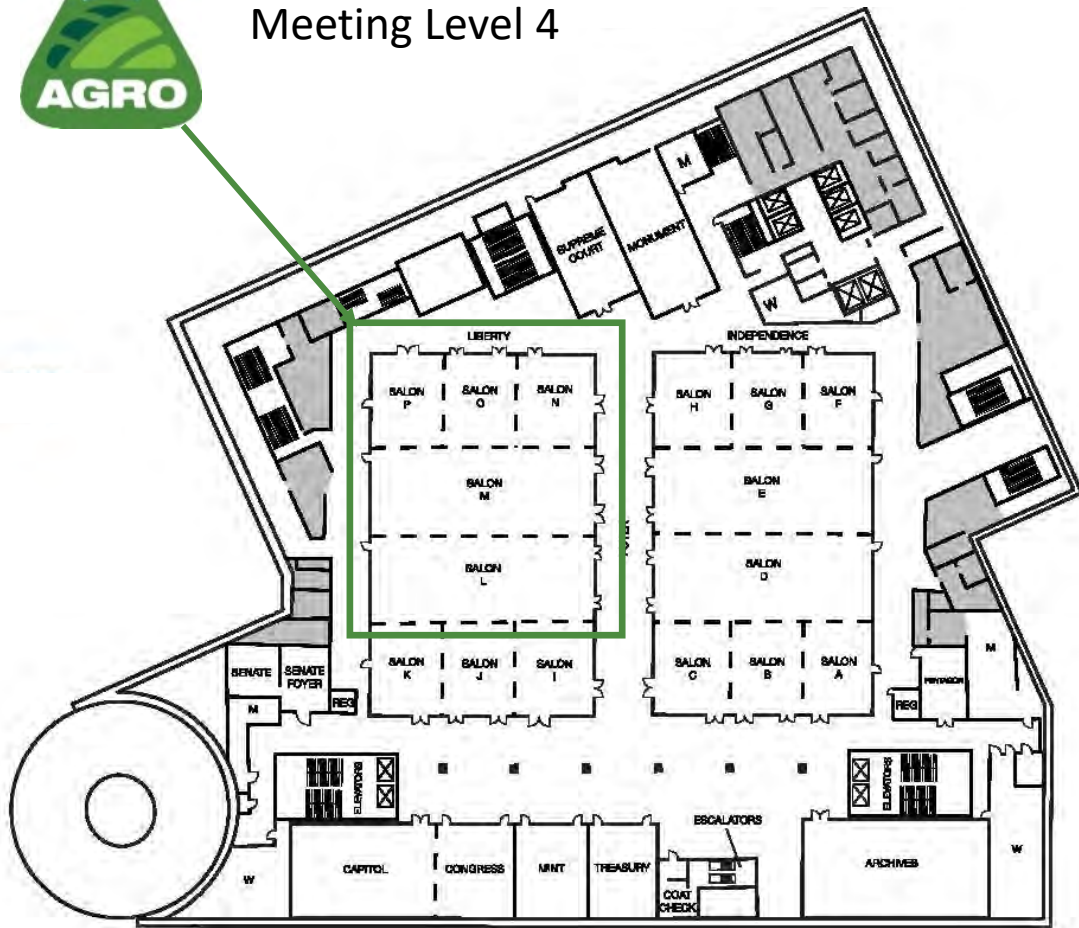
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# **NOTES**



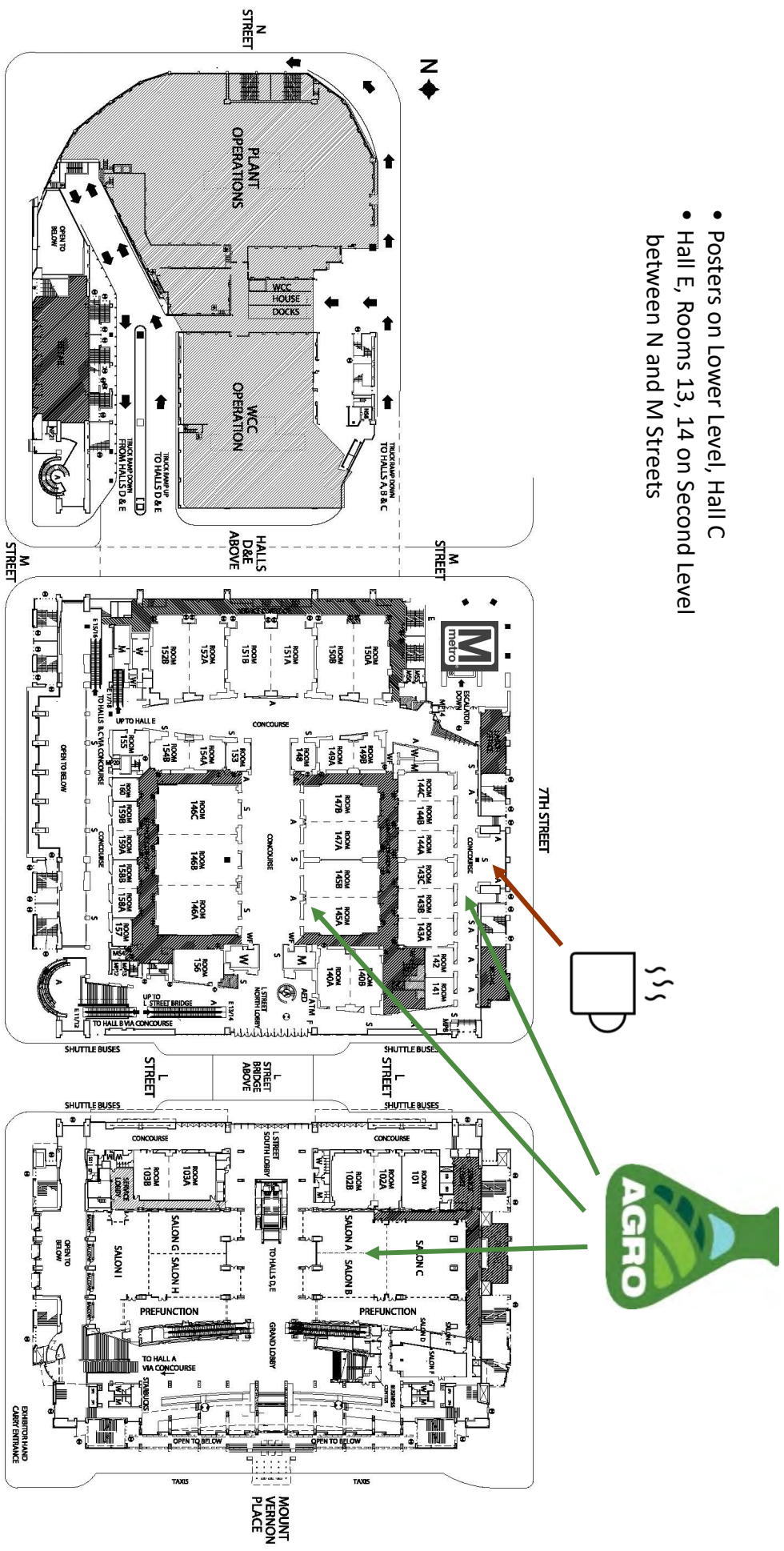


# Marriott Marquis Meeting Level 4



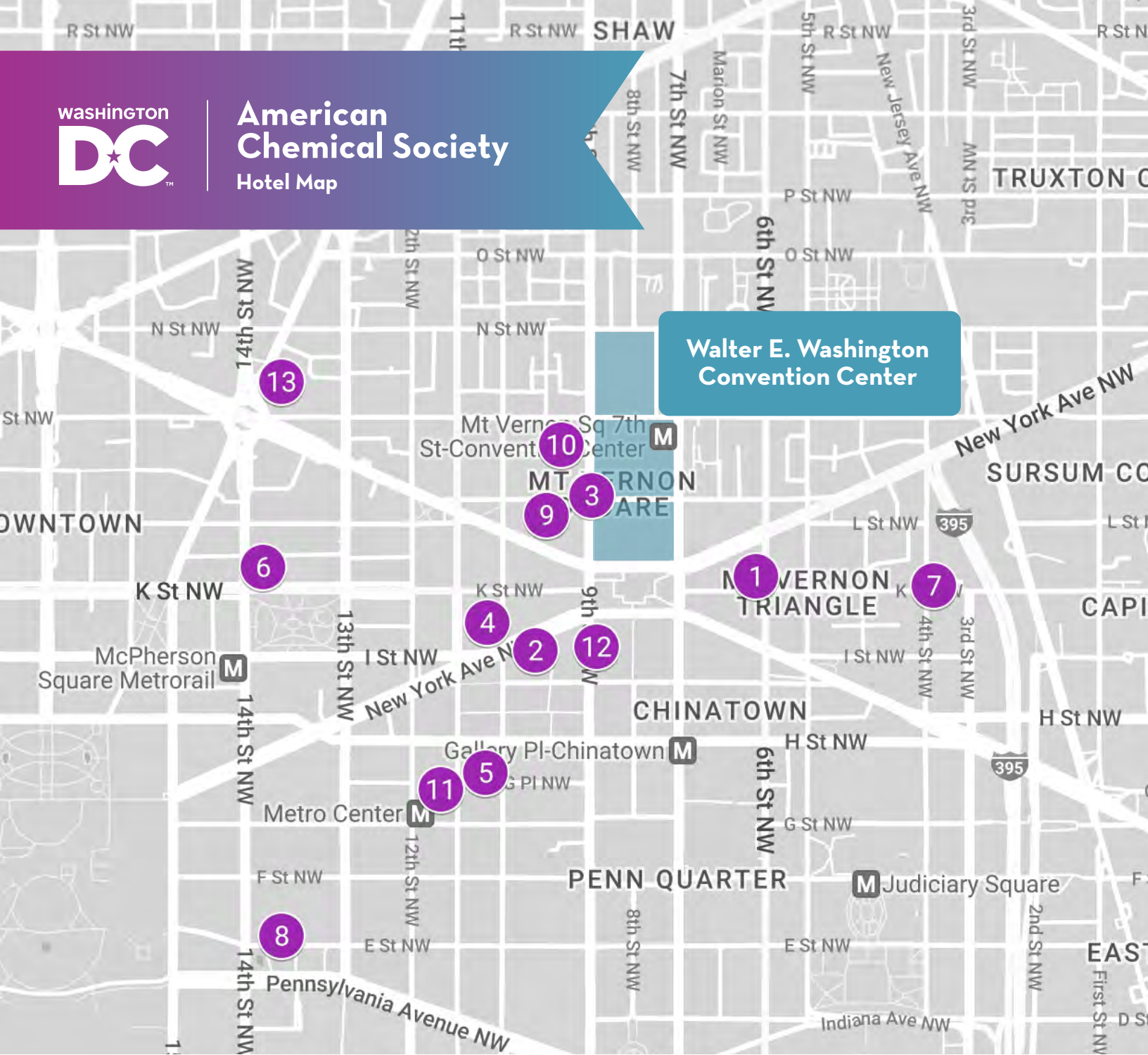
# Washington Convention Center Street Level

- Posters on Lower Level, Hall C
- Hall E, Rooms 13, 14 on Second Level
- between N and M Streets





# American Chemical Society Hotel Map



Walter E. Washington  
Convention Center

- 1. AC Hotel Washington, D.C. Convention Center**  
601 K Street NW
- 2. Conrad Washington, D.C. Downtown, an IHG Hotel**  
950 New York Avenue NW
- 3. Courtyard Washington Downtown Convention Center**  
901 L Street NW
- 4. Embassy Suites Washington, D.C. Convention Center**  
900 10th Street NW
- 5. Grand Hyatt Washington**  
1000 H Street NW
- 6. Hamilton Hotel Washington, D.C.**  
1001 14th Street NW
- 7. Holiday Inn Express Washington, D.C. Downtown, an IHG Hotel**  
317 K St NW
- 8. JW Marriott Washington, D.C.**  
1331 Pennsylvania Avenue NW
- 9. Marriott Marquis Washington, D.C. Governance Hotel**  
901 Massachusetts Avenue NW
- 10. Residence Inn Washington Downtown Convention Center**  
901 L Street NW
- 11. Washington Marriott at Metro Center**  
775 12th Street NW
- 12. Westin Washington, D.C. Downtown**  
999 9th Street NW
- 13. Washington Plaza Hotel**  
10 Thomas Circle NW

# PICOGRAM v. 106

*With Program*



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