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FALL 2022 HYBRID MEETING AND EXPO
Chicago, Illinois, USA
Sustainability in a Changing World

August 21 - 25, 2022
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From the Chair’s Desk
Qing X. Li

Aloha!

Welcome to the
ACS Fall 2022 National Meeting and Exposition
Chicago, Illinois
August 21 – 25, 2022
Sustainability in a Changing World

The Fall 2022 meeting will be hybrid meeting which allows us to meet in person as well as online. Our Program Chair, Heidi Irrig, has creatively shaped the AGRO Program in the new ACS hybrid platform. We have more than 20 symposia that cover a wide range of innovative and timely topics with agrochemical relevance. The ACS Multidisciplinary Program Planning Group (MPPG) has financially co-sponsored five AGRO symposia that have been identified as aligned with the MPPG theme Sustainability in a Changing World. The technical program along with registration details can be found on the ACS website. Please visit: https://www.acs.org/content/acs/en/meetings/acs-meetings

AGRO Awards and AGRO Co-sponsored Awards. A big thank you to all our award sponsors! As the AGRO awards committee chair and the AGRO Division Chair, I thank the 2022 Awards Committee members for their selections of the award recipients and all the nominators for their nominations. My thanks also go to Sharon Schneider, Awards Committee Liaison, and Jeanette Van Emon, Awards Committee Vice Chair, for their help along the selection process.

We are pleased to announce that Yelena Sapozhnikova is our newest AGRO Fellow. The 2022 award winners who will be recognized and will be presenting at the Chicago meeting.

• International Award for Research in Agrochemicals – Jeffrey G. Scott, sponsored by Corteva
• AGRO Award for Innovation in Chemistry of Agriculture – Joel R. Coats, sponsored by BASF
• Sterling Hendricks Memorial Lectureship Award – Stephen O. Duke, sponsored by USDA
• Kenneth A. Spencer Award – H. N. Cheng, sponsored by ACS Kansas City Section
• AGRO JAFCArticle of the Year Award – Song Yang and Cai-Guang Song
• AGFD JAFCArticle of the Year Award – Silvio Uhlig

Congratulations to all our awardees. Nominations for 2024 International and 2023 Innovation Awards and cosponsored awards are being sought. Award details can be found at https://www.agrodiv.org/awards/

2022 ACS Kathryn C. Hach Award for Entrepreneurial Success. Pamela G. Marrone is the winner of the 2022 Kathryn C. Hach Award for Entrepreneurial Success which is sponsored by the Kathryn C. Hach Award Fund. The award recognizes outstanding entrepreneurs who have created a commercially viable business within the chemical enterprise. There are many ACS national awards, and we need to nominate AGRO members for ACS national awards. ACS will begin accepting nominations for the 2024 ACS National Awards in July 2022. Please visit: https://www.acs.org/content/acs/en/funding/awards/national.html

2022 ACS Fellows from AGRO. This year three AGRO members will receive the ACS Fellow Award: Diana Aga, Kevin L. Armbrust, and Allan S. Felsot. Each year we can submit up to four nominations each year. Although nominations must be sponsored/signed off by the Division Chair, they can be championed by other members. We have a number of very worthy candidates among us who have contributed to the field of chemistry and to ACS. I encourage our membership to consider nominating a fellow member early next year. Please contact our incoming chair, Heidi Irrig (heidi.irrig@syngenta.com).

Early Career Opportunities, New Investigator Finalists, and Student Awards. Congratulations to Cera Fisher, Ellis Johnson, and Anais Le Mauff who are the 2022 AGRO New Investigator Award finalists (see p. 33). Each will present in a symposium of their choice. Thank you, Sasha Kweskin for leading these efforts.

Congratulations to the seven awardees of the student travel awards (p. 35). Winners of the poster competition will be announced at the AGRO Awards Social on Wednesday at 6:00 PM – 8:00 PM EST. Thank you to Aaron Gross and Sara Whiting for co-chairing this committee for 2022.

Early career symposia will be part of the program. Special thanks to Kalumbu Malekani for mentoring the Early Career Scientist Symposia. Please take some time to attend the student and early career talks and posters at the fall meeting. Finally, please note that students and post-docs will have a special luncheon on Monday. Reservations are required; please contact Sara Whiting (sara.whiting@bayer.com). Thank you Sara for organizing this event.

Congratulations to all award winners!

Please join the celebrations at the AGRO Awards Social on Wednesday at 6 PM – 8 PM.
Sunday Evening Activity – Grow with AGRO. Our annual AGRO Combined Governance meeting on Sunday will be rescheduled for early fall will be held online. Please watch your AGRO email. This meeting will be replaced with a meet-and-greet gathering event, Grow with AGRO, for members to get together to catch up and potential new members to learn more about us. Hors d’oeuvres, cash bar, and cool SWAG will be available. Officers and each Committee will present an overview of their roles and duties. Please join the event to learn more about AGRO and become engaged. The meet-and-greet gathering event will be on Sunday from 6:00 to 9:00 PM.

Tuesday Evening Activity – Blues & Brews. Be sure to attend the Blues & Brews idea generation session for the San Francisco Fall meeting. The theme of the San Francisco meeting is *Harnessing the Power of Data* which has me thinking of many wonderful science topics to be explored and presented. Plan to join the fun of a face-to-face live brainstorming forum at the Chicago meeting. The drinks are free but bring your ideas. There is no need to wait until Blues and Brews if you have a great idea! If you have any ideas for future programming, please contact Aaron Gross (adgross@vt.edu) directly.

AGRO at the 265th ACS 2023 Spring National Meeting and Exposition. A committee led by Aaron Gross and Ken Racke is planning an AGRO program at the 265th ACS Spring National Meeting and Exposition, March 26 – 30, 2023, in Indianapolis, Indiana. Although AGRO does not normally participate in the spring national meeting, we are excited about taking advantage of the Indianapolis location since Indy is an AGRO hub! The theme of ACS 2023 spring meeting is Crossroads of Chemistry. The AGRO division will have four symposia, and the calls for papers are described in p. 45.

AGRO 50th and Beyond. The AGRO50 and Beyond celebration was postponed from San Francisco 2020 to San Francisco 2023 fall meeting. The activities are being coordinated by Ken Racke, Jeanette Van Emon, James Seiber, and Aaron Gross. The AGRO tour in California is being coordinated by Heidi Irrig and Andrew Coates. Stay tuned for more information on this celebration!

2023 Strategic Planning. Leah Riter and Edmond Norris are taking the lead to coordinate the AGRO strategic planning retreat possibly in conjunction with a national meeting or a separate standalone meeting in Washington, DC.

AGRO Elections. We appreciate the work of the Nominations and Election Committee, Leah Riter (chair), Cheryl Cleveland, and Rodney Bennett for arranging the AGRO annual ballot process this year. We thank all the candidates for their willingness to serve. Each year, AGRO votes in members to the Executive Committee for a three-year term; a Vice-Chair who serves a three-year rotation of Vice-Chair, Program Chair, and Chair; and one-year terms for Secretary and Treasurer. Every three years, we vote for two Councilors and two alternate Councilors who serve three-year terms. AGRO 2022 election closed on June 26, 2022, and the results are:

**2023 Officers**

Vice Chair: James Foster  
Secretary: Sharon Schneider  
Treasurer: Del Koch

**Executive Committee Members (EC)**  
2023 – 2025  
Dena Barrett, Kalumbu Malekani, Natalia Peranginangin, Daniel Swale, Ralph Warren

*Congratulations to all!*

AGRO holds annual elections, so if you are interested in running for an office or the EC in 2023, please contact me (qingly@hawaii.edu), as I will be leading the Nominating and Election Committee and will take nominations for our annual elections – available positions will include the Executive Committee, Vice Chair, Secretary, Treasurer, Councilors, and Alternate Councilors. All positions are always in need of good candidates.

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

Maintenance of our membership email records can be challenging. Members can help by ensuring their ACS account profiles are up to date. **If you have had a change in the last year, or if your ACS profile is out of date, please contact ACS member services to update emails** (service@acs.org). By updating the email through member Services, the change of email will be changed as part of the permanent member record. Also drop Pat Havens (pat.havens@corteva.com) an note as he maintains the database for the email newsletter.

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AGRO AWARDS COMMITTEE REPORT
Qing X. Li, Chair

SENIOR AWARDS. Jeffrey G. Scott, Professor, Department of Entomology, Cornell University, is the recipient of the 2022 International Award for Research in Agrochemicals. Jeffrey will receive this award for development of cutting-edge technologies in insecticide resistance which will be presented at a symposium organized by John M. Clark and Ke Dong at the 264th National ACS Meeting in Chicago on Monday, August 22, at 8:00 AM CDT. Thomas M. Stevenson, a Corporate Research Fellow at FMC Corporation, is the recipient of the 2023 ACS International Award for Research in Agrochemicals. He will be recognized for his contribution to the commercialization of multiple ground-breaking products that work through new biochemical modes-of-action which include the fungicide famoxadone and the insecticides indoxacarb, chlorantraniliprole, and cyantraniliprole. Kathleen Shelton and Seva Rostovtsev will organize a symposium in Tom’s honor at the 266th National ACS Meeting in August 2023 in San Francisco. We thank Corteva Agriscience for their sponsorship.

Joel R. Coats is the winner of the 2022 AGRO Award for Innovation in Chemistry of Agriculture. Joel is recognized for his exemplary contributions to developing safe and effective natural insecticides. His award will be presented on Monday, August 22, at 2 PM CDT. We thank BASF for the sponsorship.

Stephen O. Duke is the winner of the 2022 USDA-ARS Sterling Hendricks Memorial Lectureship Award, which this year is hosted by AGRO and co-sponsored by AGFD on Tuesday at 10:50 AM CDT. Steve is a former ARS scientist and is currently part of the University of Mississippi, Oxford. He is recognized for his basic and applied research concerning natural products as sources of pesticides and for the biochemical and physiological modes of action of and resistance to herbicides. H.N. Cheng, the immediate past ACS National President and an ARS Research Scientist, is the recipient of the 2022 Kenneth A. Spencer Award, which is sponsored by the Kansas City Section. He will present his lectureship on Monday at 4:55 PM CDT, which is hosted by AGFD and co-sponsored by AGRO.

The Journal of Agricultural and Food Chemistry (JAFC) and the AGRO and AGFD Divisions sponsor two lectureships for outstanding papers published in JAFC the previous year. The 2022 winners for the AGRO paper are Teng Yang, Tao Zhang, Xiang Zhou, Pengyu Wang, Jiahua Gan, Baoan Song, Song Yang, and Cai-Guang Yang, while the winners for the AGFD paper are Silvio Uhlig, Oscar Daniel Rangel-Huerta, Hege H. Divon, Elin Rolén, Kari Pauchon, Mark W. Sumarah, Trude Vrãlstad, and Justin B. Renaud. Song Yang will present his lecture on Wednesday at 8:00 AM CDT and Silvio on Tuesday at 2:00 PM CDT.

Pamela G. Marrone of Marrone Bio Innovations is the winner of the 2022 Kathryn C. Hach Award for Entrepreneurial Success award, which recognizes outstanding entrepreneurs who have created a commercially viable business within the chemical enterprise. Pamela will give her award address in the AGRO symposium on Wednesday at 8:55 AM CDT.

FELLOWS. This year we congratulate Yelena Sapozhnikova as our newly elected AGRO Fellow. We also congratulate Diana Aga, Kevin L. Armbrust, and Allan S. Felsot as AGRO’s newest ACS Fellows. Many thanks to all who nominated our outstanding AGRO members who have worked to make ACS and AGRO supportive places for sharing scientific knowledge and creating imaginative ways to share science with our global community.

NEW SCIENTIST AWARDS. The 2022 finalists for the AGRO New Investigator Award are Cera Fisher (Cornell University, Ithaca, NY, USA), Ellis Johnson (University of Nebraska, Lincoln, NE, USA), and Anais Le Mauff (University of Orléans, Orléans, FR). Each will present in a symposium of their choice (p. 33). The winner will be announced at the AGRO Awards Social on Wednesday at 6:00 PM – 8:00 PM CDT. We thank Syngenta for its sponsorship.

The 2022 AGRO Education Award for Student Travel serves to promote an understanding of the role of chemistry in agriculture. The seven students who will receive this award (p. 35) will present posters at the AGRO Poster Session on Wednesday at 12:00 noon – 2:00 PM CDT and will compete for 1st, 2nd, and 3rd place. Winners will be announced at the AGRO Awards Social on Wednesday at 6:00 PM – 8:00 PM CDT.

Please attend their sessions and support our newest AGRO scientists. We thank Bayer for its sponsorship.

NOMINATIONS ARE BEING SOUGHT. The AGRO Awards Committee is accepting nominations for the 2024 International Award for Research in Agrochemicals and the 2023 AGRO Award for Innovation in Chemistry of Agriculture. Nomination criteria can be found on pages 27 and 28, respectively. Nominations for the 2023 Sterling Hendricks Memorial Lectureship and Kenneth A. Spencer Awards are also being accepted (pp. 29 and 30, respectively).

The AGRO Awards Committee is accepting nominations for the AGRO Division Fellow Award (p. 13). Also consider nominating AGRO members for the ACS Fellow Award. Please note that 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.

The Journal of Agricultural and Food Chemistry (JAFC) and the AGFD and AGRO Divisions are seeking nominations for the JAFc Research Article of the Year Award Lectureship. Two papers will receive awards, one from each division interest, for an outstanding article published in 2022 (either in an issue of JAFC or as soon as publishable) that demonstrate creativity and impact on agricultural and food chemistry as a whole. The call for nominations of papers published in 2022 will be solicited through the JAFC website beginning in late Fall 2022 (p. 31).

2023 New Investigator Award applications are being accepted; requirements can be found on page 36. This award is presented to scientists who have obtained a doctoral degree within the past five years and are actively conducting academic, industrial, consulting, or regulatory studies of interest to AGRO. Applications are currently being accepted (p. xy). The application process for the AGRO Student Travel Awards for 2023 can be found on page 37. AGRO has established an endowment fund for students in collaboration with Bayer US LLC, Crop Science Division to promote an understanding of the role of chemistry in agriculture. Please note these awards will only be awarded at the Fall ACS meeting.

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

Smithers Environmental Fate and Metabolism scientists are chairing symposiums and presenting at the ACS National Meeting. Attend a session below or contact us at infoERS@smithers.com to meet with our team.

Smithers Chaired Symposiums:

Monday, August 22, 8:00 AM - 12:00 PM
Room S501bc - McCormick Place Convention Center

Climate Change and Sustainable Agriculture: Impacts on food security/trade, risk assessment and pesticide fate studies (Early Career Symposium)
Wednesday, August 24, 8:00 AM - 12:00 PM
Room S502b - McCormick Place Convention Center

Smithers Presentations:

The Benefits of Data from Instrumentation with Higher Resolving Power in the Analysis of Some Radiolabeled Test Materials
ID: 3738742 Monday, August 22, 09:20 AM - 09:45 AM
Room S501bc - McCormick Place Convention Center

Assessing the Impact of Soil Characteristics on the Rate of Chemical Degradation under Aerobic Conditions
ID: 3738607 Wednesday, August 24, 11:05 AM - 11:30 AM
Room S502b - McCormick Place Convention Center

Evaluating the effect of application solvent(s) used during a soil metabolism study with [14C]Glyphosate
ID: 3743122 Wednesday, August 24, 11:30 AM - 11:55 AM
Room S502b - McCormick Place Convention Center

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The AGRO Awards Social

Celebrate all the AGRO award winners!

ACS Fellow Award
Diana Aga, Kevin L. Armbrust, Allan S. Felsot
AGRO Fellow Award
Yelena Sapozhnikova
ACS 2022 Kathryn C. Hach Award for Entrepreneurial Success
Pamela G. Marrone
ACS International Award for Research in Agrochemicals
Jeffrey C. Scott
AGRO Award for Innovation in Chemistry of Agriculture
Joel R. Coats
USDA-ARS Sterling Hendricks Lecturer
Stephen O. Duke
ACS Kansas City Division Spencer Award
H. N. Cheng
AGRO Division JAFC Article of the Year
Song Yang, Cai-Guang Yang
AGRO New Investigator Award Finalists
Cera Fisher, Ellis Johnson, Anais Le Mauff
AGRO Education Travel Award Winners

Wednesday, August 24, 6:00 - 8:00 PM Central Daylight Time

ALL AGRO DIVISION MEMBERS, SPEAKERS, AND THEIR GUESTS ARE INVITED TO JOIN US

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ACS FELLOWS AWARDS

For outstanding achievements in and contributions
to science, the profession, and the Society

Presented to Diana Aga, Kevin L. Armbrust, and Allan S. Felsot

Diana Aga, director of the University at Buffalo (UB) RENEW Institute and Henry M. Woodburn Professor of Chemistry in the UB College of Arts and Sciences, has been named a fellow of the American Chemical Society (ACS).

According to the award citation, she is being recognized for encouraging women and underrepresented minority students to pursue careers in environmental and agricultural Chemistry, and for innovative contributions in agrochemical analysis to better understand their ecological and health impacts. She is also being honored for her contributions to the ACS AGRO division, where she has organized a wide variety of student research, learning, and networking activities.

A two-time Fulbright award winner and a past recipient of Germany’s Alexander von Humboldt Research Fellowship, Aga is globally recognized for her work in environmental and analytical chemistry.

She has led the UB RENEW Institute since 2021. This university-wide multidisciplinary research institute focuses on complex energy and environmental issues, as well as the social and economic issues with which they are connected.

A prolific scholar with over 180 refereed papers, Aga also continues to lead a lab in the UB chemistry department that analyzes pollutants in the environment; develops ways to break them down and clean them up; and investigates the chemicals’ impact on humans and wildlife.

Her team’s discoveries have had a far-reaching impact on understanding emerging contaminants such as antimicrobials and other pharmaceuticals; endocrine-disrupting chemicals; engineered nanomaterials; persistent organic pollutants (POPs) such as per- and polyfluoroalkyl substances (PFAS), polybrominated diphenyl ethers (PBDEs), polychlorinated biphenyls (PCBs); and pesticides.

Aga’s career was inspired by changes she witnessed near the village where she grew up in the Philippines. She remembers swimming, playing, and fishing frequently in a river near her home, but as the years went on, the river gradually became darkened with pollution. In an interview in 2021, she noted that her research “is inspired by my desire to prevent the continuous deterioration of our environment as a result of industrialization and population growth.”

Aga is now playing an important role in training the next generation of researchers. She has mentored dozens of undergraduate and graduate students who have gone on to careers in industry, government, and academia. She hopes to expand this work through programming and partnerships at the RENEW Institute that support pathways to STEM for K-12 and university students from underrepresented groups.

Aga joined UB as a faculty member in 2002 after earning a PhD in analytical and environmental chemistry from the University of Kansas and a bachelor’s degree in agricultural chemistry from the University of the Philippines Los Baños.

She is a recipient of the ACS Schoellkopf Medal, the AGRO Fellow Award from the ACS AGRO Division, the Koh Lectureship Award in Science from the Philippine-American Academy of Science and Engineering, and the Menzie Environmental Education Award from the Society of Environmental Toxicology and Chemistry, among other honors.

By Charlotte Hsu, News Content Manager
University of Buffalo

ACS Fellows from the AGRO Division

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<th>Year</th>
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<td>2009</td>
<td>Glenn Fuller</td>
<td>2015</td>
<td>Rodney Bennett</td>
<td>2020</td>
<td>Thomas M. Stevenson</td>
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<td>2010</td>
<td>James N. Seiber</td>
<td>2016</td>
<td>John J. Johnston</td>
<td>2021</td>
<td>Sharon K. Schneider</td>
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<td>2011</td>
<td>John W. Finley</td>
<td>2017</td>
<td>Aldos C. Barefoot</td>
<td>2022</td>
<td>Diana Aga</td>
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<td>N. Bushan Mandava</td>
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<td>Stephen O. Duke</td>
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<td>Kevin L. Armbrust</td>
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<tr>
<td>2012</td>
<td>Jeanette M. Van Emon</td>
<td>2018</td>
<td>Cathleen J. Hapeman</td>
<td>2022</td>
<td>Allan S. Felsot</td>
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<td>2014</td>
<td>Kevin Hicks</td>
<td>2019</td>
<td>Joel R. Coats</td>
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<td>2014</td>
<td>Laura L. McConnell</td>
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<td>Steven J. Lehotay</td>
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<td></td>
<td>Kenneth D. Racke</td>
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<td>Beth A. Lorsbach</td>
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Kevin L. Armbrust is recognized for his service to the society and his leadership to meet diverse student needs and for sustained innovative research concerning chemical fate and ecological effects mechanisms to inform regulatory policy. He is a professor and department chairman and holds the Claiborne Chair of Environmental Chemistry and Toxicology in the Department of Environmental Sciences at Louisiana State University in the College of the Coast and Environment. He co-directs the Center of Excellence in Regulatory Science in Agriculture (CERSA) based out of North Carolina State University and holds adjunct appointments the School of Renewable and Natural Resources at LSU as well as in the College of Science and Engineering at Texas A&M, Corpus Christi.

Kevin has nearly 30 years of experience in organizational leadership and knowledge in the movement, disposition, fate, and toxicity of chemicals in environmental matrices with respect to the regulatory sciences. His career has spanned the crop protection industry, state government, and academia. He received both his B.S. in Environmental Toxicology and his Ph.D. in Agricultural and Environmental Chemistry from the University of California at Davis. He then joined DuPont Agricultural Products where he was responsible for the design, conduct and generation of laboratory and field experiments according to Good Laboratory Practice (GLP) to determine the persistence and fate of pesticides in soil, water, plants, and animals in support of their registration and reregistration.

After a short jaunt as an assistant professor Department of Crop and Soil Sciences at the University of Georgia. Prior to his position in Louisiana, Kevin was the State Chemist for the State of Mississippi, The Director of the State Chemical Laboratory of Mississippi, and an Associate Professor in the Chemistry department at Mississippi State University.

In addition to his administrative and academic responsibilities at LSU, Kevin he leads the Response and Chemical Assessment Team (RCAT) that provides scientific support to NOAA's Emergency Response Division for chemical spill (including oil spill) response. In his regulatory roll in Mississippi, he played a key coordinating roll in the response to the Deepwater Horizon Oil Spill. He has active research on the fate and effects of chemicals in and upon Louisiana watersheds and agricultural systems, wetlands, and coastal areas.

Kevin’s research groups have conducted foundational work on the environmental fate and effects of pharmaceuticals in the early 2000s and the impacts of salinity on pesticide physical properties, degradation mechanisms and toxicity including phototoxicity. Much of his work has resulted in scientifically grounded regulations to protect ecosystem and human health and agricultural product quality. Throughout his career, he has ensured that in areas under his authority that the best regulatory policy is based upon the best available science.

Kevin has been an active member of ACS and the AGRO Division for more than 30 years, serving continuously on the executive committee since 2003, as Vice Chair, Program Chair, and Chair in 2008 – 2010, and as alternate councilor. He consistently organizes innovative symposia and along with his students, regularly presents at annual meetings. This past year he has served on the ACS Committee on Science (COMSCI).

Kevin has served as the chair the USDA Multistate Project (W4045), as the President Elect of the Association of American Feed Control Officials (AAFCO), and on the US FDA’s Food Advisory Committee. He has been an active member of the Society of Environmental Toxicology and Chemistry (SETAC) and the Association of Food and Drug Officials (AFDO). He also is on the editorial advisory boards for Journal of Agricultural and Food Chemistry and Agricultural Science and Technology.

He, his wife Debbie, and grown children Andrew (LSU graduate) and Macy Caroline (current LSU student) enjoy the outdoors (when it’s not too humid) and the culture that South Louisiana offers including Cajun cuisine, LSU baseball, and especially LSU football. Geaux Tigers!!
ACS FELLOW AWARDS
For outstanding achievements in and contributions to science, the profession, and the Society

Presented to Diana Aga, Kevin L. Armbrust, and Allan S. Felsot

Allan S. Felsot is a Professor in the Department of Entomology at Washington State University where he specializes in entomology and environmental toxicology. His interests in entomology and pesticide technology started while he was an undergraduate biology major at Tulane University. He developed a project involving the chemistry of mucilage producing seeds that entrapped mosquito larvae, resulting in his first scientific paper. For two of his undergraduate summers, he worked for the Orleans Parish Mosquito Control District conducting population surveillance, bird trapping, and bleeding for arbovirus detection, and treating standing water with oils to kill larvae.

Allan obtained his M.S. in entomology from the University of Florida studying pheromone production by males of the Caribbean fruit fly after dosing with a juvenile hormone agonist. He had the opportunity thereafter to work as a technician for an organic chemist in the USDA Insect Affecting Man and Animal Lab, learning analytical chemistry, noting "that's where the 'bug' really bit me and turned my focus to pesticide chemistry." He earned his Ph.D. in entomology from Iowa State University in 1978 focusing on pesticide environmental chemistry.

Allan’s first faculty position was a research leader for pesticide chemistry and toxicology in the Illinois Natural History Survey at the University of Illinois. During his 14+ years at the University of Illinois, he studied the phenomenon of enhanced biodegradation of soil applied insecticides, showing this phenomenon was the reason certain corn rootworm control products were failing in efficacy after repeated use. He studied landfarming of contaminated soils onto cropland to enhance degradation of pesticide waste created by spills and repeated spray tank rinse out procedures. He also conducted cooperative research with agricultural engineers to study the best agronomic practices for reducing runoff of pesticide residues.

In 1993, Allan moved to Washington State University where he focused on herbicide drift onto non-target crops. He and his research team developed a sentinel plant biomonitoring network to understand how herbicide applications in a dryland wheat region distant to landscapes growing minor crops might be causing symptoms of chemical injury in those crops. His interests then drifted to experiments in orchards studying "every other row spraying" as a best management practice to reduce off target drift without sacrificing efficacy. Other projects have focused on fate of imidacloprid when applied by subsurface drip irrigation, and neonicotinoid residues in apiaries across WA State, culminating in a probabilistic risk analysis of potential effects on colony health.

Today Allan is mostly engaged in teaching four courses per semester and has developed new courses, such as Biotechnology and the Environment and Ecological and Integrated Pest Management. In addition, he and his artist bride and long-time partner, Judy Ruppert, enjoy world-wide traveling adventures, especially to visit their sons and their grandkids in Japan.

With a 45-year research career now in the past, Allan says, "I am still working without retirement plans, but I’ve learned two important lessons during my career. Teaching is the best way to stay current in a discipline. And pertinently, one should get involved with professional scientific societies, contribute your work to the conferences, volunteer for committees and leadership roles, and most importantly be a good mentor to students. The colleagues you interact with afford wonderful friendships that will last a lifetime."

Thank you, Diana, Kevin, and Allan, for your outstanding service to ACS and contributions to chemical science!
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<td>Louis Lykken</td>
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<td>Maurice B. Green</td>
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- 12 -
AGRO DIVISION FELLOW AWARD

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

Presented to Yelena Sapozhnikova
Congratulations Yelena, and thank you for all you do for AGRO!

Yelena Sapozhnikova
is a Research Chemist at the Eastern Regional Research Center, Agricultural Research Service, United States Department of Agriculture (USDA) in Wyndmoor, Pennsylvania.

Yelena’s research focuses on the development of novel methods for analysis of chemical contaminants, including pesticides, veterinary drugs, legacy and emerging contaminants to improve their analysis and enhance food safety. She conducts research projects on sample processing and preparation, analytical separations, detection, data processing and method validation for diverse chemical contaminants in foods to improve their analysis and, ultimately, protect human health. Her research work has resulted in 75 publications, including 2 book chapters, multiple invited presentations, webinars, interviews and given trainings in the USA and abroad. She currently serves on the Editorial Boards of the Journal of Food Protection and Bulletin of Environmental Contamination and Toxicology.

Prior to joining USDA in 2011, Yelena was a Research Chemist at the National Oceanic and Atmospheric Administration (NOAA) in Charleston, SC, where she developed analytical methods for analysis of emerging contaminants, including pharmaceuticals and personal care products (PPCPs), hormones, flame retardants, novel antifouling biocides, and applied the developed methods to monitor contaminants in estuarine and marine environment. She served on the Board of Directors for Carolinas SETAC (Society of Environmental Toxicology and Chemistry) in 2005-2011.

Yelena joined ACS while conducting her postdoctoral studies at the Environmental Sciences Department, University of California, Riverside, 2001-2004. In 2004, she received the Agrochemical Division Young Scientist Research Travel Award. Yelena has organized and chaired several symposia for the ACS national meetings and Pacificchem meeting, served on AGRO Executive Committee, and served as an AGRO Division email newsletter editor for the last ten years.

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
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Ecotoxicology Support  
Toxicology Support  

Spatial Analysis and Data  
Statistics & Data Analysis  
Supporting Services  
Ecological Modeling  
Environmental Data Systems and Management

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ACS KATHRYN C. HACH AWARD FOR ENTREPRENEURIAL SUCCESS
Recognizing outstanding entrepreneurs who have created a commercially viable business within the chemical enterprise
Sponsored by the Kathryn C. Hach Award Fund

Presented to Pamela G. Marrone

Pamela G. Marrone
spent her 30+ year career focused on biological products for pest management and plant health. She retired in August 2020 as CEO of Marrone Bio Innovations (MBI), an agbio company she started in 2006. Under her leadership, the company commercialized 10 products from six EPA-registered active ingredients (microbials and biochemistry) and in 2019 acquired Pro Farm Technologies selling bionutrient seed treatments from wood waste. From 2015 to 2019, Marrone Bio grew by 32% annually and increased gross margins from 5% to 56%.

In August 2013, MBI listed its stock as MBII on NASDAQ. Pam is one of very few if any in the industry who has twice taken a company from founding to scaling to many tens of millions in revenues and only one in 32 women founders to have taken a company public. She is proficient in raising debt and equity, doing turnarounds, navigating companies through major crises, leading M&A, commercializing products, and building robust patent portfolios.

Pamela is an AAAS (American Association for the Advancement of Science) Fellow and is a well-recognized leader in the ag biologicals industry. She has also been awarded Most Admired CEO, Distinguished Career Award (Sacramento Business Journal), the Sustie Award by the Ecological Farming Association, Agrow’s Best Manager with Strategic Vision Award, and the NRDC’s Growing Green Award in Business Leader category. She holds several hundred patents and is in high demand to deliver keynote addresses on biologicals for pest management, innovation and entrepreneurship.

Earning her B.S. in entomology with Honors and Distinction from Cornell University and Ph.D. in entomology from North Carolina State University, Pamela started her career in biologicals leading the Insect Biology group at Monsanto (1983-1990), which was involved in pioneering projects based on microbial natural products and plant biotechnology. She was founding the president of Entotech, Inc. (1990-1995), a biopesticide subsidiary of Novo Nordisk.

She founded AgraQuest in 1995, where she served as its CEO, Chair, and President until 2006. The company’s biofungicide Serenade™, which won the Presidential Green Chemistry Award, became the global biofungicide standard and was the first organic product in Wal-Mart’s garden section (>2000 stores) in 2003. She serves on the boards of 180 Life Sciences (NASDAQ:ATNF), Stem Express and Pheronym and advises several other agtech and agbio startups, most founded or led by women.

Pamela is the founder of the Bioproducts Industry Alliance, a trade group of more than 150 companies. She serves on the UC Davis Ag & Environmental Sciences Dean’s Advisory Council and served four years as an alumni-elected Trustee of Cornell University. She is on the board of the Foundation for Food and Agricultural Research and is a Senior Fellow of the Arizona State University Swette Center for Sustainable Food Systems.

Pamela co-founded the Sacramento Valley Chapter of the Association for Women in Science (AWIS) and served many years as Treasurer and board member of the national AWIS. When asked recently by AWIS about what she considers the best professional or personal advice she has ever received, Pamela responded, “Don’t take things too personally. It’s not about you. Others think they are doing the right thing, too. Find ways to de-personalize the disagreements and attacks. Doing this helped me save my companies during monstrous challenges.”

Pamela also told AWIS, “My success is due to resilience; overcoming challenges through determination and unwavering belief in the vision to create a more sustainable food system.” (https://www.awis.org/project/pamela-marrone-phd/)

AGRO congratulates Pamela for her many entrepreneurial successes and for being an inspiration to all, but especially to women.

Dr. Pamela Marrone will present an award lecture, Status and potential for biologicals in crop production on Wednesday, August 24, at 8:55 AM CDT.
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Jeffrey G. Scott, is being recognized for his work on insecticide resistance and insect toxicology. He received his B.S. in biochemistry from Michigan State University (MSU) and M.S. degree in entomology also from MSU working, with Professor Fumio Matsumura, studying the mode of action of pyrethroid and cyclodiene insecticides. He obtained his Ph.D. from the University of California, Riverside, working with Professor George Georghiou and studying the biochemistry and genetics of pyrethroid resistance in house flies. His work at Riverside also included collaborations with Professors Tom Miller, Roy Fukuto, and Toshio Shono.

Jeffrey was a postdoctoral associate studying the mode of action and metabolism of bicycloorthocarboxylate insecticides with John Casida at University of California, Berkeley. He then joined the Department of Entomology at Cornell and was promoted to full professor in 1998. His work has focused on diverse areas including insect toxicology, insecticide resistance, pest control, and the evolution of sex determination in house flies. From 2013 – 2015 he spearheaded the global effort to sequence and annotate the house fly genome.

Increased detoxification of insecticides is a major mechanism of resistance, but the large number of genes coding for enzymes capable of insecticide metabolism in any given species is large, making identification of the specific protein (or gene coding for the protein) a significant challenge. Jeffrey’s research group has tackled this problem with protein purification, heterologous expression, RNAi, genetics, molecular biology, proteomics and transcriptomic analyses. His lab was the first to purify (to a high specific content) a single P450 from an insect and identify how a mutation in the CYP6D1v1 promoter increased expression of this protein leading to pyrethroid resistance.

An important mechanism by which insects evolve resistance is due to changes in the target site of the insecticide. His group has actively pursued this line of research across multiple classes of insecticides (organochlorines, cyclodiens, organophosphates, carbamates, pyrethroids, neonicotinoids, spinosyns, etc.) and has documented both the nature of the mutations involved and the frequency of these mutations in different populations.

Jeffrey also made significant contributions to our understanding of the population genetics of resistance and to our understanding of the fitness costs of insecticide resistance. His group has successfully used molecular tools to genotype individual insects that has revolutionized our understanding of these aspects of insecticide resistance.

In recognition of his research achievements Jeffrey has received numerous awards, including Fellow of the Entomological Society of America and the Recognition Award in Insect Physiology, Biochemistry and Physiology from the Entomological Society of America.

In addition to his research Professor Scott has regularly taught two classes dealing with pesticides: Pesticides, Human Health, and the Environment and Insecticide Toxicology.

Numerous graduate students, undergraduates, postdocs and visiting scientists have received training in the Scott lab which has been funded primarily by the NIH and USDA.

Dr. Jeffrey Scott will present his award lecture in a hybrid symposium on Monday, August 22, at 8:00 AM CDT.

The AGRO Division is grateful for the sustained support of the International Award.
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With every year that passes, farmers are expected to produce more and better quality crops to feed a growing and more demanding population.

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Joel Coats, Charles F. Curtiss Distinguished Professor Emeritus, in the Department of Entomology at Iowa State University, grew up on a farm in Ohio and received his B.S. in Zoology (Chemistry minor) from Arizona State University. His graduate training was at the University of Illinois at Urbana-Champaign, receiving his M.S. and Ph.D. in Entomology (Chemistry minor) with specialization in insecticide toxicology and environmental toxicology. He was a Visiting Professor for two years in the Department of Environmental Biology at the University of Guelph in Ontario, Canada, teaching in Pesticides in the Environment and Biological Activity of Pesticides. Later he was a Guest Scientist at the Federal Research Center-Jülich in Germany for six months and then moved to Iowa.

At Iowa State, Joel was the primary organizer of the Interdepartmental Toxicology Graduate Program and served as the first Chair of that program for seven years. He taught parts of four courses: Insecticide Toxicology, Pesticides in the Environment, Principles of Toxicology, and Special Topics in Insect Toxicology. He has served as major professor for 52 graduate students who graduated from his lab and has served as adviser for 14 postdocs. His research program includes two main areas: (1) insect toxicity and (2) environmental toxicology and environmental chemistry of agrochemicals. His scientific publications include 15 books, 9 review articles, 51 book chapters, and 172 peer-reviewed journal articles.

For the past 35 years, Joel has been innovative in investigating natural products as insecticides and insect repellents. He has worked on identifying active components in the materials, their spectrum of activity, mechanisms of action, metabolism, and environmental fate. His research has primarily addressed terpenes and terpenoids, but it has also included studies on naturally-occurring glucosinolates, cyanohydrins, isoflavones, and fatty acids. His laboratory has synthesized hundreds of biorational analogs of terpenoids and used quantitative structure-activity relationships to assist in understanding modes of action and in prediction of better compounds. Importantly, his research has helped pave the way for companies to move forward in research and development of new products in the field of natural pesticides and repellents. He holds 9 patents on insecticides and insect repellents (6 have been licensed), and he currently has 6 pending (all licensed).

Joel is an AGRO Fellow and a Fellow of the American Chemical Society, the American Association for the Advancement of Science, and the Entomological Society of America. He received the ACS International Award for Research in Agrochemicals (2006), the Alumni Achievement Award (2013) from the University of Illinois College of Liberal Arts and Sciences, the Margaret Ellen White Award for Mentoring Graduate Students from the Graduate College at Iowa State University (2015), the John Doull Toxicology Award, from the Society of Toxicology’s Central States Chapter (2017), and the C.V. Riley Award from the North Central Branch of the Entomological Society of America (2018). He co-authored the Best Paper for 2020 from the journal Environmental Toxicology and Chemistry.

**Dr. Joel Coats will present his award lecture in a virtual symposium on Monday, August 22, at 2:00 PM CDT.**
USDA’s Agricultural Research Service plays a vital role in improving the production, quality, and quantity of food, feed, fiber, and fuel... ensuring our nation has the safest and most nutritious, abundant, and sustainable food supply in the world.

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Natural compounds for the health of plants, humans, and the environment

Stephen O. Duke is internationally recognized for his basic and applied research concerning natural products as sources of pesticides and for the biochemical and physiological modes of action of and resistance to herbicides. He is also well known for his extensive research on the herbicide glyphosate and glyphosate-resistant weeds and crops. His research has significantly influenced companies involved in pesticide discovery.

Steve received a B.S. in 1966 from Henderson State University (Arkadelphia, Arkansas) and an M.S. in 1969 from the University of Arkansas. He then spent two years as a U.S. Army Medical Service Corps officer, a year of which was spent in Vietnam. In 1975, he received a PhD in Plant Physiology and Biochemistry from Duke University. He is currently a principal scientist at the National Center for Natural Products Research (NCNPR) which is an institute of the School of Pharmacy of the University of Mississippi in Oxford, Mississippi. Before this position, he was a Research Leader of a USDA, Agricultural Research Service natural products laboratory located at NCNPR and, before that, he was Director of the USDA Southern Weed Science Laboratory in Stoneville, Mississippi.

Steve has a diverse research portfolio. His Ph.D. research was on phytochrome (discovered by Sterling Hendricks) control of plant biochemistry. His earliest research focused on plant photobiology and photochemistry, but he soon began studying the mechanisms of action of both synthetic and natural herbicides. He is especially known for his research on the mode of action of protoporphyrinogen oxidase-inhibiting herbicides. He also delved into the chemistry and mechanisms of chemical warfare between plants (allelopathy). However, much of his research is on the biological activities of newly discovered natural compounds that might be used in pest management. Some of his more recent research has been on the use of genes for pest management.

Steve has authored almost 500 refereed papers and book chapters, two patents, and one co-written textbook, as well as editing eleven books. Much of this work is highly cited, resulting in Web of Science and Google Scholar h-indices of 70 and 100, respectively. He has been Editor-in-Chief of the journal Pest Management Science since 2012 and serves on the editorial boards of several other journals.

He has been President or Chair of the Agrochemical Division (AGRO) of the American Chemical Society (ACS), the Weed Science Society of America (WSSA), the International Weed Science Society (IWSS), and the International Allelopathy Society (IAS). He is a fellow of ACS, the American Association for the Advancement of Science, AGRO, and WSSA. Other honors include the Molisch Award (IAS), the Outstanding International Achievement award of IWSS, the International Research Award of AGRO, and an honorary doctorate from the University of the Basque Country (Bilbao, Spain). In 2017, he was elected to the USDA Agricultural Research Service Science Hall of Fame.

Dr. Stephen Duke will present his award lecture in a hybrid symposium on Tuesday, August 23, at 10:50 AM CDT.
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H. N. Cheng obtained his B.S. from UCLA and his Ph.D. from the University of Illinois at Urbana-Champaign. In his R&D work, he has been active in developing and promoting green polymer chemistry as a platform to produce eco-friendly and sustainable products. As part of this work, he has been involved with the use of biobased materials, biocatalysis, green processing, and green methodology. He has also done much work on polymerization theory and polymer NMR.

H. N. is currently a Research Chemist at USDA Southern Regional Research Center in New Orleans. Prior to 2009, he was Senior Research Fellow at Hercules Incorporated in Wilmington, Delaware, where he held various R&D and managerial positions. He has authored or co-authored over 290 papers and 26 patent publications. He has organized 45 symposia at national meetings since 2000 and edited 23 books.

H. N. has been selected as a Fellow of the American Chemical Society (ACS) (2009), the ACS Polymer Chemistry Division (2010), and the ACS Agricultural and Food Chemistry (2018). He was selected as the Outstanding Scientist of the Year at USDA Southern Regional Research Center in 2014 and in 2019. He was the recipient of ACS Volunteer Service Award (2016), Tillmans-Skolnick Award for Outstanding Service from the ACS Delaware Section (2006), Distinguished Service (2005) and Special Service (2015) Awards from ACS Polymer Division, and ACS Delaware Section Award for research excellence (1994).

H. N. Cheng has been active in ACS for many years and has served in numerous ACS committees and task forces. At the national level, he served as ACS President in 2021 and ACS President-Elect in 2020. He is currently the ACS Immediate Past President. He was Chair of International Activities Committee (2013-2015), Chair of Committee on Economic and Professional Affairs (2006), Co-Chair of Presidential Task Force on Vision 2025: Helping ACS Members Thrive in the Global Chemistry Enterprise (2012-2013), Associate Chair of Board-Presidential Task Force on Multidisciplinarity (2004-2005), and Chair of CEPA Task Force on Globalization Issues (2004-2005). He has also been very active in local sections and technical divisions, serving in many functions.

On the personal side, H. N. is married and has two grown children. In his spare time, he enjoys studying history and poetry and does some volunteer work for his local church.

Dr. H. N. Cheng will present his award lecture in a hybrid AGFD symposium on Monday, August 22, at 4:55 PM CDT.

The Kansas City Section invites you to check out the Eckhard Wilhelm Hellmuth Memorial in Pictures. https://acs-kc.com/dr-hellmuth-in-pics
Risk Assessment
- Ecological and human health risk assessment
- Registration, re-registration, and stewardship of agrochemicals
- Endangered species risk assessment (national and lawsuit driven)
- Pollinator environmental risk assessment
- Regulatory and legal support services
- Public consultation and communication
- Epidemiology
- Refined exposure modeling
- Litigation Support

Environmental Fate and Exposure Modeling
- Surface water exposure (PWC, AGRO, TOXSWA)
- Spray drift (AgDrift, AGDISP, REGDISP)
- Volatilization and atmospheric transport (AERMOD)
- Watershed analysis (SWAT, APEX)
- Urban modeling (SWMM)
- Vegetative filter strips (VFSMOD)
- Groundwater exposure (PRZM, LEACHP, RZWQM)
- Higher tier probabilistic exposure assessments
- Agronomic best management practices
- Uncertainty analysis
- Custom model development and modification
- Climate change impact analysis

Field Studies
- Study design and directorship
- Field volatility studies
- Drift reduction technology assessments
- Pollinator field studies
- Simulated rainfall runoff
- Ecological monitoring studies
- Surface water monitoring
- Terrestrial and aquatic field dissipation
- Residue trial management
- Prospective groundwater studies
- Regional groundwater monitoring
- Community drinking water monitoring
- Emerging crop protection technologies research – Unmanned Aircraft Systems (UAS) applications

Spatial Analysis
- Endangered species assessments (proximity and co-occurrence)
- Watershed characterization
- High resolution national assessments
- Spatial uncertainty analysis
- GIS tool development for environmental risk assessment
- Web-based GIS solutions

Quality Assurance (RQAP-GLP)
- GLP and NELAC audits and training

State Regulatory Support
- Experience working with state regulators on a variety of agricultural related projects.
AGRO AWARD
Co-sponsored by AGFD


*Xanthomonas oryzae pv. oryzae* (Xoo) causes rice bacterial leaf blight disease. Caseinolytic protease P (ClpP) is highly conserved in the majority of bacterial species and plays a central role in protein quality control by degrading misfolded proteins. In this research article the authors determined the crystal structure of XooClpP and demonstrated a new mode of action of ClpP activators against Xoo to prevent rice bacterial leaf blight.

*Song Yang* is a full professor at the Key Laboratory of Green Pesticide and Agricultural Bioengineering, Ministry of Education of China, Guizhou University. He leads the Green Pesticide and Molecular Target Discovery research group and focuses on the discovery of new agrochemical lead compounds as well as their molecular targets and the development of green pesticides targeting agricultural bacterial and fungal disease.

Cai-Guang Yang is a full professor at the State Key Laboratory of Drug Research and the Center for Chemical Biology at Shanghai Institute of Materia Medica, Chinese Academy of Sciences. Since 2020, he has been an Adjunct Professor at School of Pharmaceutical Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences. He leads the Chemical Biology based Drug Discovery research group and focuses on the development and application of chemical probes for functional intervention of untargeted proteins.

AGFD AWARD
Co-sponsored by AGRO


This research article describes an approach to evaluate the diversity of ergot alkaloids and indole diterpenoids and other important biochemical contaminants present in cereal grains using UHPLC-HRMS, molecular biology methods, statistics, and chemical profiling procedures. The data could be used to set up allowable maximum levels of ergot alkaloids in grain and cereal products.

Silvio Uhlig is a chemist and senior researcher at the Chemistry and Toxicology Research Group at Norwegian Veterinary Institute in Ås, Norway, which works broadly on different topics within toxin chemistry as well as the biology of toxin-producing organisms. He is especially interested in applying modern analytical chemistry techniques in a toxicological or biological context, such as chemotaxonomy or bioassay-guided isolation.

AGFD TUESDAY 2:00 PM – 3742971. Semi-targeted analysis of peptide ergot alkaloids and indole–diterpenoids in the Claviceps purpurea species complex using LC–HRMS/MS diagnostic fragmentation filtering.


Congratulations to all these creative scientists!
PAST Awardees of the ACS International Award
For Research in Agrochemicals

1969 John E. Casida, University of California, Berkley
1971 Robert L. Metcalf, University of Illinois, Champaign-Urbana
1972 Ralph L. Wain, Wye College, University of 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. Keamey, 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, Fukuoka, Japan
1994 Toshio Fujiya, Kyoto University, Japan
1995 Mohyee Eldefrawi, University of Maryland, Baltimore
1996 Koji Nakanishi, Columbia University, New York, New York
1997 Günther Voss, Ciba, Basel, Switzerland
1998 George Levitt, DuPont, Wilmington, Delaware
1999 Don Baker, Zeneca, Richmond, California
2000 George P. Georgiou, University of California, Riverside
2001 Donald Crosby, University of California, Davis
2002 Keith Solomon, University of Guelph, Canada
2003 Bob Hollingsworth, Michigan State University, East Lansing
2004 Stephen O. Duke, USDA-ARS, Oxford, Mississippi
2005 Robert Krieger, University of California, Riverside
2006 Joel Coats, Iowa State University, Ames
2007 Gerald T. Brooks, University of Sussex, Brighton, United Kingdom, retired
2008 Fredrick J. Perlak, Monsanto, St. Louis, Missouri
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

Sponsored by Corteva Agriscience
CALL FOR NOMINATIONS
ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS
SPONSORED BY CORTEVA AGRICTIENCE

2024 Fall ACS National Meeting in Denver, Colorado, 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 2024 Fall National ACS Meeting in honor of the awardee.

Special thanks to our sponsor for their generous contribution!
CALL FOR NOMINATIONS
AGRO AWARD FOR INNOVATION IN
CHEMISTRY OF AGRICULTURE
Sponsored by BASF Corporation

2023 Fall ACS National Meeting in San Francisco, California, 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 National ACS 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 National ACS Meeting in August 2023 in San Francisco, California.

PAST Awardees of the AGRO Award for Innovation in Chemistry of Agriculture

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

Special Thanks to our Sponsor for their Generous Contribution!
The Agricultural Research Service (ARS), USDA's principal in-house scientific agency, is seeking nominations for the 2023 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. Presenting the lecture is a requirement of the honor. The award includes an honorarium of $2,000, a bronze medallion, and expenses to present the lecture.

The 2023 Award will be presented at the ACS National Meeting in San Francisco, California just prior to the lecture. The Divisions of Agrochemicals (AGRO) and Agricultural and Food Chemistry (AGFD) co-sponsor the lecture, and in 2023, AGFD will host the lecture.

Nominees may be outstanding senior scientists in industry, university, consulting, or government positions. Current ARS employees are not eligible.

The Nomination Package includes:
- A letter explaining the nominee's contributions to chemistry and agriculture
- A current curriculum vitae

Please send the completed package in pdf format to HendricksLecture@usda.gov

The deadline for nominations is January 15, 2023.

**Past Sterling B. Hendricks Memorial Lectureship Award Winners**

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

The Kansas City Section of the American Chemical Society is soliciting nominations for the 2023 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, parents’ names, 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 to
Gary Clapp, geclapp424@yahoo.com
Sarah Leibowitz, sleibowitzacs@gmail.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
1961  H.L. Haller, USDA-ARS
1962  A.K. Balls, USDA-ARS
1963  C.C. King, Rockefeller Foundation
1964  Daniel Swern, Temple University
1965  Aaron M. Altschul, USDA-ARS
1966  Robert L. Metcalf University of California, Riverside
1967  Melville L. Wolf, The Ohio State University
1968  Herbert E. Carter, University of Illinois
1969  Edwin T. Mertz, Purdue University
1970  Lyle D. Goodhue, Phillips Petroleum Company
1971  William J. Darby, Vanderbilt University
1972  Emil M. Mrak, University of California, Davis
1973  Esmond E. Snell, University of California, Berkeley
1974  Roy L. Whistler, Purdue University
1975  Thomas H. Jukes, University of California, Berkeley
1976  E. Irvine Liener, University of Minnesota
1977  N. Edward Tolbert, Michigan State University
1978  John E. Casida, University of California, Berkeley
1979  Charles W. Gehlke, University of Missouri, Columbia
1980  George K. Davis, University of Florida, Gainesville
1981  John Speziale, Monsanto Agricultural Products Co.
1982  Howard Bachrach, USDA-ARS
1983  Peter Albersheim, University of Colorado
1984  Richard H. Hageman, University of Illinois
1985  Bruce N. Ames, University of California, Berkeley
1986  John M. Bremer, Iowa State University
1987  Hector F. DeLuca, University of Wisconsin, Madison
1988  Boyd L. O’Dell, University of Missouri, Columbia
1989  Robert H. Burris, University of Wisconsin
1990  John E. Kinsella, University of California, Davis
1991  George Levitt, DuPont Experimental Station

1992  Clarence A. Ryan, Jr., Washington State University
1993  Bruce Hammock, University of California, Davis
1994  William S. Bowers, University of Arizona
1995  Robert T. Fraley, Ceregen, A Unit of Monsanto Co.
1996  James N. BeMiller, Purdue University
1997  William M. Doane, USDA-ARS
1998  Mendel Friedman USDA-ARS
1999  James A. Sikorski, Monsanto Co.
2000  Wendell L. Roelofs, Cornell University
2001  James Tumlinson, USDA-ARS
2002  Daniel W. Armstrong, Iowa State University
2003  Eric Block, University at Albany, State Univ. New York
2004  Steven D. Aust, Utah State University
2005  Don R. Baker, Berkeley Discovery Inc.
2006  Russell Molyneux, USDA-ARS
2007  David A. Schooley, University of Nevada, Reno
2008  Ron G. Buttery, USDA-ARS
2009  George P. Lahm, DuPont Crop Protection
2010  Clive A. Henrick, Trece, Inc.
2011  Michael W. Pariza, University of Wisconsin, Madison
2012  James N. Seiber, University of California, Davis
2013  Attila Pavlath, USDA-ARS, retired
2014  Ronald Horst, USDA-ARS, retired
2015  Thomas Selby, DuPont Crop Protection
2016  Agnes Rimando, USDA-Agricultural Research Service
2017  Bruce German, University of California, Davis
2018  Thomas M. Stevenson, FMC
2019  Thomas C. Sparks, Corteva Agriscience, retired
2020  Jerry W. King, University of Arkansas, retired
2021  Takayuki Shibamoto, University of California, Davis
2022  H.N. Cheng, USDA-ARS
CALL FOR NOMINATIONS
2023 RESEARCH ARTICLE OF THE YEAR AWARD LECTURESHP 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 2022 (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 Fall 2021 ACS National Meeting in Atlanta, Georgia

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 2022, and the award will be presented at the Fall 2023 ACS National Meeting held in August in San Francisco, California.

Send your nominations to: jafcaward@acs.org
Deadline for nominations – January 15, 2023

INTRODUCING TWO NEW JOURNALS IN THE
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SUBMIT YOUR ARTICLE TODAY!
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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[https://www.syngenta-us.com/supporting-american-agriculture](https://www.syngenta-us.com/supporting-american-agriculture)
Cera Fisher is a Postdoctoral Research Associate in the Department of Entomology at Cornell University. She received her Ph.D. in ecology and evolutionary biology at the University of Connecticut in 2019 under the advisement of Elizabeth L. Jockusch. Cera’s primary research interests lie in understanding how nucleotide sequence-level changes contribute to the origin of new traits, whether morphological or physiological. Her dissertation project investigated the evolution of the novel treehopper helmet from an evo-devo perspective, using RNA-seq and functional genomics. This work compared developmental gene expression across several species separated by as much as 300 million years of evolution.

As a postdoctoral researcher, Cera has turned from the macroevolutionary scale to the microevolutionary, characterizing the genomic basis of insecticide resistance mediated by enhanced detoxification in Aedes aegypti, the yellow fever mosquito. This project integrates classical genetics and toxicology in a multi-strain congenic system with cutting-edge high-throughput single molecule and whole-genome shotgun sequencing to provide an unparalleled level of resolution of mutations associated with resistance.

2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides and Novel Control Strategies
McCormick Place Convention Center, S502b
MONDAY 2:55 PM – 3739842. NEW INVESTIGATOR FINALIST. Chromosome-level assembly of the "Rockefeller" Aedes aegypti mosquito strain powers investigation of the evolution of pesticide resistance in a vector of human and livestock disease. C. Fisher

Ellis Johnson received his Ph.D. in Entomology from the University of Nebraska at Lincoln in 2021 under the supervision of Troy Anderson. His dissertation research focused on the potential management application and modes of action of specific plant oils and their volatile organic compounds against mosquitoes. Ellis is currently a postdoctoral research associate in the Insect Physiology Lab under the supervision of Troy Anderson at the University of Nebraska at Lincoln. His current research interests focus on the mechanisms of naturally derived compounds that can alter mosquito behavior and disrupt mosquito development. The goal of this research is to provide tools to manage mosquitoes, as well as reduce insecticide resistance selection pressures.

Advances in the Control of Medical, Agricultural, and Veterinary Disease Vectors
McCormick Place Convention Center, S501d
MONDAY 2:55 PM – 3754227. NEW INVESTIGATOR FINALIST. Characterization of the tick Ixodes ricinus nicotinic acetylcholine receptors expressed in the synganglion using membrane microtransplantation. A. Le Mauff

Anais Le Mauff is a postdoctoral research scholar in the Emerging Pathogens Institute and Department of Entomology and Nematology at the University of Florida. She earned her Ph.D. in Biology in 2021 at the University of Orleans, France, under the supervision of Steeve H. Thany where she performed a pharmacological characterization of tick nicotinic acetylcholine receptor through microtransplantation methods. She obtained her M.S. in 2018, in biodiversity, ecology, and evolution at the University of Poitiers, France, and her BS in 2016 in life sciences at the University of Montpellier, France.

Her postdoctoral research aims to understand the physiological mechanisms driving tick salivary gland function to enable blood feeding and how these physiological pathways are altered during Rickettsia infection. Fluorescent microscopy is used to determine the cellular and sub-cellular expression of potassium ion channels and ion transporters across salivary gland acini. Secondly, two-electrode voltage clamp electrophysiology is used after tissue microtransplantation to determine the pharmacological profile of ion channels expressed in tick salivary gland acini.

Advances in the Control of Medical, Agricultural, and Veterinary Disease Vectors
McCormick Place Convention Center, S501d
MONDAY 5:05 PM – 3742427. NEW INVESTIGATOR FINALIST. Characterization of the tick Ixodes ricinus nicotinic acetylcholine receptors expressed in the synganglion using membrane microtransplantation. A. Le Mauff

The AGRO Division is grateful for our new AGRO New Investigator Award sponsor!
Find out why our scientists are passionate about sharing the innovations happening at Bayer, invite them to speak at your next event!

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FIND OUT MORE ABOUT SCIENCE CONNECT AND REQUEST A SPEAKER FOR YOUR NEXT BIG EVENT HERE:
AGRO EDUCATION TRAVEL AWARDS
AND POSTER PRESENTATION COMPETITION
Sponsored by Bayer Cropscience

Congratulations to our student travel grant winners!

AGRO POSTER SESSION
WEDNESDAY, 12:00 – 2:00 PM
McCormick Place Convention Center, Hall F2

Rui Chen, Poster #2127, 3755419. Characterization of functional interactions between K⁺ flux mechanisms that drive insect neural function. Louisiana State University, Daniel Swale

Zhilin Li, Poster #2134, 3743988. Characterizing the effect of Kir channels modulators on mosquito cardiac contraction and cellular antiviral immunity. Louisiana State University, Daniel Swale

Sarah McComic, Poster #2130, 3742819. Repurposing synthetic ß-triketone herbicides to control hematophagous arthropods. Louisiana State University, Daniel Swale

XiXian Ng, Poster #2136, 3754461. Sugar compositions drive high attraction of vector mosquitoes. University of Nebraska, Troy Anderson

Juliet Ochola, Poster #2027, 3739919. Disruption of the chemical signaling between potato and cyst nematode Globodera rostochiensis. North Carolina State University, Oliver Baars

Flinn O’Hara, Poster #2031, 3735275. Optimization of inward rectifier potassium channel inhibitors to prevent hemipteran feeding. Louisiana State University, Daniel Swale

Oluwatosin Popoola, Poster #2037, 3737393 – 3D-printed nanocomposite for smart antimicrobial food packaging. Clarkson University, Silvana Andreescu

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

All Graduate Students & Post-Docs
You Are Cordially Invited to Attend the

AGRO Student & 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 22, 12:00 – 1:30 pm CDT

Join us!

Reservations required, for more information contact
SARA WHITING, sara.whiting@bayer.com
CALL FOR APPICANTS
AGRO DIVISION NEW INVESTIGATOR AWARD
Sponsored by Syngenta

2023 Fall ACS National Meeting in San Francisco, California, USA

The AGRO Division seeks nominations for the New Investigator Award (NIA) to be awarded at the ACS meeting in San Francisco, California, in August 2023. The purpose of the New Investigator Award is to recognize scientists who have obtained a doctoral degree and are actively conducting academic, industrial, consulting, or regulatory studies. Please note there will be no NIA at the Spring meeting in Indianapolis.

The Division is interested in work on all aspects of agrochemicals which are broadly defined to mean pesticides of all kinds (e.g., chemical pesticides, biopesticides, pheromones, chemical attractants, fumigants, plant incorporated protectants, and disinfectants) as well as biotechnology-derived crops (e.g., Bt crops, Roundup Ready crops, etc.). The categorical areas of study related to agrochemicals are very broad and encompass environmental chemistry, toxicology, exposure assessment, risk characterization, risk management, and science policy. Studies of veterinary pharmaceuticals and antibiotics are included in the Division’s mission. The Division encourages submissions related to public health protection as well as crop, livestock, aquaculture, and wildlife protection.

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

The Process:

- To be eligible for the award, the scientist must have obtained his or her doctorate no more than five years before the time of the Fall ACS National Meeting. Thus, for 2023, applications will be considered from scientists who have obtained their doctorates no earlier than the year 2018.
- A panel consisting of at least three AGRO members will choose up to three finalists based on their extended abstracts, 1-page curriculum vitae, and letter(s) of recommendation.
- Each finalist will receive up to $1275 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.

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 2023 ACS National Meeting in San Francisco, California.

Deadline:
The extended abstract, curriculum vitae, and letter(s) must be received by the New Investigator Award (NIA) Coordinator no later than March 13, 2023 (subject to change).

For more information, please contact:
Sasha Kweskin, NIA Coordinator
Bayer US LLC, Crop Science Division
sasha.kweskin@bayer.com
CALL FOR APPLICANTS
AGRO DIVISION 2023 EDUCATION TRAVEL AWARDS
Sponsored by Bayer US LLC, Crop Science Division

UNDERGRADUATE and GRADUATE STUDENT RESEARCH
Travel Support for Student Posters

2023 Fall ACS National Meeting in San Francisco, California USA

The AGRO Division has established an endowment fund to promote an understanding of the role of chemistry in agriculture. To address this goal, student awards will be made through the Division’s Education Committee. Please note there will be no Travel Awards at the Spring meeting in Indianapolis.

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

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

**PLEASE NOTE:** The requirements of the student travel award will change. **Only poster presentations will be eligible for the 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 presentation will not be eligible for the travel award. These students should also submit a poster separate from (but can be related to) their oral presentation.

To apply, students should submit the following no later than March 13, 2023 (subject to change):

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

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

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

2. A two-page extended abstract giving more detail of the research/presentation. For a sample extended abstract, visit http://www.agrodiv.org/graduate-students/

3. A short letter of nomination from the faculty advisor that verifies current enrollment of the student.

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

Files sent directly to the coordinators will not be accepted.

For more information, please contact the co-organizers:

Aaron Gross  
Virginia Polytechnic Institute and State University  
Department of Entomology  
Blacksburg, Virginia  
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argross@vt.edu

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

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

Special thanks to our sponsor for their generous contribution
AGRO has embraced change these past two years, meeting differently and approaching new ways of sharing cutting edge research, ideas and connecting like we never envisioned. Flexibility has become the norm for our Fall national meetings. We have adapted quickly to the new formats for meetings and the AGRO Fall 2022 meeting will continue to be a brand-new way of getting together. The Fall 2022 meeting will not like our previous live meetings, and it will not be like our recent zoom meetings either; it will be a hybrid of both.

Please note there is NO Business Meeting in Chicago. Instead we will host GROW with AGRO!

Congratulations! Five AGRO symposium were selected to receive co-sponsorship funding by the Multidisciplinary Program Planning Group (MPPG). These symposia were identified as aligned with the MPPG theme Sustainability in a Changing World, which is being co-organized by the Committee on Environmental Improvement (CEI) and the Division of Environmental Chemistry (ENVR). As a technical Division, ENVR will also co-operatively co-sponsor these sessions. Congratulations to the organizers for this special recognition and funding support by MPPG and ENVR! These symposia are:

1. Bioisosteric Replacement and Scaffold Hopping for Bioactive Compound Discovery
2. Early Career Symposium: Deciphering plant-insect-microorganism signals for sustainable crop production
3. Impact of Climate Change on Agriculture and Food Security
4. New Crop Yield Technology Companies Improving Sustainability
5. Sustainable Agriculture - A Promise for the Future

What you need to know about the AGRO Fall 2022 meeting.

- View the Technical Program and register at https://www.acs.org/content/acs/en/meetings/acs-meetings.html
- All technical sessions will be held at the McCormick Place Convention Center
- ACS has limited hybrid sessions and AGRO was one of the Divisions to receive the most with 19 hybrid sessions.
- At this point, proof of vaccination will be required to attend the meeting in-person. Please be sure to check the ACS Attendee Safety Plan for any changes to this policy. https://www.acs.org/content/acs/en/meetings/acs-meetings/registration/attendee-safety-plan.html
- The Frequently Asked Questions on the ACS website continues to be a great resource for the many questions presenters and presiders have during these strange and unpredictable times! https://www.acs.org/content/acs/en/meetings/acs-meetings/registration/faq.html

Three Ways AGRO will be participating in the meeting.

- **In-person room** – like in the past, pre-Covid, all speakers in a room giving their talks with no internet available.
  - Attendees participate in-person in Chicago with live Q&A. Presenters will present and participate in-person or, in some cases, provide a pre-recorded video to be played in the room with no opportunity for live Q&A.
- **Hybrid room** – presenters may give their presentations in Chicago or virtually, but both will be live.
  - Hybrid rooms will have access to internet. People can ask questions live. These sessions will be live streamed from Chicago. Presenters and attendees may participate in-person in Chicago or virtually via the meeting platform, or in some cases, presenters may provide a pre-recorded video to be played during the session.
- **On-Demand presentation** – all presenters have the option of uploading a recorded presentation for on-line view for 2 weeks after the meeting.
  - Presentations uploaded for on-demand access will be available to view within 24 hours after the live presentation time. On-demand presentations will then remain available for registrants for two-weeks after the end-of the meeting.

Awards. While in Chicago, we will recognize the significant achievements of our colleagues in agrochemical research. **Jeffrey Scott** will be awarded the ACS International Award for Research in Agrochemicals in a symposium organized by John Clark and Ke Dong. **Joel Coats** will receive the AGRO Innovation Ward. **Stephen Duke** will receive the Sterling Hendricks Memorial Lectureship Award which will be hosted by AGRO Division and co-sponsored by AGFD. **H. N. Cheng** will receive the Spencer Award which is sponsored by the ACS Kansas City Section and will give a lecture in a symposium hosted by AGFD and co-sponsored by AGRO. The Journal of Agricultural and Food Chemistry Best Paper Awards for AGRO are **Song Yang** and **Cai-Guang Yang** and for AGFD is **Silvio Uhlig**. This year AGRO will also host a lecture by **Pamela Marrone**, winner of the ACS Kathryn C. Hach Award for Entrepreneurial Success.
Early Career Opportunities. AGRO Education Awards for Student Travel provides funding for students who present their poster at National ACS meeting. This award helps defray costs associated with the meeting up to $1,000 for a limited number of students. Thank you to Aaron Gross and Sara Whiting for co-chairing this award program.

AGRO New Investigator Award (NIA) recognizes scientists who have obtained doctoral degree in last five years and have produced significant accomplishments conducting research, consulting, or regulatory studies. This year three finalists were selected, Cera Fisher, Ellis Johnson, and Anais Le Mauff. Thank you to Sasha Kweskin for organizing this award program.

Early Career Symposia Series provides funds for symposia within the AGRO program that are organized by and feature speakers within 10 years of their highest degree earned. In Fall 2022, we are delighted to welcome two Early Career Symposia to our Program: Deciphering plant-insect-microorganism signals for sustainable crop production organized by Nurhayat Tabanca and Gareth Thomas and Sustainability in Environmental Fate and Behavior organized by Aleksandra Dean, Samantha Nedder, and Xavier Poole.

AGRO Programming Support. Finally, we continue to rely on the expertise of Peney Patton (ppatton@agrodiv.org), Program Secretariat for AGRO and ENVR. Thank you, Peney, for all your help during this ever-evolving 2021 – 2022 planning cycle!

Enjoy the Meeting!

GROW with AGRO

August 21, 2022
6:00 – 9:00 pm
Marriott Marquis Chicago, Grand Horizon G

It has been two years since AGRO met in-person, and we are excited to see each other again and meet new members!

We are taking this opportunity to have fun, relax, reconnect, and highlight the AGRO Committees you can join.

We will also be spotlighting AGROs recent awards and award winners. Did you know AGRO was awarded two ACS ChemLuminary Award in 2021 for its creative means of engaging members and working with other ACS Divisions?

Come find out what makes this Division so great to be part of! AGRO Committee members will there and available to answer any questions you may have about the work they do.

If you have ever thought you might like to get more involved in AGRO, this is your opportunity to learn more and sign-up!

Please plan to attend this AGRO welcome back event. Hors d’oeuvres, cash bar, and cool SWAG
List of AGRO Symposia by Topic Area
264th ACS National Meeting and Exposition
August 21 – 25, 2022, Chicago, Illinois USA and Online

Sustainability in a Changing World

Agrochemical Residues, Analytical and Metabolism Chemistry, and Metabolomics
• Uses of HPLC-Mass Spectrometry in Support of Agricultural Research and Development- New Trends and Best Practices
• Extraction Efficiency testing for Residue Analytical Methods: Study Designs, Guideline requirements, Trends and Challenges

Impact of Climate Change on Agriculture and Food Security
• Impact of Climate Change on Agriculture and Food Security

Agrochemical Toxicology, Mode of Action and Omics
• 2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides and Novel Control Strategies

Air Quality and Agriculture
• Pesticide Drift and Volatility: Is the Answer Blowin’ in the Wind?

Biological Pesticides, Natural Products, Pheromones, and Growth Regulators in Agriculture
• Deciphering plant-insect-microorganism signals for sustainable crop production; Early Career Scientist Symposium

Communication
• Sustainable Agriculture – A Promise for the Future

Developments in Integrated Pest Management and Resistance Management
• INSEcicide TARgets (INSTAR) Summit

Discovery and Synthesis of Bioactive Compounds
• Biosisoteric Replacement and Scaffold hopping for Bioactive Compound Discovery

Ecosystem Exposure and Ecological Risk Assessment
• Upfront Mitigation: What that Means in the FIFRA/ESA Consultation Process

Environmental Fate, Transport, and Modeling of Agriculturally related Chemicals
• Study Designs, Data Interpretation, and Regulatory Acceptance of Terrestrial Field Dissipation Studies Conducted under OECD Guidance
• Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals
• Sustainability in Environmental Fate and Behavior: Early Career Scientist Symposium

Formulation and Applications Technology
• Enhanced formulations and delivery systems through surfactant and colloid technology
• Unmanned Aerial Systems (aka Drones) Pesticides Spraying and other Agricultural Applications

Human and Animal Health Protection: Vector Control, Veterinary Pharmaceutical, Antimicrobial, and Worker Protection Products
• Advances in the control of Medical, Agricultural, and Veterinary Disease Vectors

Human Exposure, Health, and Risk Assessment
• Human Health Paradigms: Exposure, Risk Assessment and Policies for Agrochemicals

Pesticides, Pollinators, and Non-target Arthropods
• Nontarget Arthropod Risk Assessment Scientific Developments, Challenges and Research Needs
• Pollinator Risk Assessment Modelling, Methods, and Research

Technological Advances and Applications in Agriculture (e.g., Nanotechnology, Biocontrol Agents, Endophytes and Microbiomes)
• New Crop Yield Technology Companies Improving Sustainability
As the recently elected Vice-Chair, I am looking forward to working as your 2023 Program Chair in Indianapolis, Indiana and San Francisco, California. I am excited to get back to in-person meetings this fall in Chicago, with the excellent program that Heidi and others have put together. Because of the pandemic, the AGRO 50th Anniversary festivities, which were originally planned for the San Francisco meeting in 2020, are now making a full circle back to San Francisco for the Fall 2023 meeting, allowing us to finally celebrate AGRO 50th and beyond. These activities are being coordinated by Ken Racke and Jeanette Van Emon.

In addition to the regular programming at the Fall 2023 meeting, a reduced AGRO program is also being organized at the Spring 2023 meeting in Indianapolis. This meeting will focus on the proximity to Corteva and other industry partners, the local ACS section, and local universities. Four symposia have been chosen, and the call for papers are present and begin on p. 45.

Programming Committee. The Strategic Programming Committee, chaired by the Vice-Chair, provides an ongoing forum for discussion of multi-year programming based on the standing topics of proven interest. This committee also discusses ways to partner through programming with other ACS Divisions and other national and international partners. If you are interested in working on the programming committee for the San Francisco meeting, and beyond, please contact me directly (adgross@vt.edu) or the incoming Vice Chair, James Foster (james.foster@ejgallo.com).

A key activity of the Programming Committee is to maintain a volunteer list of topic champions in support of symposia planning. The role of the topic champion is to a) serve as a general resource and an expert in their given area, b) identify timely symposia topics, and c) support specific symposia through identification and mentoring of co-organizers.

The overall theme for the San Francisco meeting is Harnessing the Power of Data. A key opportunity to discuss programming ideas for the San Francisco fall meeting will be at the Blues and Brews Brainstorming Session, which will occur in-person at McCormick Place Convention Center at the Chicago meeting in the Skyline Ballroom on Tuesday August 23, 2022, from 6:30 to 7:30 pm. I look forward to hearing from you in this fun, face-to-face live forum. However, there is no need to wait until Blues and Brews, if you have a great idea, please contact me directly.

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Be a part of the fun & creative
AGRO Program Brainstorming
and
Blues & Brews for San Francisco

Tuesday, August 23, 2021
6:30 – 7:30 PM

- Planning for the San Francisco National Meeting in 2023
- San Francisco Meeting Theme: Harnessing the Power of Data
- Creative brainstorming about future AGRO programming
- Learn more about how easy it is to organize a symposium

Socializing, Free Drinks

THIS WILL BE A LIVE ONLY EVENT
BUT YOU CAN SEND AARON GROSS YOUR IDEAS!
adgross@vt.edu
AGRO Strategic Programming
Committee Standing Programming and Champions

Additional Volunteers Needed for the 2023 San Francisco Meeting
Aaron Gross, 2023 Committee Chair; adgross@vt.edu

Agrochemical Residues, Analytical and Metabolism
Chemistry, and Metabolomics
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Lisa Buchholz, lisa.buchholz@corteva.com
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Agricultural Biotechnology
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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
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Cathleen Hapeman, cathleen.hapeman@usda.gov
Patrick Havens, pat.havens@corteva.com
Jim Seiber, jnseiber@ucdavis.edu

Biorational Pesticides, Natural Products, Pheromones, and Growth Regulators in Agriculture
Joel Coats, jcoats@fstate.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
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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
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Formulation and Applications Technology
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Human and Animal Health Protection: Vector Control, Veterinary Pharmaceutical, Antimicrobial, and Worker Protection Products
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Edmund Norris, edmund.norris@usda.gov

Human Exposure, Health, and Risk Assessment
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Amy Ritter, rittera@waterborne-env.com

Non-Food/Feed Production and Uses of Ag Commodities and Byproducts
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Pesticides, Pollinators, and Non-target Arthropods
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Joe Wisk, joseph.wisk@basf.com

Regulations, Harmonization, and MRLs
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Technological Advances and Applications in Agriculture (e.g., Nanotechnology, Biocontrol Agents, Endophytes and Microbiomes)
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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
<table>
<thead>
<tr>
<th>Activity/Event</th>
<th>Leaders/Champions</th>
<th>Status</th>
<th>Actions Required</th>
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| AGRO Lunch and Learn Webinar Series | Solito Sumulong | • Seminars are being scheduled for 2022 – 2023 academic year  
• Submit proposals for webinars | • Watch for eNewsletter announcements and sign-up to participate |
| 265th ACS National Meeting March 26 – 30, 2023 Indianapolis, Indiana | Aaron Gross  
Ken Racke | • Symposia are set  
• Call for papers are on ACS and AGRO website (see page 45) | • Submit abstracts by October 17, 2022 |
| IUPAC International Congress of Crop Protection Chemistry March 14 – 17, 2023 New Delhi, India | Laura McConnell | • Check out the website iupac2023.in | • Submit abstracts by November 30, 2022 |
| 9th LAPRW – Food and Environment Panama City, Panama May 21 – 24, 2023 | Steve Lehotay | • Check website for updates and abstract submission meeting https://www.laprw2023.com/en | • Register before March 17, 2023, for best rates |
| 58th North American Chemical Residue Workshop July 23 – 26, 2023, Marriott Harbor Beach Resort Fort Lauderdale, Florida | Steve Lehotay | • Check website for updates and details www.nacrw.org  
• Co-Sponsored by AGRO | Submit abstracts  
✓ Oral presentations typically due in March  
✓ Poster presentations typically due in May |
| 266th ACS National Meeting August 13 – 17, 2023 San Francisco, California | Aaron Gross | • Planning underway  
• Symposia proposals (Call for Papers) due November 15, 2022 | • Volunteers NEEDED!!  
• Attend Blues and Brews August 23, 2022  
• Send ideas to Aaron |
| 59th North American Chemical Residue Workshop July 14 – 17, 2024, Marriott Harbor Beach Resort Fort Lauderdale, Florida | Steve Lehotay | • Check website for updates and details www.nacrw.org  
• Co-Sponsored by AGRO | Submit abstracts  
✓ Oral presentations typically due in March  
✓ Poster presentations typically due in May |
| 268th ACS National Meeting August 13 – 17, 2024 Denver, Colorado | James Foster | • Planning underway  
Symposia proposals (Call for Papers) due November 15, 2023 | • Volunteers and champions are always NEEDED!!  
• Attend Blues and Brews San Francisco in 2023  
• Send ideas to James |

Future ACS National Meetings

- **265th ACS National Meeting & Exposition**  
  March 26-30, 2023, Indianapolis, Indiana  
  *Crossroads of Chemistry*

- **266th ACS National Meeting & Exposition**  
  August 13-17, 2023, San Francisco, California  
  *Harnessing the Power of Data*

- **267th ACS National Meeting & Exposition**  
  March 17 – 21, New Orleans, LA  
  *Many Flavors of Chemistry*

- **268th ACS National Meeting & Exposition**  
  August 18-21, 2024, Denver, Colorado  
  *Elevating Chemistry*

- **269th ACS National Meeting & Exposition**  
  March 23 27, San Diego, CA

- **270th ACS National Meeting & Exposition**  
  August 17-21, 2025, Washington, DC
Thinking about organizing a symposium for a National Meeting?

**AGRO SUPPORTS SYMPOSIUM ORGANIZERS**

Assistance with

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

**7 EASY STEPS FOR ORGANIZING A SYMPOSIUM**

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

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**AGRO Lunch and Learn Webinar Series**

Co-sponsored by Eurofins Agroscience Services

Recordings of the 2019 – 2022 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 2022 – 2023 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
Amanda Chen, Laura McConnell, Natalia Peranginangin, James Seiber, Tom Sparks, Daniel Swale

**2022 - 2023 Webinars**

- **September 14, 2022, 12:00 – 1:00 PM EDT**
  **Impact of Adjuvant and Formulation Type on UAV Application Description**
  Jason Wall, Crop Care Applications Team Leader, Croda, Inc

- **Oct 19, 2022, 12:00 – 1:00 PM EST**
  **Navigating the Changing Landscape of State and Federal Regulations**
  Brian Koontz, Industrial Hemp Program Manager, State of Colorado Hemp Program

- **Date to be announced**
  **Natural compounds for the health of plants, humans, and the environment – Sterling Hendricks Memorial Lectureship Award**
  Stephen O. Duke, University of Mississippi

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**SPECIAL THANKS TO OUR SPONSOR FOR THEIR GENEROUS CONTRIBUTION!**
The Agrochemical Division (AGRO) of the American Chemical Society is comprised of academics, government, and industry scientists dedicated to advancing agricultural productivity, public health, and the environment.

While we all enjoy the variety of horticultural crops (typically, fruits and vegetables) from the US west and east coasts and from the south to the north, the row crops grown in the midwest, also known as the Crossroads of America, play a vital role in the global food system. The importance of this growing region to world agriculture is the reason why AGRO will participate with a limited program at the Spring 2023 ACS national meeting!

Additionally, we will have a fantastic opportunity to tour an industry research and development center and discuss the state-of-the-art efforts to develop and bring novel chemistries to life with agricultural industry scientists. This meeting will serve as a preview to the full program at the Fall 2023 National Meeting and Exposition in San Francisco where AGRO will finally come together to celebrate 50 years with expanded programing, the 50th anniversary gala, and a special Ag tour.

Even though AGRO will have a small program at the Spring meeting compared to what we typically host in our Fall program, our Indianapolis program will be full of cutting-edge science research presentations and discussions. This will be achieved with four planned symposiums on hot topics for row crops, agroecosystems, future agricultural technologies, and the ever-growing issue of scientific illiteracy. Detailed descriptions of the symposia, the Call-for-Papers, follow. Consider submitting an abstract today.

Please note: We intend for this to be an in-person meeting to take advantage of the U.S. Midwest serving as the Crossroads of America and the regional agricultural activity. This will truly be a special AGRO meeting in a location too good to pass up. If we do not see you in Indy, we hope to see you in San Francisco!
Purpose of Symposium

This symposium will share examples and best practices describing how scientists can contribute to public education of scientific regulations, guidelines, and weight-of-evidence. Any level of expertise is welcomed to submit examples of publications, communication tools and concerns on policy issues that might need further attention and possibly joint efforts and cross-sectorial cooperation, at national and international level.

The outcome of the symposium is more important than ever, as it attempts to provide solutions to increase the effectiveness of scientific education to the public in an era of skepticism and scientific illiteracy.

Participation and contributions are welcome from members of other ACS Divisions, including ANYL, ENVR, ORGN, and AGFD, as well as other scientific organizations.

Suggested Topics

- Regulatory progress and gaps
- FIFRA improvements
- The Endangered Species Act (ESA) conundrum
- Education and public outreach
- Maximum Residue Limits (MRLs) and trade
- Building trust with consumers and agencies (transparency, communications)
- Food safety paradigms
- Educational programs
- Communication tools

For further information, contact the organizers:
Carmen Tiu, Corteva Agriscience, 317-372-4215, carmen.tiu@corteva.com
Ronda Hamm, Corteva Agriscience, ronda.hamm@corteva.com
Genevieve O’Sullivan, CropLife America, 202-872-3864, gosullivan@croplifeamerica.org

Submit abstracts of 2500 characters or less to
http://maps.acs.org
August 15 – October 17, 2022
Call for Papers
265th ACS National Meeting & Exposition
March 26-30, 2023
Indianapolis, Indiana USA

Innovative Technologies to Support 21st Century Agriculture

Purpose of Symposium

The development of new agricultural production technologies will be critical to support the needs of the growing world population in the face of ever-shrinking cultivated land, climate change, resistance, and regulatory pressure. The discovery of new agrochemicals will be vital, but new technologies for active ingredient analysis, production, delivery, and deployment (formulations, targeted spray applications, seed treatments, etc.) are needed. An engaged community with a forum to discuss emerging technologies will help drive the future of agriculture.

This symposium is designed to appeal to a broad audience of academic and industry experts to discuss emerging technologies that will support 21st Century Agriculture and to help guide the future of crop protection. The symposium may be of interest to other ACS divisions such as ENVR, ANYL, AGFD, ORGN and I&EC.

Suggested Topics

- Discovery chemistry (traditional agrochemistry)
- Seed and soil applied chemistry development
- Process Chemistry Development
- Natural products and biologicals
- Animal health-related products and urban pest control
- Digital agriculture
- Advances in formulations, targeted spray applications
- Emerging analytical technologies (offer posters)

For further information, contact the organizers:
John Rohanna, Corteva Agriscience, 317-337-3501, john.rohanna@corteva.com
David Jones, Corteva Agriscience, 317-337-5151, david.jones-1@corteva.com
Robb DeBergh, FMC Agricultural Solutions, robb.debergh@fmc.com
Lucas Huntimer, Elanco Animal Health, lucas.huntimer@elancoah.com
Naresh Pai, Bayer CropScience, naresh.pai@bayer.com
Tobias Harschneck, Boehringer-Ingeheim, tobias.harschneck@boehringer-ingelheim.com

Submit abstracts of 2500 characters or less to http://maps.acs.org
August 15 – October 17, 2022
Midwest Row Crop Revolution: Agrochemistry State of Affairs
after a Quarter-Century of Biotech-Enabled Agriculture

Purpose of Symposium

The introduction of genetically modified row crops to the Midwestern U.S. and Southern Canada some 25 years ago signaled the beginning of a new agronomic era. Dramatic changes in agricultural practices, including those related to pest management and agrochemical use, have accompanied the widespread adoption of corn and soybean varieties with tolerance to non-selective herbicides and resistance to above- and below-ground insect pests. Currently, more than 90 percent of North American corn and soybeans are produced using genetically modified varieties.

The purpose of this symposium is to bring together experts from academia, industry, government, and advocacy groups to share data and insights regarding the impacts this Midwest row crop revolution has had on agriculture, environmental quality, human well-being, and the agrochemical enterprise.

In addition, implications of how current agrochemical, biotech, and agronomic trends may impact the future will be debated. Perspectives will be invited as to the most desirable options that support the drive towards increased sustainability.

Suggested Topics

- Changes in integrated pest management practices and agrochemical use patterns
- Implications for agrochemical and seed research and development efforts
- Weed resistance and management experiences
- Considerations related to sustainability, conservation management, and ecosystem services
- Transport of pesticides and nutrients and significance for land, water, and air quality
- Human exposure considerations, including food residue standards and impact on trade
- Ecological impact trends, including biodiversity, pollinator health, and endangered species populations
- Best management practices to minimize impacts of agrochemistry in the Midwest region
- Evolving grower and consumer perspectives toward agriculture, agrochemicals, and biotechnology
- Changes in regulation of agrochemicals and seeds
- Evolutionary and/or revolutionary changes anticipated for the coming quarter century

For further information, contact the organizers
Ken Racke, Corteva Agriscience (Retired), 317-358-5618, kenracke@gmail.com
Tom Mueller, University of Tennessee, 865-974-8805, tmueller@utk.edu
Fred Whitford, Purdue University, 765-494-1284, fwhitford@purdue.edu

Submit abstracts of 2500 characters or less to
http://maps.acs.org
August 15 – October 17, 2022
Understanding Environmental Quality and Health in Agroecosystems

Purpose of Symposium

In modern agriculture, the use of modern integrated cropping systems has led to enormous gains in productivity and efficiency over the last half-century. Although understanding of these systems in an agronomic sense is quite advanced, their role as an overall ecosystem continues to be a fruitful avenue of research.

The purpose of this symposium is to bring together experts from a variety of disciplines working within academia, government, advocacy groups and industry to present current research in how agroecosystems influence environmental quality, how such effects can be quantified, and how policy makers and the public may view the future of the agricultural enterprise in this context.

Suggested Topics

- Defining and assessing ecosystem services offered by agroecosystems
- Implications of current and future agronomic systems on biodiversity
- Measurement and modeling of key factors impacting agroecosystems and their surroundings
- Policy implications of balancing agricultural productivity and environmental quality
- Management of agroecosystem impacts on wildlife and pollinators
- Implications of potential impacts on soil biodiversity
- Environmental risk mitigation and management programs at local to national scales
- Remediation of environmental impacts at local to national scales

For further information, contact the organizers:
Pat Havens, Corteva Agriscience, 317-337-3465, pat.havens@corteva.com
Tamara Lunsman, Corteva Agriscience, tamara.lunsman@corteva.com
Adam Dolezal, University of Illinois at Urbana-Champaign, 217-300-6762, adolezal@illinois.edu

Submit abstracts of 2500 characters or less to
http://maps.acs.org
August 15 – October 17, 2022
SAVE THE DATE

March 29, 2023
Crossroads of Ag Innovation
AGRO Evening Social

- Come celebrate with AGRO during the Spring 2023 ACS meeting in Indianapolis
- Hosted by Corteva Agriscience at its stunning Indy R&D campus
- Transportation will be provided
- Network and engage with fellow scientists
- Enjoy refreshments and have fun
- Test your knowledge and win prizes

More Details Coming Soon!
SAVE THE DATE

North American Chemical Residue Workshop 2023

July 23 – 26, 2023
Marriott Harbor Beach Resort
Fort Lauderdale, Florida, USA

JOIN US!

Our workshop reflects the scope and international nature of topics covered in a scientific program which includes: pesticides, veterinary drugs, environmental contaminants, toxins, and other chemicals of concern in food, environmental, and related applications.

Typical Submission Deadlines:
Oral presentations: March 31
Poster presentations: April 21
NACRW Student Scholarships: April 21

www.nacrw.org
IUPAC International Award for Advances in Harmonized Approaches to Crop Protection Chemistry

This award recognizes individuals in government, intergovernmental organizations, academia, and industry who have exercised personal leadership for outstanding regulatory, public policy, and/or educational contributions supporting international harmonization of crop protection chemistry.

The award is administered by the IUPAC Advisory Committee on Crop Protection Chemistry, a body of the IUPAC Division of Chemistry and the Environment, and is presented on a roughly biennial basis.

The next award will be presented as part of the Agrochemicals Division program for the Fall 2023 American Chemical Society meeting in San Francisco, USA, during August of 2023. Awardees receive an honorarium plus travel and per diem reimbursement to attend the award presentation ceremony.

Nominations for the 2023 award are due by December 1, 2022 and should be sent to Dr. Laura McConnell at laura.mcconnell@bayer.com and will consist of:

- A nomination letter including a description (200-1000 words) of the reasons why the nominee should receive this award, stressing the individual’s major accomplishments toward international harmonization of crop protection chemistry.

- A curriculum vitae of the candidate that includes places and names of employment, professional affiliations, committee and working group assignments, and listing of relevant regulatory guidance documents, reports, and/or publications.

- One or more letters of support.

IUPAC thanks Corteva Agriscience for providing continued corporate sponsorship of this award.

Past Awardees:

2019 – Mark R. Lynch (posthumously), Department of Agriculture and Food, Ireland
2016 – Daniel L. Kunkel, IR-4 Project, Rutgers, NJ, USA
2014 - Árpád Ambrus, National Food Chain Safety Office, Budapest, Hungary
2012 - Lois A. Rossi, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, USA
2010 - Denis J. Hamilton, Animal and Plant Service, Queensland Department of Primary Industries, Brisbane, Australia
IUPAC
15th ICCPC 2023
14-17 March 2023 | New Delhi
iupac2023.in

Call for Papers
Deadline 30 Nov 2022

Program Themes
- Discovery and Optimization of New Crop Protection Products
- Biopesticides and Biocontrol Agents
- Mode of Action and Development and Management of Resistance
- Biotechnology
- Advances in Analytical Technologies, Informatics, and Nanotechnologies
- Ecological and Human Safety Assessment of Products
- Digital and Precision Agriculture
- Regulatory Landscape, Policy, Trade, and Science Communication

Sponsorship Opportunities Available

Organized by
Society for the Promotion of Sustainable Agriculture (SPSA)
iupac2023@gmail.com

Endorsed by
INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY
The ninth edition of LAPRW will be held in a person way, chaired by Msc. Brenda Checa and sponsored by Ministerio de Desarrollo Agropecuario.

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

Plenary lectures from international scientists
Lectures from Latin American researchers

• young scientists’ presentations
• posters and discussion
• exhibition and vendor seminars
• Round tables discussions
• social activities networking

Pre- and post-workshop courses

Contact: Brenda Checa-Chair of LAPRW2023
e-mail: laprw2023@mida.gob.pa
Venue: Sheraton Grand Panamá Hotel
www.laprw2023.com
AGRO Division Officers, Councilors, and Executive Committee

2022 AGRO DIVISION OFFICERS

Division Chair
Qing X. Li
808-856-2011
qinglx@hawaii.edu

Program Chair
Heidi Irrig
336-632-7243
heidi.irrig@syngenta.com

Vice Chair
Aaron Gross
540-232-8448
adgross@vt.edu

Secretary
Sharon K. Schneider
605-693-5201
sharon.schneider@usda.gov

Treasurer
Del A. Koch
660-248-1911
dkoch@agrodiv.org

2021 – 2023

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

EXECUTIVE COMMITTEE MEMBERS

2020 – 2022

James Foster, james.foster@ejgallo.com>
Pat Havens, patrick.havens@corteva.com
Mingming Ma, mingming.ma@corteva.com
Kalumbu Malekani, kmalekani@smithers.com
Ralph Warren, ralph.warren@basf.com

2021 – 2023

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Andrew Coates, awecoates@gmail.com
Amy Ritter, rittera@waterborne-env.com
Solito Sumulong, solito.sumulong@gmail.com
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2022 – 2024

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

**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 appoints eight or more members.

**COMMISSION 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.

**EVALUATION 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.
AGRO Division Committees

AWARDS COMMITTEE
Qing Li, Chair, 808-956-2011, 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, James Seiber, David Soderfund, Keith Wing, Izuru Yamamoto

BYLAWS COMMITTEE
Rodney Bennett, rodbennett@dac@gmail.com
Jeanette Van Emon, jmvanemon@gmail.com

COMMUNICATIONS COMMITTEE
Cathleen Hapeman, Chair, PICOGRAM Editor
301-908-8165, cathleen.hapeman@usda.gov
Edmund Norris, Website Coordinator
352-374-5825, edmund.norris@usda.gov
Sharon Schneider, Awards Coordinator
605-693-5201, sharon.schneider@usda.gov
Leah Riter, Social Media Coordinator
636-737-9331, leah.riter@bayer.com
Pat Havens, eNewsletter Coordinator
317-337-3465, pat.havens@corteva.com

MEMBERS: Emily Saad, Katoria Tatum Gibbs, Spencer Walse

DEVELOPMENT COMMITTEE
Mingming Ma, Chair, 317-337-3500, mingming.ma@corteva.com
James Foster,jfoster@agrodiv.org
Scott Jackson, 919-746-9223, sjackson@vestaron.com
Del Koch, Ex Officio/Treasurer, 660-248-1911
dkoch@agrodiv.org
Laura McConnell, 636-737-4787, laura.mcconnell@bayer.com
Ralph Warren, 919-547-2064, ralph.warren@bayer.com

EARLY CAREER SCIENTIST COMMITTEE
Aaron Gross, Co-Chair, 540-232-8448, adgross@vt.edu
Sara Whiting, 319-512-9385, sara.whiting@bayer.com
Sasha Kwaske, 636-737-2320, sasha.kwaskein@bayer.com
Kalumb Malekani, Early Career Scientist Symposium Mentor, 508-295-2550, kmalekani@smithers.com

MEMBERS: Diana Aga, Troy Anderson, Joel Coats, Cathleen Hapeman, James Klimavicz, Steven Lehotay, Edmund Norris, Scott O’Neal, Daniel Swale, Nurhayat Tabanca

FINANCE COMMITTEE
Joel Coats, Chair, 515-294-4776, jcoats@iastate.edu
Del Koch, Ex Officio/Treasurer, 660-248-1911
dkoch@agrodiv.org

MEMBERS: Kevin Armbrust, Al Barefoot, Barry Cross, Scott Jackson, Berna McLaughney, Ken Racke

INTERNATIONAL ACTIVITIES COMMITTEE
Ken Racke, Co-Chair, kenracke@gmail.com
Carmen Tiu, Co-Chair, 317-337-4941, carmen.tiu@corteva.com

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

LIASON COMMITTEE
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Stephen Duke, 662-915-7880, sduke@olemiss.com
Paul Reibach, 508-317-0108, phrfect@aol.com
Andy Newcombe, 302-584-5999, andy.newcombe@arcadis.com

MEMBERSHIP COMMITTEE
Chris Bianca, Chair, 484-804-6962, chris.bianca@jrfamerica.com

MEMBERS: Steven Lehotay, Leah Riter, Daniel Swale

NOMINATING AND ELECTION COMMITTEE FOR 2023
Qing Li, Chair, 808-956-2011, qingl@hawaii.edu
Leah Riter, 636-737-9331, leah.riter@bayer.com
Cheryl Cleveland, 919-547-2407, cheryl.cleveland@basf.com

PROGRAMMING COMMITTEE FOR 2022 (see p. 42)
Aaron Gross, Chair, 540-232-8448, adgross@vt.edu
Webinar SubCommittee (see p. 44)
Solito Sumulong, 816 841-0935, solito.sumulong@agrithority.com

AGRO 50TH CELEBRATION COMMITTEE
Ken Racke, Co-Chair, kenracke@gmail.com
Jeanette Van Emon, Co-Chair, jmvanemon@gmail.com

STRATEGIC PLANNING COMMITTEE
Leah Riter, Lead Co-Chair, 636-737-9331, leah.riter@bayer.com
Kevin Armbrust, Co-Chair, 225-578-3030
Edmund Norris, Co-Chair, 352-374-5825, edmund.norris@usda.gov
AGRO Division Virtual Meeting
March 3, 2022
2:00 – 3:30 PM CDT
Sharon Schneider, Secretary

ATTENDANCE
Officers: Qing Li, Chair; Heidi Irrig, Program Chair; Aaron Gross, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Leah Riter, Past-Chair; Rodney Bennett, Jeanette Van Emon, Councilors; Kevin Armbrust, Alternate Councilor
Executive Committee Members (EC): Amanda Chen, Andrew Coates, James Foster, Shanique Grant, Pat Havens, Mingming Ma, Kalumbu Malekani, Amy Ritter, Thomas Sparks, Solito Sumulong, Katoria Tatum-Gibbs, Ralph Warren, Sara Whiting
Committee Chairs and Guests: Cheryl Cleveland, Joel Coats, Cathleen Hapeman, Sasha Kweksin, Laura McConnell, Tabanca Nurhayat, Peney Patton, Ken Racke

1. Welcome – Qing Li
2. Fall National Meeting
   • General meeting updates – Heidi Irrig
     o Will be looking for volunteers – contact Heidi if you’d like to volunteer, for example: AGRO hospitality table for in-person attendance, Blues and Brews, coffee hours, awards social
     o Update on meeting format
       ▪ Meeting will be hybrid with 4 options: in-person, virtual, hybrid, or on demand.
       ▪ CDC protocols will be in place; attendees must show their vaccination information when they pick up their badge. A constant stream of information is required to keep everyone engaged and updated as things change.
       ▪ Uncertainty is compounded because organizations/employers are waiting until ~6 weeks out to make decisions on travel.
   • Reimbursement of symposia organizers – Del Koch
     Del has received a couple requests to reimburse symposium organizers but historically, only speakers have been reimbursed.
     o What would AGRO like to do? There might be exceptions, but standard would be that only speakers should receive reimbursement.
     o Recommendation that the policy be clarified. There was a letter used in 2019 that delineated the policy.
     o Will revisit that letter and ensure that it is sent to symposium organizers by Peney.
   • Consideration for reimbursing of government and other speakers who have complicated monetary issues – Rod Bennett
     o Since it is difficult for government employees to accept funds, is there a way to simplify reimbursement? Each government agency and sub-agency has their own policies and procedures, so there is no blanket approach.
     o AGRO’s approach should cover all potential speakers; speakers will need to navigate their own employer’s process.
   • Pins commentating AGRO’s 50th Anniversary – Heidi Irrig
     AGRO 50th pins are in Heidi’s possession; she will bring them to the meeting
   • Masks made for the Fall 2022 meeting with the Sustainability in a Changing World theme or AGRO logo – Heidi Irrig
     o ACS will design and distribute for free a mask to meeting attendees that will have ACS logo/meeting.
     o Looking for a couple volunteers to come up with ideas for AGRO-specific sustainable items (one suggestion was a reusable badge holder). Please present an estimated cost.
   • Timing for PICOGRAM / Call for Papers – Heidi Irrig, Cathleen Hapeman
     o The spring PICOGRAM will be printed. PICOGRAM content will be posted on the AGRO website.
     o Calls for papers are ready to be posted. Abstract submission closes March 14.
     o [Post-meeting update: the abstract submission deadline was extended to March 29.]
     o Deadline for content to be included in the Fall PICOGRAM is June 1.
   • Blues & Brews – Aaron Gross
     o New ACS rule: Technical sessions to be held 8 am to noon, 2 to 6 pm are live in-person. No division may hold non-technical sessions during these times.
     o ACS is discussing how Council will meet.
     o Tentative plan is to have in-person Blues and Brews and then follow up with a virtual session afterward. Aaron will be looking for volunteers.
3. Special AGRO Programming for the Spring 2023 Indianapolis Meeting – Ken Racke
   • Background: A small AGRO program is planned for the Spring 2023 ACS meeting in Indy. The goal is to boost AGRO influence and membership via regional/local interests. The technical program is to complement, not duplicate, Chicago and San Francisco symposia. The Indy Planning Committee will partner with 2023 Program Chair, Aaron Gross.
   • Progress so Far: Have developed a plan of key milestones for the Indy ACS meeting. Initial outreach located interest within Corteva, Purdue Univ., Elanco Animal Health, and SePRO, as well as the Indiana ACS Local Section. First technical program brainstorming session identified four potential symposium topics of high interest on a regional basis to include oral and poster sessions. Sponsorship funding confirmed for hosting of an AGRO social event. David Jones of Corteva will join Ken Racke in helping coordinate Corteva engagement efforts (Suheleen Cespedes Vasquez stepping down)
   • Next Steps: Confirm symposium topics and identify co-organizers by mid-April; finalize a 1-page “call for papers” for each symposium by May 15 for the fall PICOGRAM. Hold a brainstorming session and set a tentative date for the AGRO social event. Develop an agrochemical public outreach component for the Indy 2023 plan.
   • May be opportunities for funding through LSAC. Suggestion to list Aaron and Ken as joint program chairs so that both are able to access MAPS and be in the loop on ACS correspondence.
4. AGRO 50th and Beyond – 2023 Fall in San Francisco
- Overall project – Ken Racke, Jeanette Van Emon, Jim Seiber
  Next phase planned as part of the Fall 2023 ACS meeting in San Francisco. Organizing efforts led by Ken Racke and Jeanette Van Emon. Key components include a symposium (AGRO evolution and future opportunities), gala reception, and agricultural field tour. Request to reconstitute an AGRO 50 and Beyond Planning Committee to guide events; will need volunteers
- Open IPGs – AGRO tour – Heidi Irig, Andrew Coates
  Andrew has reached out to UC Davis. Hoping to reassemble the ag tour team that was already involved in the prior planning, plus anyone else who wants to join in the planning. Plans to utilize the contacts and tour stop sites that they had signed on when they first tried planning the ag tour (which was in San Francisco). Andrew will coordinate an ag tour planning meeting once everyone is on board
- Cooperative Agreement with the Society of Quality Assurance – Heidi Irig
  Peney and Heidi will have an offline meeting.
- Recent Changes in Communications Committee and its Activities – Cathleen Hapeman
  Ed Norris and Spencer Walse will be taking over parts of the website maintenance. There is no longer a public relations group. The communications committee handles the website, the webinars (more under purview of program chair), PICOGRAM, and e-newsletter
- Election candidates for Officer and EC ballot – Qing Li
  Leah Riter is looking for candidates for all elected positions for annual elections this summer. Candidates for EC, Vice Chair, Secretary, and Treasuries are encouraged to contact Leah via email. Any member is eligible to nominate another member; self-nominations are also welcome.
- Financial Report – Del Koch
  - The budget for the 2021 operating account projected a $64K loss but actuals showed a gain of $25K. Operating expenses were lower than projected because of the virtual meeting format and only one PICOGRAM being printed and shipped. In 2021 we received a larger-than-normal allocation from ACS.
  - The 2022 budget projects a $92K operating loss but some items will be less than projected (Pacificchem support, PICOGRAM costs, annual meeting costs).
  - Investments showed a gain of $85K. There were no withdrawals from the AGRO Endowment Fund accounts because our bank account could cover all expenses; our bank account balance is currently $46K. In a normal year, we spend more than we brought in; this was not the case in 2021.
  - Special allocation to Divisions – ACS may ask for information on how AGRO used these funds to support the ACS mission.
- Nominations and Activity Report – Qing Li
  - Nominations: Should continue strong nominations for AGRO Fellow; ACS Fellow; International and Innovation Award
  - Division Row is back in person and will take place in San Diego, CA on Monday, March 21 at Sci-Mix. ACS will provide space for the division posters in a prominent location to give divisions more exposure to national meeting attendees—particularly the younger chemists that divisions are eager to engage. Kevin Ambrust and Laura McConnell volunteered to put up an AGRO poster at the spring meeting, using the poster AGRO already printed.
  - ACS is offering divisions a “seat” to have access to the Spring and Fall ACS meeting metrics dashboard. The dashboard will allow divisions to explore visitor numbers, length of visit, and some demographics for the virtual portion of the hybrid meeting, including division-organized symposia and poster sessions. This should be a valuable tool in collecting metrics for these events and planning. It does NOT have in person attendance, and so it will only be a part of the attendance picture. AGRO’s designee will be the Division Secretary, who will be responsible for downloading data and sending to EC.
  - After a 1-year delay, Pacificchem 2021 was successfully held as a 100% virtual conference during December, 2021. The program included 10 AGRO-inspired symposia comprised of 79 oral and 6 poster presentations; each symposium had one or more AGRO co-organizers.
  - The program was smaller than originally prepared for 2020. Numbers of presentations and attendees were both reduced versus expected. No AGRO networking event was organized. Overall, the conference participation was valuable for AGRO, but overall meeting size and satisfaction were impacted by COVID and the virtual format
  - No travel support was needed. No AGRO budget was required (EC approved up to $65K)
  - AGRO International Activities Committee recommends that the Division plan for additional programming engagement at the next Pacificchem in 2025
- 2022 Strategic Planning Retreat – Leah Riter, Cheryl Cleveland
  Will be transferred to Qing and Heidi; they will meet offline. Plan was to make use of ACS’s facilitation; should be at least hybrid if not completely virtual
- Proposal to create an AGRO archive
  Referred to a volunteer sub-committee of Bennett, Hapeman, Schneider
- Councilors Report
  - ACS is working on formatting national meeting into a hybrid. ACS and ACS Council is learning that meeting in a hybrid environment is different than in-person.
  - ACS has a new membership payment structure so that divisions can expand membership and work more with local sections. ACS is interested in how can we benefit newer/younger chemists, for example in network development; how do we best serve all of our members?
  - There are no Councilor-only committees in ACS; all are open to ACS members. If you are interested in participating in ACS committees, please volunteer.
- Development Committee – James Foster
  - 2020 AGRO sponsorship included pledges of $45,200, with $41,290 received to date. Pledges for awards were $19K (all received); for symposia were $12K $5290 received, and for the 50th anniversary celebration were $7.9K ($5K received).
  - Pledges and receipts increased in every category compared with 2019; totals mark an increase of >30% over the previous year, even without the special 50th anniversary line item.
• Sponsor-specific thank-you letters were sent to all sponsors in October 2021. Fall 2022 sponsorship request letters were sent out in early February 2022.
• Yelena Sapozhnikova sent the sponsorship request letter to all active AGRO members.

Theme: The Many Flavors of Chemistry. ACS will prioritize symposia and events which are sponsored by two or more divisions and related to the theme, cross listing with MPPG.

16. Round Table
ChemLuminary Awards: Leah has the new AGRO trophies.

AGRO Division Virtual Meeting
May 25, 2022
1:00 – 2:30 PM CDT
Sharon Schneider, Secretary

ATTENDANCE
Officers: Qing Li, Chair; Heidi Irrig, Program Chair; Aaron Gross, Vice-Chair; Sharon Schneider, Secretary; Del Koch, Treasurer; Leah Riter, Past-Chair; Rodney Bennett, Jeanette Van Emon, Councilors
Executive Committee Members (EC): Amanda Chen, Andrew Coates, James Foster, Shanique Grant, Pat Havens, Mingming Ma, Ed Norris, Amy Ritter, Thomas Sparks, Solito Sumulong, Katoria Tatum-Gibbs, Ralph Warren
Committee Chairs and Guests: Joel Coats, Cathleen Hapeman, Laura McConnell, Peney Patton, Ken Racke

1. Welcome – Qing Li
2. Fall National Meeting
• General meeting updates – Heidi Irrig
  o No information yet regarding the location of AGRO sessions in Chicago. Peney has made room reservations for non-technical events. Post-meeting update: All AGRO technical sessions are scheduled to be held at the McCormick Place Convention Center.
  o Received a total of 280 abstracts – 30+ are posters and ~20 are in-person posters. Notifications of acceptance are expected today.
• Update on meeting format – Heidi Irrig
  o ACS has 3 different types of sessions for this meeting.
    1) The majority will be in-person only like pre-COVID. For AGRO, about half are in-person only.
    2) The rest of the AGRO sessions will be hybrid. There will be an audience in the room. The speaker may be in person or online. Slides will be projected in the room. If you are virtual, you will hear the speaker and see the slides. Most divisions were only allotted one hybrid session. ENVR and AGRO received the most; ENVR received 22 and AGRO was allotted 18 hybrid half-day sessions. AGRO requested one more, so we have 19.
    3) Third option is virtual-only. AGRO is not doing any virtual-only sessions.
  o The Wednesday afternoon posters will be in-person with a simultaneous virtual-only session – each poster will be live or virtual. Posters with a 3-minute summary will be available on-demand during the meeting and for 2 weeks afterward. Oral presenters may similarly record their talk and make it available for on-demand viewing.
• Reimbursement of symposia organizers – Del Koch
  Allocation will be a total of $700 per half-day session. Each symposium’s organizer(s) will determine how to spend these funds to support speaker travel.
• SWAG and Pins Commemorating AGRO’s 50th Anniversary – Heidi Irrig
  o Masks will likely no longer be needed so Shanique Grant volunteered to look into different items and costs Grant provided prices for a few options for 500 units that ranged from about $2000 to >$5000 and included lanyards, notebooks, and travel mugs.
  o Input from EC members: customize the product with the AGRO logo. Cathleen will ask AGRO’s graphics design company for contacts/products. Suggestion for AGRO to pay to have the items shipped to the meeting and extras sent back to the custodian.
  o Heidi Irrig has the 50th anniversary pins but there are fewer than 500. It appears we may be out of the regular Erlenmeyer flask pins. Recommendation to order additional pins – both the 50th anniversary and the Erlenmeyer.
  o Shanique will circulate some options of AGRO promotional goods, and EC members will vote. Recommendation to offer things with the 50th logo available only at the San Francisco meeting; at other meetings, AGRO should distribute things with the regular AGRO logo.
MOTION: The subcommittee is authorized to obligate no more than $10K for regular AGRO pins plus 50th anniversary AGRO pins plus other promotional items to be distributed at the Chicago meeting and other AGRO-sponsored meetings.
Motion Passed
• Volunteers needed
  AGRO Social, hospitality desk, Division Row poster, other duties.
ACTION: Volunteers will be solicited by e-mail with vacant spots recruited at the meeting. Suggestion to re-activate a social committee to manage outreach volunteers.
• Blues & Brews – Aaron Gross
  Event will be in-person on Tuesday, 6:30-7:30 pm. No live blues music. Suggestion to use Mentimeter for participants to enter symposium ideas and for program chair to capture them. Consider having a virtual brainstorming session after the meeting if needed.
MOTION: Renew subscription to Mentimeter Pro. Annual subscription is $300.
Motion Passed
• PICOGRAM – Cathleen Hapeman
  o Due to supply shortages, the printer will not be able to comply with our stringent requirements. The printing will therefore be delayed; the plan is to ship the printed PICOGRAM to AGRO members in August.
  o There will be an online version of the Program available before the Chicago meeting.
  o New deadline for content is June 15; final copy by June 30.
ACTION: Suggestion to print maps of meeting locations for AGRO sessions for display at the hospitality desk at the Chicago meeting.
5. A GRO 50th and Beyond – 2023 Fall in San Francisco

- Overall project – Ken Racke, Jeanette Van Emon
  - Ken and Jeanette will be updating the list of topics and targeted speakers for the for the special symposium
  - Ken, Jeanette, and Aaron will be preparing on an updated description and agenda for the gala reception
  - Ken and Jeanette will be updating the AGRO 50 budget
  - Ken will work with Edmund Morris to update the website
  - Planning team will meet again in June or July to advance next steps
  - Request for additional volunteers, especially for the gala reception and ag tour

- AGRO tour – Heidi Irrig, Andrew Coates
  - Still need volunteers and implement tour. James Foster is in the San Francisco area and signed up to help. Also have 2 volunteers from UC-Davis.

6. Candidates for AGRO Ballot – Leah Riter

- Elections are June 6 – 27, 2022. Arrangements have been made with VoteNow. Members received a message that elections were open, but that was erroneous. We have a full ballot with prepared bios connected to the ballot.

7. International Affairs Committee – Ken Racke, Carmen Tiu

- Reviewed results of an April survey of AGRO international membership satisfaction and ideas – several ideas under further consideration.
- International activities webpage under the AGRO website is being considered.
- Proposal under development for additional funding for enhancing AGRO international exchanges (Chris Peterson)
- Agreement to seek AGRO engagement with the next Latin American Pesticide Residue Workshop (LAPRW, Panama City, Panama) and 15th IUPAC Congress on Crop Protection Chemistry (New Delhi, India)
- Discussed opportunities for greater agrochemical cooperation with Africa. Identified a number of areas of cooperation with Owen Fraser, head of Africa section of AOAC. Plan to propose an AGRO webinar on Africa AOAC and agrochemical activities.

MOTION: AGRO will sponsor poster awards at $1,000 total for the 2023 LAPRW in Panama (2 awards). Steve Lehota will coordinate. AGRO will commit to booth-level sponsorship for the 15th IUPAC International Congress of Crop Protection Chemistry in India-2023 at approximately $6500: $5,000 for a bronze/booth level sponsorship plus $1,500 for associated costs to prepare and ship booth materials.

Motion Passed

8. Proposal to Create an AGRO History Committee – Ken Racke

Proposal presented for further discussion later. See below.

9. Proposal to Create an AGRO Archive – Sharon Schneider

- Committeeincluded Cathleen Hapeman, Rodney Bennett, and Sharon Schneider
- Their opinion is to define the true archives as:
  - PICOGRAMS, IPGs, and specific minutes (if not already captured in the PICOGRAM).
  - Working documents are not archives but are very useful to the membership. Working documents include examples/templates of general correspondence; introduction and thank you letters to sponsors, symposia organizers, letters to elected/not-elected candidates following AGRO elections, etc.
- Working documents should be available to everyone who has a specific need.
- Operations Manual (currently on Version 9) needs to be updated.
- How and where should we preserve physical items such as photos, Old Bug Banner; the Division Awards (Plaques), etc. Are the 50th anniversary timeline and other materials a good place to start?
- May want to consider an Archive Committee with an Archivist designated for the Chair of that committee.

DISCUSSION: Would be helpful for each committee to have working documents and calendar of activities. Records retention and depository of operational materials.

ACTION: History Committee and archive referred to an ad-hoc subcommittee. Ken Racke will lead, Sharon Schneider, Rod Bennett, James Foster, Amy Ritter members.
10. Councilor update: Preference form allows people to request to be on any ACS committee, you do not need to be a Councilor. New membership structures provide opportunities to increase AGRO membership.

11. 2022 Strategic Planning Retreat – Leah Riter, Cheryl Cleveland
   - Discussion about whether it should be in conjunction with a national meeting or a separate standalone meeting in Washington, DC.

12. Diversity Committee – Laura McConnell
   No updates. Recommend this as an initiative in the next strategic plan. Consider sending early career people to ACS Leadership Institute and Strategic Planning Retreat. Consider recognizing new members and send them an onboarding message with information about the Division to inform and engage them better.

13. ACS Leadership Institute – Aaron Gross, James Foster
   Foster reported on his experience, and what he learned. Both found it very engaging and informative and were inspired to keep AGRO strong.

14. Round Table
   - Consider having the Combined Governance meeting via Zoom/Teams after the national meeting. There may be logistical concerns. Suggestion to replace the in-person Combined Governance meetings with a meet-and-greet gathering with food and drink to encourage new AGRO volunteers. Consider having officers and each Committee present an overview of their role/duties so potential recruits can gain awareness of opportunities to participate.

ACTION: Because the meeting extended beyond its scheduled time, many members needed to disconnect and therefore a quorum is lacking for this decision. A motion will be developed and circulated for discussion and vote via e-mail.
   o Bylaws committee is working on revised bylaws.

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Proposal to Create an AGRO History Committee
May 19, 2022
Ken Racke

AGRO has been celebrating its 50th anniversary, and significant efforts were made to collect historical information related to Divisional activities including a historical timeline of events, photographs, and early programs.

This proposal would create a committee to own and maintain these work products and undertake additional activities to promote preservation and awareness of AGRO history both within and outside the Division.

Without assigning specific ownership of such responsibilities, much of the value of these recent efforts may be lost and future generations of AGRO members may lack appreciation for the rich heritage of their Division and its legendary members. A preliminary description of the purpose and responsibilities of the proposed Committee appears below.

HISTORY COMMITTEE

Purpose: The objectives of the History Committee are to preserve and to celebrate information related to historic Divisional activities and to promote appreciation of the Division’s rich heritage of contributions among the membership and within the broader agrochemical community.

Composition: The Committee consists of a Chair, appointed by the Division Chair, and at least two additional members, appointed by the Committee Chair.

Term of Office: There is no set term of office for this committee.

Responsibilities
- Centralize and lead initiatives related to collection, preservation, and dissemination of historical information related to the AGRO Division.
- Develop and maintain a permanent archive of historic AGRO Division materials and records.
- Curate an electronic archive of audio/visual materials related to Divisional activities and personages.
- Maintain and solicit periodic additions to the AGRO historical timeline posted to the Divisional website.
- Launch and manage an AGRO history webpage, in cooperation with the Communications Committee and the Divisional Web-Manager.
- Promote awareness of key historical contributions of AGRO by preparing periodic news articles for dissemination via the website, PICOGRAM, and e-newsletters.
- Prepare and publish a Divisional history, with an emphasis on the past 25 years to complement the article by Nancy Ragsdale which covered 1976-2001 (J. Agric. Food Chem. 2002, 50, 7-9).
- Stimulate AGRO history-related technical programming (symposia, lectures, webinars), in cooperation with the Program Chair and the Programming Committee.
- Cultivate cooperation with the ACS Division of the History of Chemistry (HIST) related to AGRO history efforts and collaborative programming.
- Present a Committee report at the fall Governance Meeting held during the ACS meeting to report on the Committee’s activities.
AGRO Division Virtual Meeting
July 25, 2022
3:00 – 4:30 PM CDT
Sharon Schneider, Secretary

ATTENDANCE
Officers: Qing Li, Chair; Heidi Irrig, Program Chair; Aaron Gross, Vice-Chair; Del Koch, Treasurer; Leah Riter, Past-Chair; Rodney Bennett, Jeanette Van Emon, Councilors; Kevin Armbrust, Alternate Councilor
Executive Committee Members (EC): James Foster, Shanique Grant, Pat Havens, Ed Norris, Amy Ritter, Thomas Sparks, Solito Sumulong, Katoria Tatum-Gibbs, Ralph Warren
Committee Chairs and Guests: Cathleen Hapeman, Scott Jackson, Laura McConnell, Peney Patton, Ken Racke

1. Welcome – Qing Li

2. Peney Patton Contract for Administrative Assistance – Qing Li
   The draft contract specifies the services performed in support of AGRO programming at national ACS meetings and co-sponsored conferences, interfacing with ACS and its computer systems, assisting with AGRO awards, and other services. The term of the agreement is September 1, 2022, to August 31, 2025. Payment is $45 per hour for a maximum of 400 hours per year.

MOTION: Accept service agreement for Peney Patton with no changes.

Motion Passed

3. Fall Chicago National Meeting – Heidi Irrig
   - Heidi is sending out presider and presenter information; on demand instructions; registration instructions for speakers.
   - There have been some withdrawals: if ACS is notified, then Heidi and Peney are notified.
   - The ACS program should reflect up-to-date information.
   - Shanique Grant acquired Grow with AGRO T-shirts and shipped them to Heidi who will then send to Chicago via FedEx to the Marriott Marquis Hotel.
   - Rooms for AGRO programming are South Building, fifth floor, S501-505 series.
   - Grow with AGRO networking event instead of Sunday night Combined Governance meeting. Agenda, food, etc. are planned. Katoria Tatum-Gibbs is looking for photos of committee chairs and committee members for a slide show for the Grow with AGRO event. She requests that they be sent this week.
   - Blues and Brews will use Mentimeter. Aaron Gross will renew subscription using agrodv account.
   - Pat Havens will coordinate promotion via e-mail blast of Grow with AGRO; Blues and Brews; Sterling Hendricks lecture; Early Career lunch (registration required); other nontechnical events.
   - Suggestion to continue to highlight awardees on a revolving banner on the AGRO website. Consider having an email blast announcing the award winners. Cathleen Hapeman will send award winner information to Edmund Norris and Pat Havens for e-newsletter and website.

4. AGRO Hospitality table at Chicago:
   - Action for Heidi to consider Google calendar or Signup Genius to get volunteers to staff the AGRO table in advance
   - Action for Rodney to supplement with a paper sign-up sheet at the table.
   - Cathleen usually arranged for printing and posting signage at/around the AGRO table announcing award winners, etc. Peney Patton will find out ACS/venue rules for having signs printed and posted. If signs are untenable, consider having an iPad at the AGRO table.
   - Suggestion to have a printed map of where AGRO events are being held for table staffers to reference
   - Action for Heidi to have laminated map for use at the desk.

   - On-the-spot membership opportunities
     Become a Member on the AGROdiv.org website allows people to join AGRO from our website. Laura McConnell will create a QR code for the AGROdiv main page and another one for the member page. Hospitality desk folks can direct people to this QR code. Pat Havens will print QR code for membership onto stickers for AGRO desk to distribute.

5. PICOGRAM Update – Cathleen Hapeman
   Program will be ready by August 1 and posted on website. Electronic version of the PICOGRAM will be available beginning of August, and printed PICOGRAM will be mailed after the Chicago meeting.

6. Early Career Scientist Committee Update – Aaron Gross
   - Twenty-six students and post-docs are registered for luncheon. Suggest having a wait list in case of cancelations and no-shows. For roundtable discussions, there is good representation of academia and industry, government a bit in the air because of travel restrictions.
   - Aaron Gross and Sara Whiting will send student receipts to Del Koch for reimbursement. They are also looking for poster judges, let them know if you are available.

7. Indianapolis Meeting Update – Aaron Gross, Ken Racke
   - Arranging 4 oral symposia sessions and 1 combined poster session.
   - Aaron Gross, Ken Racke, and Peney Patton have been requested for full access to AGRO program in MAPS.
   - Social networking event planned for March 29, 2023. Corteva will sponsor, budget is confirmed, venue reserved, bus transport contracted.
   - Call for papers and save the date prepared for AGRO website, flyers, and e-mail.
   - Abstracts will be accepted in MAPS August 15 to October 17. Plan for an AGRO welcome table. Items from the Chicago hospitality table will be taken by Ken Racke to Indianapolis after the Chicago meeting.

8. Election Results – Leah Riter
   Vice Chair – James Foster
   Treasurer – Del A. Koch
   Secretary – Sharon Schneider
   Executive Committee (2023-2025): Dena Barrett, Kalumbu Malekani, Natalia Peranginanagin, Daniel Swale, Ralph Warren

9. Annual Governance Meeting – Qing Li
   Sharon Schneider will send out a Doodle poll for dates in September after Labor Day.
AGRO Councilors’ Report
Spring Virtual Meeting
March 23, 2022
Jeanette M. Van Emon and Rodney Bennett, Councilors

Candidates for President-Elect, 2023: The Committee on Nominations and Elections presented to the Council the following nominees for selection as candidates for President-Elect, 2023: Frank Blum, Mary Carroll, Rigoberto Hernandez, and Ingrid Montes. By electronic ballot, the Council selected Mary Carroll and Rigoberto Hernandez as candidates for 2023 President-Elect. These two candidates, along with any candidates selected via petitions, will stand for election in the Fall 2022 National Election.

The Committee on Nominations and Elections announced the results of the election held prior to the virtual Council meeting, to select candidates from the list of nominees for Directors from District II and District IV, on the Board of Directors for the term 2023-2025. By internet ballot, the Councilors from these districts selected Kimberly Agnew-Heard and Marcy Towns as District II candidates and Christopher J. Bannochie and Lisa Houston as District IV candidates. Ballots will be distributed to members residing in District II and District IV around October 1, 2022.

The Committee on Nominations and Elections also announced the selection of the following candidates for Directors-at-Large for 2023-2025 terms: Milagros (Milly) Delgado, Malika Jeffries-El, Will E. Lynch, and Ellene Tratras Contis. The election of two Directors-at-Large from among these four candidates and any selected via petition will be conducted in the fall. Ballots will be distributed to all Councilors around October 1, 2022.

Key Actions and Resolutions. The Council approved the Petition to Amend the Duties of the Committee on Chemists with Disabilities (CWD). This petition sought to change the language in the duties of CWD from students to persons to be more inclusive to ACS members of all levels and backgrounds participating in the Society’s meetings and events.

The Council approved the continuation of the Committee on Chemists with Disabilities. The Committee on Committees (ConC) reviews each Society Committee at least every five years and advises the Board of Directors and Council on whether they should be continued. ConC completed the performance review for the Committee on Chemists with Disabilities and recommended its continuation.

The Council approved the Petition to Amend the Use of Dues. The petition has two major components. The first changes the basis for developing the total pool of allotments available for Local Sections and Technical Divisions. The second eliminates the connection between dues revenue and Chemical & Engineering News (C&EN). The total resource pool available for distribution to Local Sections and Technical Divisions will be funded via a quasi-endowment established from the Society’s unrestricted investment balances. This replaces the previous pool that was funded through the allocation of 20% of dues revenue to Local Sections and Divisions.

The Council approved a Division name change. Effective January 1, 2023, the Division of Carbohydrate Chemistry (CARB) will change its name to the Division of Carbohydrate Chemistry and Chemical Glycobiology (CARB).

The Council approved a Petition to Charter an International Chemical Sciences Chapter. This petition, contingent on approval by the ACS Board of Directors, allows for a new International Chemical Sciences Chapter in Switzerland to be established.

The Council approved the extension of market testing of the international dues discount program based on World Bank country income levels. The test provides reduced dues for international members residing in emerging nations, which host an ACS chapter, and as defined by World Bank income criteria. The test results, to date, have suggested a positive impact on membership through new members and the expanded inclusivity that a wider global community provides.

The Council approved the 2023 Schedule of Membership. The 2022 Schedule went “live” a few short months ago, and the 2023 Schedule was designed to add more value and an increased choice for membership by adding clarity and a more intuitive explanation of the membership categories. The 2023 Schedule of Membership did not change any dues, benefits, eligibility, or privileges from the 2022 Schedule.

The Council unanimously passed the following resolutions:
- in memory of Past ACS President Nancy B. Jackson and in honor of her many accomplishments for ACS;
- in memory of deceased Councilors and for their service to ACS; and
- for the recognition of officers and members of the San Diego Local Section for their assistance in the Spring 2022 ACS meeting.

Selected Highlights from ACS Executive Committee and Committees

Committee Report Budget and Finance. In 2021, ACS generated a net from operations of nearly $79 million, which was almost $48 million higher than budgeted. Total revenues were $660 million, which was 5.2% or $32.6 million over budget. Expenses for the year were $581 million, or 2.5% below budget. This overall result was attributed to strong revenue performance from the Society’s Information Services units (CAS and ACS Publications), reduced spending due to COVID-19 related impacts, and careful management of expenses across the ACS. The Society’s overall financial position strengthened considerably in 2021 as Unrestricted Net Assets, or reserves, increased by $123 million to $676 million on December 31. The increase was primarily the result of the $79 million net from operations and growth of the Society’s investments totaling $71 million.

Committee Report Nominations and Elections. The Committee on Nominations and Elections solicits input regarding qualified individuals for President-Elect and/or Directors for future consideration. Suggestions may be sent to nomelect@acs.org.

Committee Report Committee on Committees. All Councilors, including new Councilors, were reminded to complete their online committee preference form for 2023 committee assignments. The preference form will be open to all ACS members, and no one will be required to request permission to gain access to the form. The new form will allow users to review each committee by its main topic and focus, along with the skills and expertise needed to serve. The committee preference form will open mid-April at CMTE.acs.org. Users will also be able to submit a skills assessment which will be used when considering which committees may best suit their talent.
Council Policy Committee. The Council Policy Committee (CPC) met virtually several times to discuss ways to promote the ACS Core Values of: Passion for Chemistry and the Global Chemistry Enterprise; Focus on Members; Professionalism, Safety, and Ethics; and Diversity, Equity, Inclusion, and Respect (DEIR). The Change Drivers of: Market Disruption and Economic Downturn; Accelerating Automation of Chemistry; Strained Pipeline and Changing Workplace; Continued Globalization of Chemistry; Chemistry and Social Responsibility; Embracing Open Science; and Scientific Doubt and Polarization in the U.S. were discussed in preparation for the Strategic Café which was to be held in person at the Fall 2022 meeting. However, this event will not be virtual.

Reports From the Board of Directors and Executive Director

The ACS Board of Directors met in Executive Session on March 18 and 19 at the ACS Spring 2022 meeting in San Diego. They considered several key strategic issues and responded with numerous actions. The Board opened its session with a reflection on Diversity, Equity, Inclusion, and Respect (DEIR), led by Immediate Past President, H. N. Cheng.

The Board received an extensive report from the CEO on issues relating to ACS core values of safety and DEIR, membership, financials, the ACS Institute, strategic initiatives, and upcoming events and activities. Notably, the strategic initiatives include funding of up to $50 million over five years for sustainability, fostering a skilled technical workforce, accelerating digital research data projects, and accelerating life sciences growth.

Note: An announcement was made on May 31, 2022, that Dr. Thomas Connelly, Jr. will be retiring at the end of 2023. The ACS Board of Directors has begun a search for his replacement. ACS has grown and flourished under Dr. Connelly’s excellent leadership. “Tom has provided strong leadership for ACS throughout his tenure, especially over the past two years as we experienced a once-in-a-lifetime challenge due to the COVID-19 pandemic. With his guidance, ACS has weathered the pandemic and is now stronger than it’s ever been,” says Paul W. Jagodzinski, chair of the ACS Board of Directors. “We look forward to Tom’s continued leadership through the rest of 2022 and wish him all the best as he enters the next chapter of his life in 2023.”

To automatically receive press releases from the American Chemical Society, contact newsroom@acs.org.

The Board’s Committees and Task Forces

The Board received and discussed reports from its committees on Executive Compensation, Professional and Member Relations, as well as the ACS Governing Board for Publishing, Budget and Finance and the Working Group on Structure/Representation. Some of these committees requested and obtained Board action on one or more items, as follows:

The Board received an extensive briefing and approved several recommendations from its Committee on Executive Compensation. The compensation of the Society’s executive staff continues to be reviewed regularly by the Board. Upon recommendation of the ACS Governing Board for Publishing, the Board voted to approve the reappointment of one of its members. The reappointment will be announced once the individual has been notified and appropriate arrangements for their continued service have been made. Upon recommendation of the

Committee on Professional and Member Relations, the Board approved five nominees each for the 2023 Priestley Medal, the 2023 Award for Volunteer Service to the ACS, and the 2023 Charles Parsons Award, as well as a recommendation for an ACS nominee for the 2022 GRAND PRIX of the Fondation de la Maison de la Chimie.

Pending the approval by Council of the Petition to Amend the Use of Dues, the Board of Directors resolved to authorize the creation of a quasi-endowment derived from proceeds in the ACS General Fund. The endowment would have an initial principal amount of $85 million, the annual payout from which would fund individual Technical Divisions and Local Sections per the allotment policies established by the Committees on Divisional Activities (DAC) and Local Section Activities (LSAC). Further, the amount of funding made available for this purpose would be the standard payout from this quasi-endowment or $3.2 million, whichever is greater.

In other Society Business, the Board ratified interim actions on moving the June 2022 Board meeting to Sunday, May 22-23 in Atlanta, GA (so as to be co-located with the leadership institute); and approved the recommendation of the Office of Research Grants (with assistance from the Frasch Committee) for the 2022 Herman Frasch Foundation Grant in Agricultural Chemistry. As is customary, the Board heard reports from the Presidential Succession on their current and planned activities for 2022 and 2023. The Board adopted the resolution in memory of ACS Past President Nancy B. Jackson, who passed away in January 2022.

The Board also addressed technical programming issues. It was determined that new strategies need to be considered, such as the introduction of a pilot program to allow topical groups, potentially formed under DAC and/or M&E, to complement the technical programming provided by divisions. In this regard, ACS has been working on a plan similar to the topical sessions called Convergence Research Communities, which DAC may offer as a pilot experiment at a future meeting.

Please let your Councilors know if you have any questions or comments regarding this report.
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**DIVISION BUSINESS AND PLANNING**

**AGRO Business Meeting**
Will be rescheduled in September

**SUNDAY – 6:00 to 9:00 PM**

**Grow with AGRO**
- Learn more about AGRO Committees and activities
- Hors d’oeuvres, cash bar, and cool SWAG
  Marriott Marquis Chicago, Grand Horizon G

**TUESDAY – 6:30 to 7:30 PM**

**Program Planning – AGRO Blues-N-Brews**
- Members and others with ideas are welcome
- Free beverages
  McCormick Place Convention Center
  Skyline Ballroom W375c

**SOCIAL EVENTS**

**AGRO Coffee Break/Intermission**
**SUNDAY:** 9:45 – 10:15 AM; 3:45 – 4:15 PM
**MONDAY:** 9:45 – 10:15 AM; 3:45 – 4:15 PM
**TUESDAY:** 9:45 – 10:15 AM; 3:45 – 4:15 PM
**WEDNESDAY:** 9:45 – 10:15 AM; 3:45 – 4:15 PM
**THURSDAY:** 9:45 – 10:15 AM

**MONDAY – 12:00 – 1:00 PM**

**AGRO Graduate Student/Post-Doc Luncheon**
- Network with scientists and explore career and AGRO opportunities
- Reservations required, Sara Whiting, sara.whiting@bayer.com
  McCormick Place Convention Center, S503b

**TUESDAY – 12:00 – 01:00 PM**

**Sterling Hendricks Award Reception**
- Follows lecture and discussion
  McCormick Place Convention Center, S503b

**WEDNESDAY – 6:00 – 8:00 PM**

**AGRO Awards Social**
- Hors d’oeuvres, cash bar
- Announcement of NIA and Student winners
- Members/Speakers/Guests welcome
  McCormick Place Convention Center
  Skyline Ballroom W375b

**AGRO POSTER SESSION**

**WEDNESDAY, 12:00 – 2:00 PM**
McCormick Place Convention Center, Hall F2

**SUNDAY MORNING**

**Advances in the Control of Medical, Agricultural, and Veterinary Disease Vectors**
*Co-sponsors: ANYL, BIOT, ENVR, MEDI*
Aaron Gross, Daniel Swale, Organizers
Kumudini Meepagala, Edmund Norris, Organizers, Presiders

****Oral – In-person only**
McCormick Place Convention Center, S501d

**8:00 AM – Introductory Remarks**

**8:05 AM – 3741566.** Spatial repellents for disease vector control: updates on public health value assessment.
N. Achee

**8:30 AM – 3754900.** Small molecule phytochemical attractants for malaria mosquitoes.
T. Anderson

**8:55 AM – 3740553.** Comparative efficacy of DEET-based mosquito repellents and synergy mechanism of vanillin against the Asian tiger mosquito, Aedes albopictus.
J.-H. Tak

**9:20 AM – 3736728.** Understanding the mosquito biting deterrence effect of fatty acids and triglycerides from traditionally used plants.
C. Cantrell

**9:45 AM – Intermission**

**10:15 AM – 3755677.** Current research to control agricultural pests and disease vectors at the USDA-ARS San Joaquin Valley Agricultural Sciences Center.
A. Perez de Leon

**10:40 AM – 3738344.** Why so many sodium channel mutations confer insect resistance to pyrethroids?
K. Dong

**11:05 AM – Discussion**

**11:30 AM – Concluding Remarks**

**Environmental Fate, Transport, and Modeling of Agriculturally Related Chemicals**
*Financial Co-Sponsor: Stone Environmental, Intrinsik Corp.*
*Co-sponsors: AGFD, ANYL, ENVR*
Scott Jackson, Ralph Warren, Organizers, Presiders

**Oral – Hybrid**
McCormick Place Convention Center, S501bc

**8:00 AM – Introductory Remarks**

**8:05 AM – 3739855.** Effects of tank mixtures in soils.
C. Wijntjes

**8:30 AM – 3726160.** Investigation of the sunlight photolysis of the veterinary antibiotic tiamulin.
J. Congilosi
**Oral – In-person only**
McCormick Place Convention Center, S502b

Human Health Paradigms: Exposure, Risk Assessment and Policies for Agrochemicals

**Oral – Hybrid**
McCormick Place Convention Center, S501a

Sustainable Agriculture: A Promise for the Future
Co-sponsors: AGFD, ENVR
Peter Maienfisch, Leah Riter, Amy Ritter, John Rohanna
Organizers
Shanique Grant, Natalia Peranginangin, Organizers,
Presiders

SUNDAY AFTERNOON

Advances in the Control of Medical, Agricultural, and Veterinary Disease Vectors
Co-sponsors: ANYL, BIOT, ENVR, MEDI
Aaron Gross, Daniel Swale, Organizers
Kumudini Meepagala, Edmund Norris, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S501d

8:00 AM – Introductory Remarks
8:05 AM – 3734330. Rethinking chronic toxicity and carcinogenicity assessment for agrochemicals. G. Hilton
8:55 AM – 3745420. Bayesian integration of Monte Carlo exposure and pharmacokinetic modeling for lambda-cyhalothrin with urinary 3PBA measurements. N. Cuvelier
9:20 AM – 3749948. What does USDA PDP data reveal about dietary exposure to pesticides in animal commodities? OA. Szarka
9:45 AM – Intermission
10:15 AM – 3738039. Evaluating use of CARES NG for conducting probabilistic acute dietary risk assessments for pesticides. S. Flack
10:40 AM – 3743678. Exploring the functionality and verifying the accuracy of CARES-NG for conducting probabilistic acute dietary risk assessments for pesticides. M. Munday
11:05 AM – 3753776. New approach method to waive subchronic inhalation study. S. Webb
11:30 AM – Panel Discussion
11:55 AM – Concluding Remarks

9:45 AM – Intermission
11:55 AM – Concluding Remarks
11:30 AM – 3753962. Towards a future of sustainable dust-free seed planting. R. Colletti
9:45 AM – Intermission
10:15 AM – 3743071. Nanoscale sulfur uniquely suppresses fungal disease and increases biomass and yield of crop plants. Y. Wang
10:40 AM – 3728861. Nanoscale sulfur uniquely suppresses fungal disease and increases biomass and yield of crop plants. Y. Wang
11:05 AM – 3727798. Long noncoding RNA-EN_181 potentially contributes to the protective effects of N-acetylcysteine against non-alcoholic fatty liver disease in mice. S. Li

2:00 PM – Introductory Remarks
2:05 PM – 3741258. Pepper extracts significantly enhance the toxicity and neurophysiological effects of natural pyrethrins in Aedes aegypti. J. Bloomquist
2:30 PM – 3754255. Diversifying the insecticide toolkit for vector control. C. Hill
2:55 PM – 3747426. Targeting kir channels to reduce vector competency of arthropods. D Swale
3:20 PM – 3729550. Evolution of different kdr alleles in Aedes aegypti. J. Scott
3:45 PM – Intermission
4:15 PM – 3737264. Relating laboratory insecticide resistance testing to operational efficacy in mosquitoes. A. Estep
4:40 –3744552. In vitro and in vivo acaridial properties of orally delivered ivermectin against the black-legged tick, Ixodes scapularis. J. van Oosterwijk, L. Beimfohr, C. Przybyszewski, A. Li
5:05 – 3755832. Shut the front door! Protecting hives from small hive beetles through behavioral modification. A. Gross
5:30 – Discussion
5:55 – Concluding Remarks
Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals
Financial Co-Sponsor: Stone Environmental, Intrinsik Corp.
Co-sponsors: AGFD, ANYL, ENVR
Scott Jackson, Ralph Warren, Organizers, Presiders

**Oral – Hybrid**
McCormick Place Convention Center, S501bc

2:00 PM – Introductory Remarks
2:05 – 3731287. Spray atomization in multiphase flow with extensions to tank mixes of agricultural products. G. Krishnan, S. Cryer
2:30 PM – 3741549. Novel remote sensing approach for estimating field-scale crop planting and pesticide application timing. A. Jacobson
3:20 PM – 3733292. Transport behavior of short-chain and long-chain perfluoroalkyl carboxylic acids (PFCAs) in saturated porous media. L. Qi
3:45 PM – Intermission
4:15 PM – 3737768. Uptake of organophosphate pesticides by tissues of common reed (Phragmites australis) and seagrass (Zostera capensis) from polluted watersheds. C. Olisah
4:40 PM – 3745277. OECD pesticide residue definition update. M. Doherty, D. Murnane, I. Pilote
5:05 PM – 3754602. ANVISA’s challenge on implementing GHS classification in the reevaluation of pesticides. L. Muratori Aguiar
5:30 PM – 3735643. European risk assessment of combined exposure to multiple pesticides. J. van Klaveren
5:55 PM – Concluding Remarks

Sustainable Agriculture: A Promise for the Future
Co-sponsors: AGFD, ENVR
Shanique Grant, Natalia Peranginangin, Leah Riter, Amy Ritter, Organizers
Peter Maienfisch, John Rohanna, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S502b

2:00 PM – Introductory Remarks
2:05 – 3728712. Driving sustainability end to end in discovery, development and manufacturing of crop protection products. A. Batra
3:20 PM – 3752526. Delivering the promise of RNA for plant health: Sustainable control of agricultural pests and pathogens. J. Gillian
3:45 PM – Intermission
4:15 PM – 3738001. Natural products: A source and inspiration for crop protection solutions. N. Garizi
5:05 PM – 3729763. Designing for sustainability - new and old chemical ideas for decreasing environmental footprint of chemical manufacturing. D. Gribkov
5:30 PM – 3728968. Establishing an electrochemistry platform in crop protection research: early incorporation of sustainable methods for impacting downstream synthesis. C. Scarborough
5:55 PM – Concluding Remarks
MONDAY MORNING

2022 ACS International Award for Research in Agrochemicals

Jeffrey Scott

The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides, and Novel Control Strategies

Resistance
Cosponsored by BIOL, MEDI, POLY, and PROF
Financially supported by CORTEVA Agriscience
John M. Clark, Ke Dong, Organizers, Presiders

Oral – In-person only
McCormick Place Convention Center, S501d

8:00 – Introductory Remarks
8:05 AM – 3729546. Lessons learned from decades of investigations into insecticide toxicology. J. Scott
9:45 – Intermission
10:15 AM – 3741490. Regional differences in susceptibility to spinosyn insecticides registered for Colorado potato beetle management. I. Scott
10:40 AM – 3756100. Transcriptional regulation of detoxification in the polyphagous arthropod pest Tetranychus urticae. T. Van Leeuwen

Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals
Financial Co-Sponsor: Stone Environmental, Instrinsik Corp.
Co-sponsors: AGFD, ANYL, ENVR
Scott Jackson, Ralph Warren, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S501d

8:00 – Introductory Remarks
8:05 AM – 3740069. Integrated approach of regression and machine learning modeling to refine human health risk from pesticides in surface water throughout the conterminous United States. Y. Wu
8:30 AM – 3739562. Simulation of pesticide and metabolite concentrations using SWAT+ Landscape routing and conditional management applications. H. Rathjens, J. Kiesel, M. Miguez
9:45 – Intermission
10:15 AM – 3754315. Integrating species-specific landscape information into aquatic exposure estimates for endangered species assessments. C. Holmes

10:40 AM – 3735211. ESASeedPARAM: A seed treatment model for threatened and endangered bird species in the United States. D. Moore

11:05 AM - Discussion
11:30 AM – Closing Remarks

Human Health Paradigms: Exposure, Risk Assessment and Policies for Agrochemicals
Internal and External Exposure Modeling and Characterization
Co-sponsors: AGFD, TOXI
Cheryl Cleveland, Cecilia Tan, Organizers
Tharacad Ramanarayanan, Katoria Tatum-Gibbs, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S502b

8:00 – Introductory Remarks
8:05 AM – 3750951. Canadian dietary risk assessment and residues: Challenges and opportunities. A. Ardiel, H. Griffiths
8:30 AM – 3755949. Agricultural use and human exposure driven data generation: Impact of drinking water on dietary exposure. E. Freeman
8:55 AM – 3721142. Advanced exposure analysis - methods and tools for enhanced human health risk assessment. J. Doyle

9:20 – Intermission
10:15 AM – 3742965. Development of a regulatory package for a new herbicide without the use of animal testing. T. Ramanarayanan
10:40 AM – 3756332. Regulatory flexibility for the implementation of NAMs in pesticide registration. J. Henriquez

11:05 AM – Closing Remarks

Co-sponsors: AGFD, ANYL, ENVR
Kaushik Banerjee, Rory Mumford, Organizers
Steve Perez, Manasi Saha, James Ferguson, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501bc

8:00 – Introductory Remarks
8:05 AM – 3731297. Novel mass spectrometry tools to speed the identification of metabolites in agricultural research and development. J. Balcer
8:30 AM – 3737254. Extraction efficiency: EU guideline requirements, challenges, limitations and recent experiences for plant residue analytical methods. C. Spangler
8:55 AM – 3742438. Improving the extractability of polar and thermally unstable pesticides in food- challenges and solutions. R. Shinde, K. Banerjee
9:20 AM – 3738742. Benefits of data from instrumentation with higher resolving power in the analysis of some radiolabeled test materials. J. Ferguson

9:45 – Intermission
10:15 AM – 3740858. WITHDRAWN
10:40 AM – 3743569. Practical approaches to finding and elucidating the low level metabolite needles in complex matrix haystacks. **O. Chepelin**
11:05 AM – 3734867. PFAS in food: Method comparison and validation of a QuECHERSER approach. **R. Taylor**
11:30 AM – 3750260. Agricultural applications of nanotechnology: Controlled release of agrochemicals. **M. Alrbaihat**
11:55 AM – Concluding Remarks

**Sustainable Agriculture: A Promise for the Future**
Co-sponsors: AGFD, ENVR
Peter Maienfisch, Natalia Peranginangin, Leah Riter, Amy Ritter, Organizers
Shanique Grant, John Rohanna, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501a

8:00 – Introductory Remarks
8:05 AM – 3737245. WITHDRAWN

8:30 AM – 3743789. Increased crop rotational diversity improves sustainable nitrogen management. **K. White**

8:55 AM – 3754556. Sustainable postharvest treatments for global food security and safety. **S. Walse**

9:20 AM – 3752184. Natural salicylaldehyde for fungal and pre- and post-emergent weed control. **J. Kim**

9:45 – Intermission

10:15 AM – 3750143. APEX simulations to evaluate effectiveness of field-Level conservation practices in reducing off-field pesticide transport for a stewardship assessment tool. **J. Stryker**


11:05 AM – 3752109. Environmental impact reduction of crop protection: How to model, how to measure, how to achieve? **A. Gladbach**

11:30 AM – 3731308. Development of a crop disease forecast system with ties to southern rust movement within the U.S. **S. Cryer**

11:35 AM – Concluding Remarks

**MONDAY AFTERNOON**

**2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides and Novel Control Strategies**
Resistance and Physiology
Cosponsored by AGFD, TOXI
Financially supported by CORTEVA Agriscience

John M. Clark, Ke Dong, Organizers
Ralf Nauen, Kun Zhu, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S502b

2:00 PM – Introductory Remarks
2:05 PM – 3734361. Amitraz resistance in varroa destructor: Insights from monitoring and genomics. **F. Rinkevich**

2:30 PM – 3737322. Fitness advantages and disadvantages of pyrethroid resistance mechanisms in *Aedes aegypti* and their potential consequences to human health. **L. Smith**


3:45 PM – Intermission

4:15 PM – 3742219. Loss-of-function of nicotinic acetylcholine receptor subunits reveals distinct insecticidal effects of dinotefuran. **Y. Ozoe**

4:40 PM – 3737424. Insect muscarinic acetylcholine receptors: A target for physiological synergists and the greater effect of the Rdl mutation on the cholinergic system. **A. Gross**

5:05 PM – 3740503. Upregulation of cytochrome P450s in insecticide resistance. **N. Liu**

5:30 PM – Concluding Remarks

**Advances in the Control of Medical, Agricultural, and Veterinary Disease Vectors**
Co-sponsors: ANYL, ENVR, MEDI, BIOT
Kumudini Meepagala, Edmund Norris, Organizers
Aaron Gross, Daniel Swale, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S501d

2:00 PM – Introductory Remarks

2022 AGRO Innovation Award
Financially supported by BASF

**Joel Coats**

2:05 PM – 3743801. Sustainability in agricultural chemistry. **J. Coats**

2:55 PM – 3754227. NEW INVESTIGATOR FINALIST. Physiological activities of *Melaleuca cajuputi* (Cajeput Oil) to yellow fever mosquito. **E. Johnson**


3:45 PM – Intermission
2:30 PM – 3742689.

Sustainable Agriculture: A Promise for the Future
Shanique Grant, Leah Riter, Amy Ritter, John Rohanna,
Co-sponsors: AGFD, ENVR

5:30 PM – Discussion
5:55 PM – Concluding Remarks

Pollinator Risk Assessment Modelling, Methods, and Research
John Purdy, Tom Steeger, Organizers
Jennifer Collins, Organizer, Presider; Katrina White, Presider

Oral – Hybrid
McCormick Place Convention Center, S503b

2:00 PM – Introductory Remarks
2:05 PM – 3734582. Overview of the framework for assessing risk of pesticides to bees in the United States. K. White
2:30 PM – 3740160. Non-Apis bee life history traits pose unique agrochemical exposure routes. T. Pitts-Singer
2:55 PM – 3754696. Identifying routes of exposure and colony-level effects on honey bees from systemic pesticide pollution associated with processing pesticide-treated seeds through ethanol production in Nebraska. J. Wu-Smith
3:20 PM – 3744261. Rethinking pesticide risk assessments in the face of sustainable agroecosystem management. A. Seshadri
3:45 PM – Intermission
4:15 PM – 3739184. Methods to assess the generational effects of maternal exposure to agrochemicals. J. Fine
4:40 PM – 3754574. Pesticide risk during apple bloom differs between managed honey bees and wild native bees. S. McArt
5:05 PM – 3736975. Lab assays of honey bee queen health and fecundity for ecotoxicology. A. Hamilton
5:30 PM – 3754016. Water increases lifespan but worker bees (Apis mellifera) Still living half as long as previously observed. A. Nearman
5:55 PM – Concluding Remarks

Sustainable Agriculture: A Promise for the Future
Co-sponsors: AGFD, ENVR
Shanique Grant, Leah Riter, Amy Ritter, John Rohanna, Organizers
Peter Maienfisch, Natalia Peranginangin, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S503a

2:00 PM – Introductory Remarks
2:05 PM – 3742689. Enhancing ecosystem services and biodiversity on farm and pasture lands - A climate positive agriculture. N. Mutti
2:30 PM – 3740057. Mitigating climate change: Assessment of innovative approaches integrating climate-smart practices and crop protection products to reduce greenhouse gas emissions (GHG) in agriculture. Y. Wu

2:55 PM – 3747296. Catalytic ammonia abatement in agriculture. T. Knorr
3:45 PM – Intermission
3:20 PM – 37378740. Digital agronomy: Forming the intersection of sustainability and agricultural automation. J. Hesterman
3:45 PM – Intermission
4:15 PM – 3742528. Microplastics - Opportunity for innovation and a more sustainable agriculture. M. Esson
4:40 PM – 3756128. European regulatory changes in 2021: How the transparency regulation can help and hinder the sustainable future of agriculture. D. Williams

5:05 PM – Panel Discussion
5:30 PM – Concluding Remarks

Unmanned Aerial Systems (aka Drones): Pesticide Spraying and Other Agricultural Applications
Financial Co-Sponsor: Stone Environmental, Intrinsik Corp.
Co-sponsors: ANYL, ENVR
Ross Breckels, Zhenxu Tang, Organizers
Melissa Bridges, Shanique Grant, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501a

2:00 PM – Introductory Remarks
2:05 PM – 3750379. Application of pesticides by uncrewed aerial spray systems: Work of the OECD subgroup. G. Stark
2:30 PM – 3743343. Uncrewed aerial spray systems and equivalency with conventional techniques: spray drift, operator exposure, crop residue, and efficacy. J. Bonds
3:20 PM – 3732402. Transport Canada remotely piloted aircraft systems. C. Haughton
3:45 PM – Intermission
4:15 PM – 3742324. Drift of drone and ground applications according to the droplet size. U. Antoniassi
5:05 PM – 3754469. Model evaluation of spray drift from unmanned aerial system. Z. Tang, M. Winchell
5:30 PM – 3738619. Comparison of drift deposition from a UAS application using tracer dye with multiple downwind sampling methodologies. A. Rice

5:55 – Concluding Remarks
**In-person**

**Oral – Hybrid**

McCormick Place Convention Center, S504bc

4:55 PM – Spencer Award Introduction

05:05pm – 3739164. Agro-based raw materials as green product platforms. H.N. Cheng

MONDAY EVENING

Sci-Mix Poster Session
8:00 – 10 PM

**In-person**

McCormick Place Convention Center, Hall F2

AGRO Posters

3734330, ALSO A PLATFPROM PRESENTATION – Rethinking chronic toxicity and carcinogenicity assessment for agrochemicals. G. Hilton

3754602, ALSO A PLATFPROM PRESENTATION – ANVISA’s challenge on implementing GHS classification in the reevaluation of pesticides. L. Muratori Aguiar

3754908, ALSO A PLATFPROM PRESENTATION – Using automation techniques and machine learning algorithms to create a multi-source pesticide monitoring database. Z. Stone

3735275 – Optimization of inward rectifier potassium channel inhibitors to prevent hemipteran feeding. F. O’Hara

3737393 – 3D-printed nanocomposite for smart antimicrobial food packaging. O. Popoola

3737505 – On the use of science-based thresholds for the interpretation of public environmental monitoring data: Demonstrating glyphosate residues in European surface, ground and drinking water pose no risk to biota, ecosystems or human health. D. Saltmiras

3739919 – Disruption of the chemical signaling between potato and cyst nematode Globodera rostochiensis. J. Ochola

3741893 – Neonicotinoid insecticides in urban underground storm drain systems: Distribution and trends. N. Sy

3742819 – Repurposing synthetic β-triketone herbicides to control hematophagous arthropods. S. McComic

3743988 – Characterizing the effect of Kir channel modulators on mosquito cardiac contraction and cellular antiviral immunity. Z. Li

3745374 – Assessing human carcinogenicity risk without the rodent cancer bioassay. A. Goetz-Bouchard

3732194 – Sampling representative test portions of encapsulated ingredients in feed: Vitamin A and D3 nutritional analysis for regulatory and safety requirements. K. Riter

3747929 – NAM-based tiered phototoxicity testing and acute dermal exposure: A proposed human health risk assessment framework for agrochemicals. E. Chikwana

3747959 – Impact of drinking water assessments on conventional pesticide registrations. E. Chikwana

3753791 – Systems pharmacodynamic modelling of 4-hydroxyphenylpyruvate dioxygenase inhibition: Predicting tyrosinaemia. S. Webb

3754461 – Sugar compositions drive high attraction of vector mosquitoes. X. Ng

3755419 – Characterization of functional interactions between K+ flux mechanisms that drive insect neural function. R. Chen

3757832 – CYP71V7 catalyzes the conversion of 5-pentadecatrienyl resorcinol-3-methyl ether in sorgoleone biosynthesis. Z. Pan

3743265 – Analysis of endogenous and radiolabeled natural products derived from 14C-agrochemicals in plant and animal. B. Osterman

3743068 – Effect of microplastics on gastropod immunity to Paralaphostrongylus tenuis larvae. L. Koyanagi

3747037 – Dissipation and dietary risk assessment of difenoconazole in spinach, wax gourd and summer squash under open field conditions in China. B. Dong

TUESDAY MORNING

2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides and Novel Control Strategies

New and Novel Insecticides
Co-sponsored by AGFD, TOXI
Financially supported by CORTEVA Agriscience

John M. Clark, Ke Dong, Organizers
Blair Siegfried, Yoshihisa Ozoe, Organizers, Presiders

**Oral – In-person only**

McCormick Place Convention Center, S502b

8:00 – Introductory Remarks

8:05 AM – 3739990. Encircle™ remote termite detection system: An innovative approach enabling integrated management from BASF. C. Leichter

8:30 AM – 3741300. Insecticidal centrally-acting spider toxin polypeptides. J. Bloomquist

8:55 AM – 3730773. New insecticides: “Chance favors the prepared mind”. T. Sparks

9:20 AM – Intermission

9:45 AM – 3734446. Phycotoxins associated with red tide mass-kill events in filth flies. E. Burgess

10:10 AM – 3742237. Deconstructing some recent successes in insect resistance management. T. Dennehy

10:35 – Concluding Remarks

Bioisosteric Replacement and Scaffold Hopping for Bioactive Compound Discovery

Co-sponsor: ENVR
Clemens Lambeth, Peter Maienfisch, Organizers, Presiders

**Oral – In-person only**

McCormick Place Convention Center, S501d

8:00 – Introductory Remarks

8:05 AM – 3738045. Herbicidal diarylhetocyclic propionic acid derivatives: A case study in scaffold hopping strategies. T. Stevenson

8:55 AM – 3733698. Isosteric ring exchange as a useful scaffold hopping tool in agrochemistry. C. Lambeth

- Program p. 7 -
10:20 AM – 3727396. Stored product insect interactions with the microbes, Aspergillus flavus and Fusarium verticillioides on grain: Insect behavioral response to microbial volatiles and propensity for vectoring after harvest. W. Morrison

8:55 AM – 3740468. Bottom-up effects of the rhizobacterium on tritrophic interactions. D. Magalhães

9:20 AM – Intermission

8:55 AM – 3737538. Chemical landscape of Phragmites australis. A. Gaffke

8:30 AM – 3730641. Pathways in arthropod neural systems. D. Swale

9:20 AM – Intermission


8:30 AM – 3754598. Using data for developing strategies: Mitigations, pesticides, and ESA. L. Duzy

8:55 AM – 3750029. Using data for developing strategies: Mitigations, pesticides, and ESA. L. Duzy

9:20 AM – Intermission

8:05 AM – 3737538. Making mitigations manageable: Characterization of ABC transporter, UDP and CP gene in thiamethoxam-resistant field populations of Asian citrus psyllid, Diaphorina citri Kuwayama. X. Chen

10:05 AM – 3741461. bottom-up effects of the rhizobacterium on tritrophic interactions. D. Magalhães

10:45 AM – Concluding Remarks

Upfront Mitigation: What that Means in the FIFRA/ESA Consultation Process

Co-sponsor: AGFD, ANYL, BIOL, ENVR
Kathryn Bissell, Tilghman Hall, Bernlyn McGaughey, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501bc

9:00 – Introductory Remarks

Sterling B. Hendricks Memorial Lectureship Award

Stephen O. Duke

Cosponsored by AGFD
Financially supported by USDA-ARS

John Beck, Cathleen Hapeman, Sharon Schneider, Organizers
Michael Appell, Organizer, Presider

Oral – Hybrid
McCormick Place Convention Center, S501bc

10:50 AM – Award Presentation by Simon Liu

11:00 AM – 3736505. Natural compounds for the health of plants, humans, and the environment. S. Duke

11:50 AM – Discussion

12:00 to 1:00 PM – Reception
McCormick Place Convention Center, S503b

TUESDAY AFTERNOON

2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides and Novel Control Strategies

Toxicology and Physiology
Cosponsored by AGFD, TOXI
Financially supported by CORTEVA Agriscience

John M. Clark, Ke Dong, Organizers
Blair Siegfried, Yoshihisa Ozoe, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S502b

2:00 PM – Introductory Remarks

2:05 PM – 3730825. MIR162 maize event that carries the Vip3A trait gene remains a powerful solution for controlling multiple corn Lepidopteran pests after commercial cultivation for more than 10 years. Z. Wen

2:30 PM – 3744241. Toxicological relevance of K+ flux pathways in arthropod neural systems. D. Swale


3:20 PM – 3739257. Reduced oxidative bioactivation, particularly in nervous system, is responsible for selective resistance to coumaphos in honey bees. S. Cho, K. Yoon, J. Lee, S. Kim; J. Lee; S. H. Lee

3:45 PM – Intermission

4:15 PM – 3734420. Transgenic overexpression of P450 genes confers deltamethrin resistance in the fall armyworm, Spodoptera frugiperda. S. Palli


5:05 PM – 3742579. Gene editing tools for the southern green stink bug, Nezara viridula: Challenges and frustrations. B. Siegfried

5:30 PM – 3718197. Age-related difference in the action of pyrethroids on native voltage-sensitive sodium channels from juvenile and adult rat brains. J. Clark

5:55 PM – Concluding Remarks
Bioisosteric Replacement and Scaffold Hopping for Bioactive Compound Discovery
Co-sponsor: ENVR
Clemens Lambeth, Peter Maienfisch, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501bc

2:00 PM – Introductory Remarks
2:05 PM – 3721206. Applications of bioisosteres in the design of biologically active compounds. N. Meanwell
3:20 PM – 3739571. Picolinamide complex III inhibitors: A review of quinone inside inhibitors and the importance of bioisosteric principles in the discoveries of these new fungicides. V. Jackson
3:45 PM – Intermission
4:15 PM – 3736709. Applications of bioisosteres in the discovery of succinate dehydrogenase inhibitors. O. Loiseleur
4:40 PM – 3729900. Discovery of a new chemotype of SDHI fungicides through bioisosteric replacements. C. Zhou
5:05 PM – 3743441. Scaffold hopping approaches in the invention pathway to ADEPIDYN™. R. Rajan
5:30 PM – 3739277. Discovery of succinate dehydrogenase fungicide via computational substitution optimization. G.-F. Yang
5:55 PM – Concluding Remarks

EARLY CAREER SYMPOSIUM
Deciphering Plant-Insect-Microorganism Signals for Sustainable Crop Production
Co-sponsor: AGFD, BIOT, Committee on Technician Affairs (CTA)
Nurhayat Tabanca, Gareth Thomas, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S501d

2:00 PM – Introductory Remarks
2:05 PM – 3753445. Induced volatiles in maize: Examining the interplay of plant genotype and microbe treatment. E. Ngumbi
2:30 PM – 3738606. Noisy pests: Exploiting predatory insect odors to control aphid pests in sustainable crop production. J. Kansman
2:55 PM – 3743155. Leveraging hyperspectral reflectance to assess volatile organic compound (VOC) mediated induced responses across the genus Helianthus. J. Dowell
3:20 PM – 3717166. Investigating the role of acute oak decline (AOD) bacterial volatiles on the behavior of the two-spotted oak buprestid Agrilus biguttatus (Coleoptera: Buprestidae). G. Thomas
3:45 PM – Intermission
4:15 PM – 3737775. Molecularization of metabolom alterations in exudates of Lotus japonicus induced by arbuscular mycorrhiza. S. Schalk
4:40 PM – 3741295. Mosquito repellency potential of plants’ volatiles: Can people’s preferences demand future research need on volatile compounds from Ocimum tenuiflorum? J. Osei-Owusu
5:05 PM – 3737438. Streptomyces distalisicus, a potential microbial biolarvicide. S. J. Kim

5:55 PM – Concluding Remarks

From Colloids to Drift Effect: Bridging Formulations to Fields
Co-sponsor: AGFD, ANYL, ENVR
Naresh Pai, Frederick Salzman, Solito Sumulong, Susannah Banziger, Ricardo Acosta Amado, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501a

2:00 PM – Introductory Remarks
2:05 PM – 3740194. Conversations about the future of dicamba: The science behind off-target movement. L. Riter
2:30 PM – 3726170. Field volatility of 2,4 dichlorophenoxyacetic acid in a formulated product (MON 301820). S. Whiting
2:55 PM – 3743832. Off-target drift reduction efficacy of hooded sprayers for pre- and post-emergent applications. B. Brayden
3:20 PM – 3738578. Qualifying hooded sprayers for reduced downwind spray buffer distances in dicamba-tolerant soybeans. T. Lane
3:45 PM – Intermission
4:15 PM – 3742951. Phytoglycogen-based materials as emulsifier, solubilizer, or vaccine adjuvant. Y. Yao
5:05 PM – 3749326. Compatibility of surfactants and seed coating binders with bacterial and fungal strain. C. Woelfle-Gupta
5:30 PM – 3729244. Formulation and planter box application of plant beneficial methylotrophic microbes. J. Whitteck
5:55 PM – Concluding Remarks

Upfront Mitigation: What that Means in the FIFRA/ESA Consultation Process
Co-sponsor: AGFD, ANYL, BIOL, ENVR
Kathryn Bissell, Tilghman Hall, Bernalyn McGaughey, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S503a

2:00 PM – Introductory Remarks
2:05 PM – 3754909. Compatibility of surfactants and seed coating binders with bacterial and fungal strain. C. Woelfle-Gupta
2:30 PM – 3753645. María Isabel, J. Whitteck
2:55 PM – 3741295. Mosquito repellency potential of plants’ volatiles: Can people’s preferences demand future research need on volatile compounds from Ocimum tenuiflorum? J. Osei-Owusu
3:20 PM – 3737438. Streptomyces distalisicus, a potential microbial biolarvicide. S. J. Kim
3:45 PM – Intermission
4:15 PM – 3754259. Web-based, site-specific exposure modeling for endangered species assessment. B. Engel

- Program p. 9 -
4:40 PM – 3741522. Conservation that counts: Scaling up the FIFRA-ESA consultation process and implementation of offsets across space, time, and registration actions. **J. Bickel**

5:05 PM – 3758188. Upfront mitigation: Is there an engagement role for producers? **D. Parker**

5:30 PM – Discussion

5:55 PM – Concluding Remarks

**Division of AGFD**

**Journal of Agricultural and Food Chemistry**

**AGFD Best Paper Award**

*Sponsored by JAFC  Co-sponsored by AGRO*

Silvio Uhlig, Oscar Daniel Rangel-Huerta, Elin Rolen, Hege Divon, Kari Pauchon, Mark Sumarah, Trude Vrålstad, Justin Renaud

**Oral – Hybrid**

McCormick Place Convention Center, S504bc

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**WEDNESDAY MORNING**

**Climate Change and Sustainable Agriculture: Impacts on food security/trade, risk assessment and pesticide fate studies (including Early Career Symposium)**

*Co-sponsor: AGFD, CELL, ENVR, TOXI*

Aleksandra Dean, Patricia Engel, Cornelis Hoogeweg, Pamela Rice, Amy Ritter, **Organizers**

Frederick Salzman, Xavier Poole, Samantha Nedder, **Organizers, Presiders**

**Oral – In-person only**

McCormick Place Convention Center, S502b

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**8:00 – Introductory Remarks**

**8:05 AM – 3740076.** Predicting the response of future food systems to climate change. **W. Easterling**

**8:30 AM – 3738620.** EPA Pesticide regulatory efforts related to climate adaptation and agriculture. **J. Dawson**

**8:55 AM – 3754393.** Incorporating climate change into the conduct of chemical risk assessments to inform risk management, adaptation, and mitigation. **W. Landis**

**9:20 AM – 3755929.** Incorporating climate change predictions into ecological risk assessments. **Z. Stone**

**9:45 – Intermission**

**10:15 AM – 3750632.** Comparative assessment of food trade standards. **C. Tiu**

**10:40 AM – 3740007.** Reuse water for food production: Treatment challenges and consumer concerns. **J. Czarnecki**

**11:05 AM – 3738607.** Assessing the impact of soil characteristics on the rate of chemical degradation under aerobic conditions. **K. Cabral**

**11:30 AM – 3743122.** Evaluating the effect of application solvent(s) used during a soil metabolism study with $^{14}$C-glyphosate. **X. Poole**

**11:55 AM – Concluding Remarks**

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**INSecticide TARgets (INSTAR) Summit**

*Co-sponsor: AGFD, ANYL, BIOT, ENVR*

Troy Anderson, Stephen Duke, **Organizers**

Daniel Swale, **Organizers, Presiders**

**Oral – In-person only**

McCormick Place Convention Center, S501d

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**New Crop Yield Technology Companies Improving Sustainability**

*Co-sponsor: AGFD, ANYL, BIOT, ENVR*

Pam Marrone, Keith Wing, **Organizers, Presiders**

**Oral – Hybrid**

McCormick Place Convention Center, S501bc

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**8:00 – Introductory Remarks**

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**Journal of Agricultural and Food Chemistry**

**AGRO Best Paper Award**

*Sponsored by JAFC  Co-sponsored by AGFD*

Teng Yang, Xiang Zhou, Pengyu Wang, Jianhua Gan, Baoan Song, Song Yang, and Cai-Guang Yang

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**8:05 AM – 3743464.** Dysregulation of ClpP by small-molecule activators used against *Xanthomonas oryzae pv. oryzae* infections. **T. Yang; X. Zhou, C. Yang, S. Yang**

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**Kathryn C. Hach Award for Entrepreneurial Success**

*Sponsored by Kathryn C. Hach Award Fund*

Pamela Marrone

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**8:55 AM – 3736478.** Status and potential for biologicals in crop production. **P. Marrone**

**9:45 – Intermission**

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- Program p. 10 -
10:15 AM – 3743052. Using small molecule signaling to enable nitrogen fixation in maize. A. Greenlon, T. Meragelman, T. Bayer
10:40 AM – 3729541. Data traits: Improving farm sustainability by digitizing crop physiology using novel living sensors and scalable remote monitoring. R. Shultz
11:05 AM – 3738264. Reshaping insect pest control for the protection of crop yield. J. Yuan
11:55 AM – Concluding Remarks

Nontarget Arthropod Risk Assessment: Scientific Developments, Challenges and Research Need
Co-sponsor: AGFD, ANYL, BIOR, ENVR
Domenica Auteri, Keith Sappington, Tom Steeger, Organizers
Alessio Ippolito, Katrina White, Organizers, Presiders

AGRO POSTER SESSIONS
AGRO Combined Poster Session
Poster - In-person
McCormick Place Convention Center, Hall F2
12:00 PM

*** Student Travel Award Winner
SM – Sci-Mix Presenter

*** Poster #2027, SM: 3739919 – Disruption of the chemical signaling between potato and cyst nematode Globodera rostochiensis. J. Ochola
Poster #2029, SM: 3757832 – CYP71V7 catalyzes the conversion of 5-pentadecatrienyl resorcinol-3-methyl ether in sorgoleone biosynthesis. Z. Pan
*** Poster #2031, SM: 3735275 – Optimization of inward rectifier potassium channel inhibitors to prevent hemipteran feeding. F. O’Hara
Poster #2033, SM: 3736294 – Ingestion bioassay protocol for assessing pesticide toxicity to the solitary bee, Osmia cornifrons. N. Phan
Poster #2035: 3736552 – Risk estimation for butterflies exposed to permethrin from mosquito control sprays. T. Bargar
*** Poster #2037, SM: 3737393 – 3D-printed nanocomposite for smart antimicrobial food packaging. O. Popoola
Poster #2126, SM: 3737505 – On the use of science-based thresholds for the interpretation of public environmental monitoring data: Demonstrating glyphosate residues in European surface, ground and drinking water pose no risk to biota, ecosystems, or human health. D. Saltmiras
*** Poster #2127, SM: 3755419 – Characterization of functional interactions between K+ flux mechanisms that drive insect neural function. R. Chen
Poster #2129, SM: 3745374 – Assessing human carcinogenicity risk without the rodent cancer bioassay. A. Goetz-Bouchard
*** Poster #2130, SM: 3742819 – Repurposing synthetic β-triketone herbicides to control hematophagous arthropods. S. McComic
Poster #2131, SM: 3747929 – NAM-based tiered photoxocity testing and acute dermal exposure: A proposed human health risk assessment framework for agrochemicals. E. Chikwana
Poster #2132: 3743773 – To evaluate the persistence of pesticides in soil based on their biochemical availability. P. Kaur
Poster #2133, SM: 3747959 – Impact of drinking water assessments on conventional pesticide registrations. E. Chikwana
*** Poster #2134, SM: 3743988 – Characterizing the effect of Kir channel modulators on mosquito cardiac contraction and cellular antiviral immunity. Z. Li
Poster #2135: 3738597 –Dicamba volatility changes based on pre/post application events (Dew/Rain). T. Lane
*** Poster #2136, SM: 3754441 – Sugar compositions drive high attraction of vector mosquitoes. X. Ng
Poster #2137: 3764471 – Pesticide residues in agriculture, ecosystem and environment of cotton and vegetable growing areas and contamination of Ghaggar River. T. Jindal
Poster #2226: 3748260 – New SDHI chemistry does not require new cancer bioassays to evaluate human risk. N. Ryan

- Program p. 11 -
**Poster #2228, SM: 3753791** – Systems pharmacodynamic modelling of 4-hydroxyphenylpyruvate dioxygenase inhibition: Predicting tyrosinaemia. S. Webb

**Poster #2230: 3755610** – Predict agrochemical metabolism in early stage by in vitro method. K. Yang

**Poster #2232: 3743265** – Analysis of endogenous and radiolabeled natural products derived from 14C-agrochemicals in plant and animal. B. Osterman

**Poster 3741893 – WITHDRAWN**

**Poster 3752364 – WITHDRAWN**

**AGRO Combined Poster Session: Virtual Session**
**12:00 – 2:00 PM**
Heidi Irrig, Organizer

**Zoom Virtual-only**

**3716634** – Residual characteristics and processing factors of carbendazim in persimmon, Diospyros kaki Thunb. J.-Y. Kim

**3728605** – Volatile emissions from exotic fungi vectored by Euwallacea prebervis Schedl (Coleoptera: Curculionidae). N. Tabanca

**3736920** – Residual characteristics of met alfumizone during ginseng cultivation and processing. N. Eun Shik

**3737870** – Decade of dicamba: Water monitoring, drift complaints, and regulation in Minnesota. K. Hall

**3737991** – Maize lectin can function as a defensive protein against insect and fungal pests. P. Dowd

**3741955** – Establishment of multiresidue analysis of over 350 pesticides in soils using a modified QuEChERS method coupled with GC-MS/MS and LC-MS/MS. Y.-H. Chang

**3742511** – Study on the vitality of functional microorganisms complex microflora and its effect. Y. Wu

**3742522** – Residual characteristics of etofenprox and flubenamide in rice, Oryza sativa L. J.-Y. Kim

**3743051** – Impact of organosilicone spray adjuvants on pollinator health and reproduction. D. Cox-Foster

**3743068**, SM – Effect of microplastics on gastropod immunity to Parelaphostronglyus tenuis larvae. L. Koyanagi

**3743166** – Landscape modelling for non-target arthropod risk assessment of pesticides: challenges and opportunities. P. Thorbek

**3747037, SM** – Dissipation and dietary risk assessment of difenoconazole in spinach, wax gourd, and summer squash under open field conditions in China. B. Dong

**3754808** – Investigation of gas exchange in pest insect eggs using osmium tetroxide. J. Powell

**3755615** – Total synthesis and biological evaluation of penicilacum A and analogs. A. Demeritte

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**WEDNESDAY AFTERNOON**

**Bioisosteric Replacement and Scaffold Hopping for Bioactive Compound Discovery**
Co-sponsor: ENVR
Clemens Lambeth, Peter Maienfisch, Organizers, Presiders

**Oral – Hybrid**
McCormick Place Convention Center, S501bc

2:00 PM – Introductory Remarks

2:05 PM – 3742581. Multidimensional innovations in chiral agrochemicals enabled by the “Chem-Bio” scaffold aryloxazoline. S. Li

2:30 PM – 3733591. Fungicidal 5-sulfonyl thiadiazoles and related derivatives. S.-Y. Hsieh

2:55 PM – 3735068. Discovery and development of a new class of biaryl ether herbicides. C. Kalnmals


3:45 PM – Intermission


4:40 PM – 3734800. Discovery of pyrimidinyl-based kinase herbicides. P. LePlae

5:05 PM – 3738494. Novel azoly1 N-aryloxazolidinone herbicides for Amaranthus and grass control in corn and soybeans. S. De

5:35 pm – Concluding Remarks

**Good Laboratory Practices for the Agrochemical Professional**
Co-sponsor: ENVR
Kimberly Frazier, Johanna Mazlo, Barb Munch, Organizers
Jennifer Cypher, Organizer, Presider

**Oral – Hybrid**
McCormick Place Convention Center, S501a

2:00 PM – Introductory Remarks

2:05 PM – 3736282. Quality culture: Incorporating quality principles across your organization. J. Cypher

2:30 PM – 3737421. Roles and responsibilities of sponsor in a GLP study as per EPA regulations. A. Pandya

2:55 PM – 3734238. WITHDRAWN

3:20 PM – 3755259. SOPs: The ‘dirty dozen’ and how to maintain compliance. J. Mazlo

3:45 PM – Intermission

4:15 PM – 3729272. Auditing test facility as per EPA good laboratory practice standards: Regulatory insights. A. Pandya

4:40 PM – 3734243. WITHDRAWN

5:05 PM – 3758114. Insights of method validation studies for stability and homogeneity of test substance in carrier: QA perspective. A. Pandya

5:30 PM – Concluding Remarks
**INSecticide TARgets (INSTAR) Summit**
Co-sponsor: AGFD, ANYL, BIOT, ENVR
Troy Anderson, Stephen Duke, Organizers
Daniel Swale, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S501d

2:00 PM – Introductory Remarks

2:10 PM – 3754875. Insecticide resistance management: An introduction to past, present and future INSTAR perspectives. T. Anderson

2:30 PM – 3736309. Strategies to mitigate herbicide resistance: Where we have been and where we are going. P. Traner

2:55 PM – 3748049. Use of next-generation sequencing technology to identify the molecular markers of insecticide resistance in mosquitoes. E. Muturi

3:20 PM – Intermission

3:50 PM – Panel Discussion

5:20 PM – Concluding Remarks

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**New Crop Yield Technology Companies Improving Sustainability**
Co-sponsor: AGFD, ANYL, BIOT, ENVR
Pam Marrone, Keith Wing, Organizers, Presiders

**Oral – In-person only**
McCormick Place Convention Center, S502b

2:00 PM – Introductory Remarks

2:05 PM – 3736299. Peptides for crop protection: How the insecticide SPEAR® ushers in a new era, based on safer molecules and sustainable manufacturing. B. Kennedy

2:30 PM – 3725600. Target-based discovery of crop protection chemistries powered by DNA-Encoded libraries. T. Meade

2:55 PM – 3741156. WITHDRAWN

3:20 PM – Intermission

3:50 PM – Panel Discussion

5:20 PM – Concluding Remarks

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**Bioisosteric Replacement and Scaffold Hopping for Bioactive Compound Discovery**
Co-sponsor: ENVR
Clemens Lambeth, Peter Maienfisch, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501bc

8:00 – Introductory Remarks

8:05 AM – 3739295. Discovery of succinate dehydrogenase fungicides via receptor-based scaffold-hopping. G.-F. Yang

8:30 AM – 3737198. Discovery of novel 1,3,4-trisubstituted pyrazoles and their use as insecticides. T. Pahutski

8:55 AM – 3742450. Design, synthesis, and properties of silicon-containing 1,3-diamide insecticides. X. Quan

9:20 AM – 3742666. Exploration of fCo TRPV channel modulators for sucking pest control: Postulation of a comprehensive toxophore model. S. Rendler

9:45 – Intermission


10:40 AM – 3729860. Design, synthesis, and insecticidal activities of Chlorantraniliprole analogues containing α-substituted alcohol and its derivatives. G. Yang

11:05 AM – 3757434. Insecticidal isoxazoline bioisosteres. K. Koerber

11:30 AM – 3742186. 3-Aryl-2-hydroxy-3-[(trifluoromethyl)pyrrolidine Core: A new structural feature for insecticides. P. Jeschke

11:55 AM – Concluding Remarks

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**Nontarget Arthropod Risk Assessment: Scientific Developments, Challenges and Research Needs**
Co-sponsor: AGFD, ANYL, BIOL, ENVR
Domenica Auteri, Keith Sappington, Tom Steeger, Organizers
Alessio Ippolito, Katrin White, Organizers, Presiders

Oral – Hybrid
McCormick Place Convention Center, S501a

8:00 – Introductory Remarks

8:05 AM – 3739599. Advancing the environmental risk assessment of non-target arthropods for plant protection products: Ecosystem services and function. L. Maltby

8:30 AM – 3738242. Ecological traits and pesticide risk assessment: Vulnerability of bee species to pesticide exposures. A. Schmolke

8:55 AM – 3742299. Use of ecological models to assess the effects of a plant protection product on ecosystem services provided by an orchard. P. Van den Brink

9:20 AM – 3739477. Exposure assessment goals to define exposure to pesticides in the field and improve the linking to effects observed in ecotoxicological experiments. P. Adriaanse

9:45 – Intermission

10:15 AM – 3744329. LD50 at 95: Time for 100-year upgrade for pollinator risk assessment. M. Berenbaum

10:40 AM – 3731323. Pesticide risk to managed bees during blueberry pollination is primarily driven by off-farm exposures. K. Graham


11:30 AM – 3743636. Assessing risk of insecticide exposures to Lepidoptera: Molecular to population-level effects. N. Krishnan

11:55 AM – Concluding Remarks
McCormick Place Convention Center and nearby Hotels

AGRO Meeting Rooms
5th Floor

AGRO Posters – Third Floor Hall F2
Sci-Mix on Monday
AGRO Poster Session on Wednesday

AGRO Gatherings Third Floor W375C
Blues-N-Brews on Tuesday
Awards Social on Wednesday

AGRO Gatherings
Sunday night, Grand Horizon G

Grow with AGRO
Please note that this is upside down with respect to the Convention Center map.

Escalator from 4th floor connects to other escalators all the way to the 1st floor.

AGRO Meeting Rooms

ACRO Meeting Room
International Award
Grad Student/Post-doc Luncheon
Sterling Hendricks Reception

Also, ACED hosted awards Spencer Award and IACF Award
Please note that this is upside down with respect to the Convention Center map.
Global Women’s Breakfast 2023

“Breaking Barriers In Science”

February 14, 2023
2022 AGRO Education and Poster Awards for Student Travel

Sponsored by

Zhilin Li
Rui Chen
Sarah McComic
XiXian Ng

Juliet Ochola
1st Place
Flinn O’Hara
2nd Place Tie
Oluwatosin Popoola
2nd Place Tie

Juliet Ochola
1st Place
Flinn O’Hara
2nd Place Tie
Oluwatosin Popoola
2nd Place Tie

Rui Chen
Zhilin Li
XiXian Ng