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SAN FRANCISCO

AUGUST 10 - 14, 2014

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AGRO

PICOGRAM V. 85

Call for Papers

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13th IUPAC International Congress of Pesticide Chemistry

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TABLE OF CONTENTS

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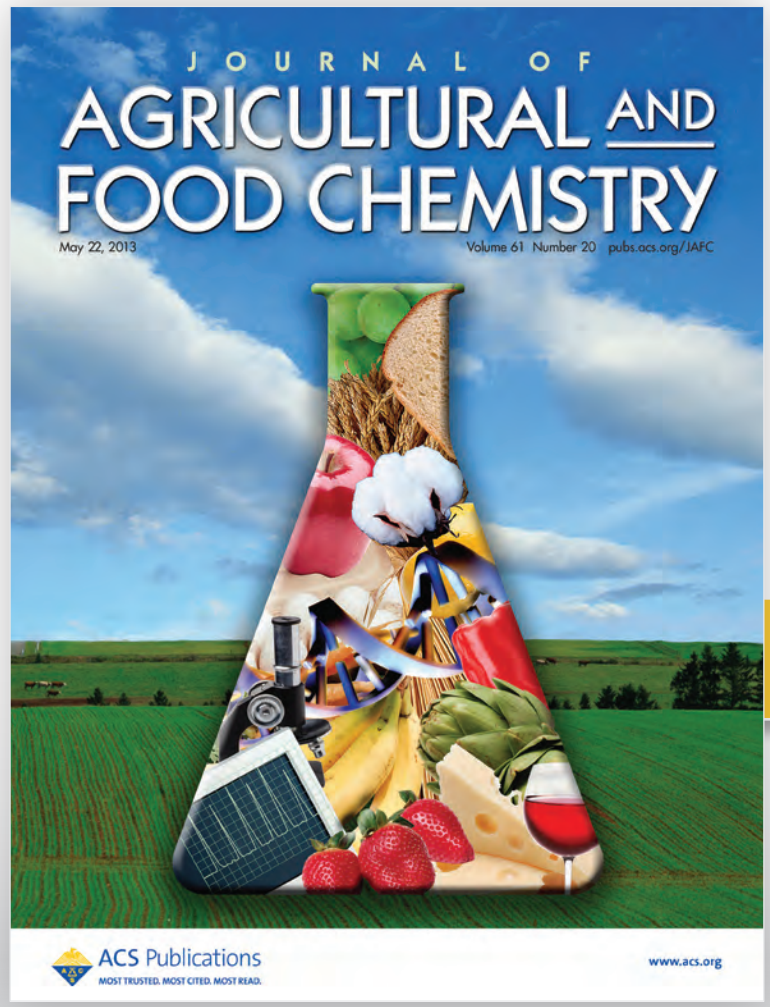

The *Journal of Agricultural and Food Chemistry* publishes high-quality, cutting edge original research representing complete studies and advances dealing with the chemistry and biochemistry of agriculture and food. The *Journal of Agricultural and Food Chemistry* reports an **Impact Factor of 2.906** with **76,046 total citations** in the 2012 Journal Citation Reports® (Thomson Reuters, 2013). The journal ranks **#1 in total citations in Food Science & Technology, Applied Chemistry, and Agriculture, Multidisciplinary**.

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James N. Seiber
Editor-in-Chief
University of California, Davis

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FROM THE CHAIR'S DESK

STEPHEN O. DUKE

Time flies. Even though four months have passed, our meeting in Indianapolis seems like yesterday. AGRO continues to evolve by finding innovative ways to support those who endeavor to improve agricultural productivity and protection of human health and the environment with agrochemical research. AGRO works hard to provide a strong sense of community and support for our members. The AGRO vision continues to provide a supportive environment for professional growth through innovative programming, services, and opportunities for collaboration. Three areas are central to our continued success as a valuable and growing professional society.

Programming

The AGRO program for the 246th National Meeting in Indianapolis last September was the largest in our history. It contained five award symposia, 21 technical symposia, and two poster sessions, for a total of 334 submitted abstracts. There was extensive co-programming with the AGFD and ENVR Divisions. Particularly noteworthy was the fabulous social hosted by Dow AgroSciences at their corporate headquarters.

The program being put together by Cathleen Hapeman for the 248th National Meeting in San Francisco at the Marriott Marquis Hotel has the theme of "Chemistry and Global Stewardship." It is certain to be a large and diverse meeting, since our meeting is combined with the 13th IUPAC International Congress of Pesticide Chemistry. Ken Racke and Laura McConnell are leading the organizing committee on the IUPAC side and are moving ahead on many fronts ensuring the success of this meeting. Information about the meeting and the Call for Papers begins on page 19 and at www.iupac2014.org. The IUPAC pesticide meeting only comes around every 4 years and seldom meets with us. So, you will not want to miss this rare opportunity. We very much hope to see you in San Francisco.

AGRO continues its effort to co-program in related conferences. It co-sponsored the North American Chemical Residue Workshop in 2013 and for the foreseeable future. AGRO also will co-sponsor of a Pesticide Ecological Risk Assessment Modeling Course in Florida in 2014. Several AGRO members have planned symposia for the PacifiChem (the International Chemical Congress of Pacific Basin Societies) meeting in December 2015.

The Foundation for the Study of Traditional Sciences and Arts (ECYART) lectureship series in Peru kicked off in 2013. Luis Ruzo established ECYART as an educational/research entity in Peru and created a lecture series at the Universidad Nacional Agraia La Molina in Lima. Dr. Ruzo, a long-time AGRO member working with an ad-hoc AGRO committee, successfully implemented the lecture series in 2013 with a series of five guest lecturers presenting on agrochemical topics in four different months. This program will continue in 2014.

James Seiber, in his role as Editor-in-Chief of *Journal of Agriculture and Food Chemistry* (JAFC), in concert ACS Publications, AGFD, and AGRO, initiated lectureships based on Research Article of the Year Awards for JAFC. Two awards are given each year; one for the best paper in agrochemical research and the other in the area of food chemistry. These lectures were given a prominent place in the 2013 program and will be part of our 2014 program.

Governance

The health and prosperity of AGRO is completely dependent on members stepping forward and offering their services for the common good. Pam Rice was elected Vice-Chair and will be organizing our program in Boston for 2015 (Aug 16-20). Del Koch continues as Treasurer. Rod Bennett and Jeanette Van Emon continue as Councilors. Sharon Papiernik is continuing as Secretary, and John Clark is serving as past chair and chair of the Nominating Committee. Cheryl Cleveland, Amy Ritter, John Beck, Marja Koivunen, and Ke Dong have joined the Executive Committee. Pam Rice, Julie Eble, Scott Jackson, Jim Seiber, and Keith Solomon rotated off the EC. Many thanks to those who have served and to those are now stepping up to the plate. Also, thanks to those who were willing to have your names on the ballot, but did not were not elected. We hope that you will be willing to be considered again in the future.

At our annual business and governance meeting, the Board voted to incorporate AGRO to protect the officers from personal liability. An ACS attorney is in the process of implementing this.

Our current Strategic Plan runs through 2014. Major accomplishments from this plan include: (a) reorganization of AGRO committees; (b) email newsletter initiated; (c) live webcast of symposium in Philly with follow-up article in JAFC; (d) launched "Lunch and Learn" webinar series; (e) program topic champions for long-term planning; (f) IUPAC 2014 Congress to be held at ACS meeting. We will be organizing a new Strategic Planning Committee in 2014.

The financial health of AGRO is good due to excellent support from our patrons, strong programming that maintains our revenue from ACS, special grants, earnings from investments, and financial reserves. Nevertheless, we have been spending more than we receive annually for the past several years. The finance committee projects that there will be a turnaround in 2014, creating a small surplus. In 2013, we created a "Sponsorship Champion" position. This person works closely with the current Program Chair and focuses solely on raising money in the support of specific symposia in the technical program for each ACS-AGRO national meeting. Al Barefoot graciously volunteered to be the first Sponsorship Champion. He raised more than $26.5K from eleven sponsors that we would otherwise not have had for the 2013 program. I thank Al profusely for his dedication.

Committee Structure and Leadership

The success and health of AGRO depends on volunteers. I want to thank all of those who volunteered their time to help man the AGRO table and do other tasks in Indianapolis. Without your help, it would have been a mess. We still need a volunteer to help manage the AGRO archives. Let me know if you have an interest.

AGRO DIVISION FELLOWS

1971	Dr. Louis Lykken	1979	Dr. Rodney D. Moss	1996	Dr. John Bourke
	Dr. Tom H. (Bucky) Harris	1980	Dr. G. Wayne Ivie	1998	Dr. Hank Cutler
	Dr. Herman Beckman (Posthumous)		Dr. John B. Siddall (Posthumous)		Mr. Paul Giesler
1972	Mr. Wendell F. (Bud) Phillips	1981	Dr. Robert M. Hollingsworth	2000	Dr. Barry Cross
	Dr. Don G. Crosby		Dr. Gino J. Marco	2001	Dr. Robert Hoagland
	Dr. Elvins Y. Spencer	1983	Dr. John Harvey, Jr.	2003	Dr. Judd O. Nelson
1973	Mr. Roger C. Blinn	1985	Mr. Henry Dishburger	2005	Dr. Rodney Bennett
	Dr. Philip C. Kearney		Dr. Richard C. Honeycutt	2006	Dr. Terry D. Spittler
	Dr. Julius J. Menn	1986	Dr. Gunter (Jack) Zweig	2007	Dr. John M. Clark
1974	Dr. Morton Beroza	1987	Dr. Willa Garner		Dr. Ann T. Lemley
	Dr. James P. Minyard, Jr.	1988	Dr. Jan Chambers		Dr. R. Don Wauchope
	Dr. Joe C. Street		Dr. James Seiber	2008	Dr. Allan S. Felsot
1975	Dr. Hank F. Enos	1990	Dr. Joseph Fenyes	2011	Dr. Laura L. McConnell
	Dr. Maurice B. Green	1991	Dr. Nancy N. Ragsdale	2012	Dr. Jeffrey J. Jenkins
	Dr. Charles H. Van Middelem	1992	Dr. Don Baker		Dr. John J. Johnston
1976	Dr. Marguerite L. Leng		Dr. Joel Coats	2013	Dr. Stephen S. Duke
	Dr. Jack R. Plimmer		Dr. Guy Paulson		Dr. Cathleen J. Hapeman
	Dr. Gerald G. Still	1993	Dr. Larry Ballantine		Dr. Kenneth D. Racke
1977	Dr. Gustave K. (Bob) Kohn	1994	Dr. James Heitz		Dr. Teresa A. Wehner
1978	Dr. S. Kris Bandal		Dr. Ralph Mumma		
	Dr. Paul Hedin		Dr. Willis Wheeler		

Awards Committee Report

Dr. Ralf Nauen of Bayer CropScience in Germany is the recipient of the 2014 ACS International Award for Research in Agrochemicals, sponsored by DuPont Crop Protection. Dr. Nauen receives this award in recognition of his research into the modes of action and resistance to insecticides and acaricides, especially neonicotinoid and tetronic acid classes. A symposium in his honor is being organized by Dr. Bob Hollingworth and will be part of the 13th IUPAC International Congress of Pesticide Chemistry at the 248th ACS National Meeting in San Francisco.

The winner of the 2014 USDA-Agricultural Research Service Sterling Hendricks Lectureship Award will be announced shortly. The winner will present a lecture in a lunch time symposium on Tuesday at the 248th ACS National Meeting in San Francisco and will be hosted by AGFD and cosponsored by AGRO.

In cooperation with the AGRO and AGFD divisions, the *Journal of Agricultural and Food Chemistry* (JAFC) will sponsor 2 lectureships for outstanding papers in JAFC. Papers are divided according to journal subject category and forwarded to review committees from each division, who will select the winners. The awardees will receive a plaque, a monetary award, and travel expenses to the meeting. The call for nominations of papers published in 2014 will be solicited from AGRO and AGFD members and from the public through the JAFC website beginning in late Fall 2014; the deadline will be December 31, 2014. Winners of the 2013 lectureships will be announced shortly and will be presented in San Francisco.

Congratulations to **Dr. Daniel Swale**, Vanderbilt University Medical Center, who received the 2013 New Investigator Award. This award is sponsored by Dow AgroSciences and presented by AGRO to scientists who have obtained a doctoral degree within the past five years and are actively conducting academic, industrial, consulting or regulatory studies related to aspects of agrochemicals.

AGRO has established an endowment fund in collaboration with Bayer CropScience to promote an understanding of the role of chemistry in agriculture for students. Congratulations to 2013 AGRO Education Award Finalists: First Place: **Lacey Jensen**, University of Florida, Gainesville (Dr. Jeffrey Bloomquist); Second Place: **Aaron Gross**, Iowa State University (Dr. Joel Coats); and Third Place: **Joshua Wallace**, University of Buffalo (Dr. Diana Aga).

Nominations for the 2015 ACS International Award for Research in Agrochemicals, sponsored by DuPont Crop Protection, and the 2014 AGRO Award for Innovation in Chemistry of Agriculture, sponsored by BASF, are currently being evaluated by the Awards Committee. The nomination criteria for the 2016 International and 2015 Innovation Awards can be found on pages 7 and 9, respectively. The Awards Committee is also accepting new award nominations for the Division Fellow Award. Criteria for the award and what to submit are shown below. The deadlines each year are March 31 for the Fellow Award and December 31 for the International and Innovation and Awards. Nominations for the 2015 Sterling Hendricks Lectureship Award are being solicited by USDA-ARS. The nomination criteria can be found on page 11. Nominations for the Kenneth A. Spencer Award are being solicited by the ACS Kansas City Section, and criteria can be found on page 13. Please consider nominating deserving colleagues for these awards.

Respectfully submitted,
James N. Seiber, Chair
Awards Committee

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*. Deadline for submitting nominations is March 31 of each year. Contact the Awards Committee for further information.

Submit nominations electronically to:

Dr. James N. Seiber
AGRO Awards Committee Chair
530-752-1141
jnseiber@ucdavis.edu

Past Awardees of the Burdick & Jackson International Award

1969 John E. Casida, University of California, Berkley
1970 Richard D. O'Brien, Cornell University
1971 Robert L. Metcalf, University of Illinois
1972 Ralph L. Wain, Wye College, University of London
1973 Hubert Martin, British Crop Protection Council
1974 T. Roy Fukuto, University of California, Riverside
1975 Michael Elliot, Rothamsted Experiment Station, England
1976 Morton Beroza, USDA-ARS (retired)
1977 Francis A. Gunther, University of California, Riverside
1978 Julius J. Menn, Stauffer Chemical
1979 Milton S. Schecter, USDA (retired)
1980 Minuro Nakajima, Kyoto University, Kyoto, Japan
1981 Philip C. Kearney, USDA-ARS, Beltsville, Maryland
1982 Jack R. Plimmer, USDA-ARS, Beltsville, Maryland
1983 Karl Heinz Buechel, Bayer AG, Germany
1984 Jacques Jean Martel, Roussel Uclaf, Paris
1985 Junshi Miyamoto, Sumitomo Chemical Co., Japan
1986 James Tumlinson, USDA-ARS, Gainesville, Florida
1987 Fumio Matsumura, Michigan State University
1988 Ernest Hodgson, North Carolina State University
1989 Toshio Narahashi, Northwestern University
1990 David Schooley, University of Nevada, Reno
1991 Stuart Frear, USDA-ARS, Fargo, North Dakota

Past Awardees of the ACS International Award For Research in Agrochemicals

Co-Sponsored by BASF & DuPont Crop Protection

1992 Bruce Hammock, University of California, Davis
1993 Dr.Morifuso Eto, Kyushu University, Fukoka, Japan
1994 Toshio Fujita, Kyoto University, Kyoto, Japan
1995 Mohyee Eldefrawi, University of Maryland, Baltimore
Koji Nakanishi, Columbia University, New York
1996 Günther Voss, Ciba, Basel, Switzerland
Klaus Naumann, Bayer, Leverkusen, Germany
1997 Fritz Führ, Jülich, Germany
Izuru Yamamoto, University of Tokyo, Japan
1998 George Levitt, DuPont, Wilmington, Delaware
Leslie Crombie, University of Nottingham, England
1999 Don Baker, Zeneca, Richmond, CA
James Seiber, University of Nevada, Reno
2000 George P. Georghiou, University of California, Riverside
Herbert B. Scher, Zeneca
2001 Donald Crosby, University of California, Davis
Ralph Mumma, Pennsylvania State University
2002 Keith Solomon, University of Guelph, Canada
Marinus Los, American Cyanamid
2003 Bob Hollingworth, Michigan State University
Hideo Ohkawa, Kobe University, Japan
2004 Stephen Duke, USDA-ARS, Oxford, Mississippi
John Marshall Clark, University of Massachusetts-Amherst
2005 Robert Krieger, University of California, Riverside
Janice E. Chambers, Mississippi State University
2006 Joel Coats, Iowa State University
Isamu Yamaguchi, Agricultural Chemicals Inspection Station, Tokyo, Japan
2007 Gerald T. Brooks, West Sussex, UK
Fredrick J. Perlak, Monsanto, St. Louis, Missouri
2008 David M. Soderlund, Cornell University
2009 R. Donald Wauchope, USDA-ARS (retired), Tifton, Georgia
2010 Shinzo Kagabu, Gifu University, Gifu, Japan
2011 George P. Lahm, DuPont Crop Science, Newark, Delaware

Past Awardees of the ACS International Award For Research in Agrochemicals

Sponsored by DuPont Crop Protection

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

CALL FOR NOMINATIONS
ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS
Sponsored by DuPont Crop Protection

2016 Fall ACS National Meeting in Philadelphia, Pennsylvania

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:

Dr. James N. Seiber
AGRO Awards Committee Chair
530-752-1141
jnseiber@ucdavis.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 2016 Fall National ACS Meeting in honor of the awardee.

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  - Degradation in surface waters
  - Soil adsorption/desorption and column leaching
  - Soil volatility
- **Plant metabolism:**
  - Nature of the residue in crops
  - Confined rotational crops
- **Animal metabolism:**
  - Rodents: ADME
  - Livestock metabolism (goats and hens)
- **Livestock feeding studies:**
  - Cows and hens
- **Analytical Chemistry:**
  - Residues in soil, air and water
  - Residues in crops
  - Radio validation and ILVs
  - Operator exposure
  - 5-Batch analysis
- **Physicochemical characteristics**

Contact: Dr. David Dohn
d.dohn@ptrlwest.com

Dr. Luis Ruzo (Division General Manager)
lruzo@eaglabs.com

PTRL Europe

Services include:

- **Environmental fate:**
  - Hydrolysis
  - Photolysis (aqueous and soil)
  - Metabolism in soils and sediments
  - Soil adsorption/desorption
  - Soil volatility
  - Air sampling
- **Plant metabolism:**
  - Nature of the residue in crops
- **Analytical Chemistry:**
  - Matrices include: crops, animal, blood, urine, soil, water, air, operator exposure and others.
  - Development of new methods and modification/adaptation of old methods
  - Radio validations and ILVs
  - Operator exposure
  - 5-Batch analysis
  - Chemistry support of environmental effects studies
  - Blood cell isolation, RIA, FACS
- **Physicochemical characteristics**

Contact: Dr. Thomas Class
Thomas.Class@ptrl-europe.de

Dr. Luis Ruzo (Division General Manager)
lruzo@eaglabs.com

Wildlife International

Services include:

- **Environmental fate:**
  - Hydrolysis
  - Photolysis (aqueous and soil)
  - Metabolism in soils and sediments (aerobic and anaerobic)
  - Degradation in surface waters
  - Soil adsorption/desorption
- **Biodegradation**
- **Analytical Chemistry:**
  - Residue analysis
  - Method Development
  - ILVs
  - 5-Batch analysis
- **Physicochemical characteristics**
- **Ecotoxicology:**
  - Complete suite of fresh water and marine aquatic tests
  - Endocrine disruptor screening and testing with in-house histopathology
  - Bioaccumulation testing through aquatic and dietary exposure
  - Avian toxicology
  - Terrestrial and aquatic plant testing
  - Honey bee and earthworm testing

Contact: Annegaaike Leopold
aleopold@wildlifeinternational.com

Dr. Luis Ruzo (Division General Manager)
lruzo@eaglabs.com

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8598 Commerce Drive
Easton, MD 21601 USA
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CALL FOR NOMINATIONS
ACS AWARD FOR INNOVATION IN CHEMISTRY OF AGRICULTURE
Sponsored by BASF Corporation

2015 Fall ACS National Meeting in Boston, Massachusetts

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:

Dr. James N. Seiber
AGRO Awards Committee Chair
530-752-1141
jnseiber@ucdavis.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 given the opportunity to present their work in a special lecture at Boston National ACS Meeting in August 2015.

SPECIAL THANKS TO OUR SPONSOR FOR THEIR GENEROUS CONTRIBUTION!

BASF
The Chemical Company

PAST AWARDEES OF THE ACS INTERNATIONAL AWARD FOR RESEARCH IN AGROCHEMICALS

2012 Steven J. Lehotay, USDA-Agricultural Research Service, Wyndmoor, Pennsylvania
2013 Jeanette M. Van Emon, US Environmental Protection Agency, Las Vegas, Nevada

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CALL FOR NOMINATIONS

2015 STERLING B. HENDRICKS MEMORIAL LECTURESHIP

Sponsored by USDA-Agricultural Research Service

Co-Sponsored by AGFD & AGRO Divisions

The USDA-Agricultural Research Service (ARS) is seeking nominations for the 2015 Sterling B. Hendricks Memorial Lectureship Award. This Lectureship was established in 1981 by ARS to honor the memory of Sterling B. Hendricks and to recognize scientists who have made outstanding contributions to the chemical science of agriculture. Dr. 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. Deadline is **November 14, 2014.**

The AGRO Division and the Agricultural & Food Chemistry Division (AGFD) co-sponsor the Lecture which will be held in a joint session of these divisions. The lectureship is presented at an AGFD symposium in even-numbered years and in an AGRO symposium in odd-numbered years. The award includes an honorarium of $2000, a bronze medallion, and expenses to attend the meeting.

Nominees will be outstanding senior scientists in industry, universities, consulting, or government positions. *Current ARS employees are not eligible.* The Award will be presented at the 250th American Chemical Society National Meeting held in 2015 in Boston, Massachusetts prior to the Lecture. Giving the presentation is a requirement of the honor.

The **Nomination Package** includes:

- A letter explaining the nominee's contributions to chemistry and agriculture,
- A current *curriculum vitae* (hard copy only)

Nomination letters may be sent electronically to:

Kim Kaplan, Lecture Coordinator
kim.kaplan@ars.usda.gov

Hard copy nominations and *curriculum vitae* are to be submitted via courier to:

Kim Kaplan, Lecture Coordinator
ARS Information Office
Room 1-2253, Mail Stop #5128
5601 Sunnyside Ave
Beltsville, MD 20705
301-504-1637 – phone

PAST STERLING B. HENDRICKS MEMORIAL LECTURESHIP AWARD WINNERS

1981	Norman E. Borlaug, Nobel Laureate, International Maize and Wheat Improvement Center, Mexico City
1982	Warren L. Butler, University of California, San Diego
1983	Melvin Calvin, Nobel Laureate, University of California, Berkeley
1984	Frederick Ausubel, Harvard Medical School and Massachusetts General Hospital, Boston, MA
1985	Alan Putnam, Michigan State University
1986	Ralph Hardy, Cornell University and BioTechnica International
1987	Mary-Dell Chilton, Ciba-Geigy Corporation, Research Triangle Park, NC
1988	Bruce N. Ames, University of California at Berkeley
1989	Sanford A. Miller, University of Texas Health Science Center at San Antonio
1990	Roy L. Whistle, Purdue University
1991	Peter S. Eagleson, Massachusetts Institute of Technology
1992	John E. Casida, University of California, Berkeley
1993	Philip H. Abelson, Deputy Editor, *Science*, and Scientific Advisor to AAAS
1994	Wendell L. Roelofs, Cornell University
1995	Winslow R. Briggs, Carnegie Institution of Washington
1996	Hugh D. Sisler, University of Maryland
1997	Ernest Hodgson, North Carolina State University
1998	Morton Beroza, USDA-ARS, Maryland (retired)
1999	Bruce D. Hammock, University of California, Davis
2000	William S. Bowers, University of Arizona
2001	Malcolm Thompson, USDA-ARS, Maryland (retired)
2002	Ervin E. Leiner, University of Minnesota
2003	Kriton Kleanthis Hatzios, Virginia Polytechnic Institute and State University
2004	Robert L. Buchanan, Food & Drug Administration
2005	Donald L. Sparks, University of Delaware
2006	Stanley B. Prusiner, Nobel Laureate, University of California, San Francisco
2007	Bruce E. Dale, Michigan State University
2008	Fergus M. Clydesdale, University of Massachusetts, Amherst
2009	Charles J. Arntzen, Arizona State University, Tempe
2010	Chris Somerville, Director of the Energy Biosciences Institute, Berkeley
2011	Deborah P. Delmer, University of California, Davis
2012	Eric Block, University at Albany, State University of New York
2013	Keith Solomon, University of Guelph, Guelph, Ontario, Canada

Call for Nominations
2015 Kenneth A. Spencer Award
Sponsored by ACS Kansas City Section

The Kansas City Section of the American Chemical Society is soliciting nominations for the 2015 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 at
http://cas.umkc.edu/chemistry/kcacs/spencer/AwardLogistics/spencer_nomination.pdf

Send nomination by November 15, 2014 to:

Kenneth A. Spencer Award
Kansas City Section of ACS
c/o Dr. Eckhard Hellmuth
Department of Chemistry
University of Missouri- Kansas City
5100 Rockhill Road
Kansas City, MO 64110
816-235-2290 - phone

Past Kenneth A. Spencer Award Winners

1955	Ralph M Hixon, Iowa State University
1956	Conrad A Elvehjem, University of Wisconsin
1957	William C Rose, University of Wisconsin
1958	EV McCollum, Johns Hopkins University
1959	Karl Folkers, Merck, Sharpe & Dohme Res. Labs.
1960	CH Bailey, University of Minnesota
1961	HL Haller, USDA-Agricultural Research Service
1962	AK Balls, USDA-Agricultural Research Service
1963	CC King, Rockefeller Foundation
1964	Daniel Swern, Temple University
1965	Aaron M. Altschul, USDA-Agricultural Research Service
1966	Robert L. Metcalf University of California, Riverside
1967	Melville L. Wolfrom, 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, Berkley
1979	Charles W. Gehrke, University of Missouri-Columbia
1980	George K. Davis, University of Florida, Gainesville
1981	John Speziale, Monsanto Agricultural Products Co.
1982	Howard Bachrach, USDA-Agricultural Research Service
1983	Peter Albersheim, University of Colorado
1984	Richard H. Hageman, University of Illinois
1985	Bruce N. Ames, University of California, Berkeley
1986	John M. Brenner, 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-Agricultural Research Service
1998	Mendel Friedman USDA-Agricultural Research Service
1999	James A. Sikorski, Monsanto Co.
2000	Wendell L. Roelofs, Cornell University
2001	James Tumlinson USDA-Agricultural Research Service
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	Russel Molyneux USDA-Agricultural Research Service
2007	David A. Schooley, University of Nevada, Reno
2008	Ron G. Buttery, USDA-Agricultural Research Service
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, University of California, Davis

AGRO Division
2013 New Investigator Award Winner
Sponsored by Dow AgroSciences

DR. DANIEL SWALE is the 2013 winner of the New Investigator Award sponsored by Dow AgroSciences and the AGRO division. He received his PhD in Entomology from the University of Florida under the advisement of Dr. Jeffrey Bloomquist. His research focused on the design of novel agrochemicals while defining the biochemical and toxicological properties of acetylcholinesterase within mosquito vectors and agricultural pests. He is currently a postdoctoral fellow working with Dr. Jerod Denton at Vanderbilt University Medical Center.

During his postdoctoral fellowship, Dr. Swale is working on the discovery and development of novel modulators of potassium inward rectifying ion channels that possess insecticidal activity to control mosquito-borne diseases. This research area utilizes high-throughput screening, RNAi, and electrophysiological approaches to identify molecular leads that will facilitate insecticide development. In his recent work, he has identified the first Kir channel inhibitors that induce mosquito toxicity and inhibit Malpighian tubule function.

2013 New Investigator Award Finalists

DR. CHLOÉ de PERRE received her PhD in 2009 in analytical and environmental chemistry from the University of Bordeaux, France under the supervision of Dr. Helene Budzinski and Dr. Edith Parlanti. Her research focused on interactions between dissolved organic matter organic contaminants (pharmaceuticals and PAHs) and in aquatic environments. Following graduation, she worked as a postdoctoral researcher in analytical forensic chemistry with Dr. Bruce McCord at Florida International University, Miami, Florida. She developed a several analytical methods for the detection of homemade explosives and gunpowder additives at trace levels.

Since 2011, Dr. de Perre has been a postdoctoral researcher working with Dr. Michael Lydy at Southern Illinois University in Carbondale, Illinois. Her research has focused on environmental fate of insecticides (neonicotinoids, organophosphates, and pyrethroids) in agricultural fields using conservation methods, such as crop rotation and different tillage treatments. She has studied the toxicity of these insecticides to aquatic and terrestrial non-target organisms, using individual compounds and mixtures to assess the environmental risk.

DR. CHITVAN KHAJURIA received his PhD in Entomology from Kansas State University (KSU), Manhattan, Kansas under the supervision of Dr. Kun Yan Zhu and Dr. Lawrent Buschman. His PhD work was focused on better understanding the Bt resistance mechanism in European corn borer. After completing his PhD, Dr. Khajuria joined Dr. Ming Shun Chen's lab at KSU as a post-doctoral research associate and worked on identifying the potential genes that may play an important role in wheat-Hessian fly interaction.

In 2011, Dr. Khajuria moved to University of Nebraska (UNL), Lincoln, Nebraska, as Research Assistant Professor and worked under the supervision of Dr. Blair Siegfried. His research at UNL was focused on better understanding the mode of action of RNA interference in western corn rootworm (WCR). He also worked on identifying potential targets for the control of WCR. In September 2013, Dr. Khajuria joined Monsanto and is working there as a Research Entomologist.

Congratulations to Our New Investigators!

CALL FOR APPLICANTS
AGRO DIVISION
2014 NEW INVESTIGATOR AWARD
Sponsored by Dow AgroSciences

13th IUPAC International Congress of Pesticide Chemistry
At the 248th ACS National Meeting in San Francisco, California

The AGRO Division seeks nominations for the New Investigator Award (NIA) to be awarded at the ACS meeting in Indianapolis in August 2014. The purpose of the New Investigator Award is to recognize scientists who have obtained a doctoral degree and are actively conducting academic, industrial, consulting, or regulatory studies.

The Division is interested in work on all aspects of agrochemicals which are broadly defined to mean pesticides of all kinds (e.g., chemical pesticides, biopesticides, pheromones, chemical attractants, fumigants, plant incorporated protectants, 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 2014, applications will be considered from ***scientists who have obtained their doctorates no earlier than the year 2009.***
- A panel consisting of at least three AGRO members will chose up to three finalists based on their extended abstracts and letter(s) of recommendation.
- ***Each finalist will receive up to $1000 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 **150-word abstract** to a symposium in the AGRO Division using ACS PACS abstract submission at *http://abstracts.acs.org/*
2. Submit an **extended abstract (maximum 2 pages) describing the candidate's research/studies**. Include the impact (or potential impact) of the results as it pertains to issues of concern to the AGRO
3. Submit least **one letter of recommendation** from a current supervisory scientist (e.g., post-doctoral mentor a business manager, departmental chair).
4. Deliver an oral presentation in a symposium at the 13th IUPAC International Congress of Pesticide Chemistry help at the 248th ACS National Meeting in San Francisco.

Deadline:
Both the extended abstract and letter(s) must be received by the New Investigator Award Coordinator no later than March 10, 2014.

For more information, please contact:
Dr. Steven J. Lehotay, NIA Coordinator
USDA-Agricultural Research Service
steven.lehotay@ars.usda.gov

The AGRO Division is grateful for the sustained support of the AGRO New Investigator Award

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2013 AGRO EDUCATION AWARD FINALISTS

Sponsored by Bayer CropScience

FIRST PLACE

LACEY JENSON recently graduated from University of Florida, Gainesville with a PhD in Entomology and Nematology under the advisement of Dr. Jeffrey Bloomquist. Her research focused on the characterization of insecticide target-site protein expression in hormonally-induced insect cell lines (funded by the Deployed War-Fighter Research Program). In 2010, Lacey earned a Master of Science in Entomology from Virginia Tech under the advisement of Dr. Bloomquist. Her thesis research was focused on the development of a hormonally-induced cell assay for the high-throughput screening of existing and experimental insecticides. In 2007, Lacey earned a BS in Pre-Health Professional (Microbiology minor) from Iowa State University. Lacey is currently a post-doctoral fellow in the Department of Entomology and Fralin Life Science Institute at Virginia Tech under the supervision of Dr. Troy Anderson. She is leading research studies that focus on the characterization of drug transport proteins and ion channel physiology of insects (funded by the Virginia Department of Agriculture and Consumer Services).

SECOND PLACE

AARON GROSS is a PhD candidate in Toxicology with minors in Neuroscience and Entomology at Iowa State University of Science and Technology. Aaron is co-advised by Dr. Joel Coats (Entomology) and Dr. Michael Kimber (Biomedical Sciences). His research focuses on examination of biopesticides to interact with G-protein-coupled receptors in the southern cattle tick and is funded by a US Environmental Protection Agency Science to Achieve Results (EPA-STAR) Fellowship. Aaron earned his BS in Biochemistry and Biomedical Science (Criminal Justice minor) from St. Cloud State University in 2007 and his MS in Toxicology (2010) at Iowa State University under the direction of Dr. Coats. For his MS thesis research, he investigated the ability of terpenoids to interact with an octopamine receptor using a yeast-histidine-auxotrophic assay.

THIRD PLACE

JOSHUA WALLACE is a PhD candidate in Environmental Chemistry at the State University of New York at Buffalo. Joshua is co-advised by Dr. Diana Aga and Dr. Joseph Gardella, Jr. In 2011, Joshua earned his BS in Chemistry (Mathematics minor) and a BA in Political Science (Governance and Development contract minor) from Houghton College in Western New York. As an undergrad, his research focused on the synthesis and characterization of glycopolymers containing biodegradable polycarbonate backbones and glucose and galactose pendant groups. While at the University at Buffalo, Joshua investigates the presence of antibiotics in animal manure and agricultural and municipal effluent. His PhD research is funded through a National Science Foundation Fellowship through the Integrative Graduate Education and Research Traineeship (IGERT) through which his cohort has focused on Ecosystem Restoration through Interdisciplinary Exchange (ERIE) in the Lake Erie region.

Congratulations to the finalists and to all our travel grant winners!

Bayer CropScience

CALL FOR APPLICANTS
AGRO DIVISION
2014 EDUCATION AWARDS
Sponsored by Bayer CropScience

UNDERGRADUATE & GRADUATE STUDENT RESEARCH

Support for Poster Presentations

13th IUPAC International Congress of Pesticide Chemistry

At the 248th ACS National Meeting in San Francisco, California

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

Proposals are sought for the 2014 awards. Selected undergraduate and graduate students will be awarded up to $600 each to help defray costs of attendance to give poster presentations at the 13th IUPAC International Congress of Pesticide Chemistry help which will be held August 10 – 14, 2014 in San Francisco, California as part of the ACS National Meeting. Posters will be displayed in a special poster session of the ACS AGRO Division. First, Second, and Third place winners 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.

To apply, a graduate student should submit the following to be received no later than March 1, 2014 (PACS deadline):

1. An abstract formatted according to the directions given on the ACS website. Be sure to include name (of applicant), address, and e-mail address.

2. A two page extended abstract giving more detail of the research/presentation. For sample file, visit http://www.iupac2014.org/

3. A short letter of nomination from the faculty advisor.

Submit item 1 to the ACS PACS abstract submission website
http://abstracts.acs.org/

Submit item 2 and 3 as a Word or pdf file to
Dr. Diana Aga
dianaaga@buffalo.edu
or
Dr. Marja Koivunen
mekoivunen@gmail.com

For more information, please contact the co-organizers:

Dr. Marja Koivunen
Novozymes Biologicals, Inc.
1445 Drew Avenue
Davis, CA 95618
tel: 530-574-1837
email: mekoivunen@gmail.com

Dr. Diana Aga
Chemistry Department, NSC 611
University of Buffalo
Buffalo, NY 14260
tel: 716-645-4220
email: dianaaga@buffalo.edu

Abstracts will be reviewed by the Education Committee.
Submitters will be notified of their selection status in May 2014.

Special thanks to our sponsor for their generous contribution!

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Join Us!

ON AUGUST 10-14, 2014

in San Francisco, California USA for the

13TH IUPAC CONGRESS OF PESTICIDE CHEMISTRY

CROP, ENVIRONMENT, AND PUBLIC HEALTH PROTECTION: TECHNOLOGIES FOR A CHANGING WORLD

Co-sponsored by IUPAC and ACS-AGRO

The Congress will be held concurrently with the 248th American Chemical Society National Meeting & Exposition. Sign up for email updates at our website www.iupac2014.org

MAJOR TOPIC AREAS WILL INCLUDE:

- Emerging Issues and Challenges
- Mode of Action and Resistance Management
- Discovery and Synthesis
- Agricultural Biotechnology
- Environmental Fate and Metabolism
- Ecological and Human Exposure and Risk Assessment
- Residues in Food and Feed
- Formulation and Application Technologies
- Stewardship, Regulation, and Outreach

IUPAC 2014

SAN FRANCISCO

13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

August 10-14, 2014, San Francisco, California

ORGANIZER CO-CHAIRS

Kenneth Racke, Dow Agrosciences, kracke@dow.com
Laura McConnell, Bayer CropScience, laura.mcconnell@bayer.com

PROGRAM ADMINISTRATOR

Peney Patton, ppatton@iupac2014.org

ORGANIZING COMMITTEE

Responsible for overall planning and management of the Congress on behalf of the ACS AGRO Division and IUPAC. Directs the activities of committees, volunteers and staff for organization of the Congress. Maintains a high-level of coordination with both ACS and IUPAC. Ensures effective communication and implementation of the Congress vision. Recruits volunteers and establishes support positions and committees as needed to achieve Congress goals.

US Members:
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Ellen Arthur, Bayer CropScience
Aldos Barefoot, DuPont Crop Protection
Rod Bennett, JRF America
Jeff Bloomquist, University of Florida-Gainesville
John Clark, University of Massachusetts
Stephen Duke, USDA-ARS
Jay Gan, University of California-Riverside
Cathleen Hapeman, USDA-ARS
Ann Lemley, Cornell University
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Sharon Papiernik, USDA-ARS
Pamela Rice, USDA-ARS
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Jan Linders, RIVM, Netherlands
Keith Solomon, University of Guelph, Canada
Keiji Tanaka, Mitsui Chemicals Agro, Japan
John Unsworth, Consultant, UK

INTERNATIONAL ADVISORY COMMITTEE

Provides international advice/perspectives to the Organizing Committee for effective Congress planning based on past experience. Assists with communication of Congress plans and solicitation of inputs from international partner organizations. Promotes international participation in the scientific program of the Congress by liaising with scientific organizations, industry, and governments around the world. Supports efforts of the Scientific Program Committee to ensure an internationally diverse program of platform and poster presentations.

Chair:
Kenneth Racke, Dow AgroSciences, USA
Members:
Elizabeth Carazo, University of Costa Rica, Costa Rica
Bernhard Johnen, CropLife International, Belgium
Hisashi Miyagawa, Kyoto University, Japan
Hideo Ohkawa, Kobe University, Japan
N.A. Shakil, IARI, India
Greg Simpson, CSIRO, Australia
John Unsworth, IUPAC, UK
Zhang Zhongning, Chinese Academy of Sciences, China

SPONSORSHIPS & FINANCE COMMITTEE

Responsible for development and implementation of a Congress budget of income and expenses. Establishes sponsorship guidelines and recruits sponsors. Provides financial guidance and advice to the Organizing Committee and other committees.

Chair:
Kenneth Racke, Dow AgroSciences, USA
Members:
Al Barefoot, DuPont Crop Protection, USA
Rodney Bennett, JRF America, USA
John Johnston, USDA-FSIS, USA
Del Koch, ABC Labs, USA
Scott Jackson, BASF, USA
Laura McConnell, Bayer CropScience, USA
James Seiber, University of California, Davis, USA
Scott Yates, USDA-ARS, USA

COMMUNICATIONS & PUBLICITY COMMITTEE

Promotes interest and awareness of the Congress among potential attendees in the US and internationally. Develops promotional materials (brochures, flyers, ads, etc) and electronic communication for Congress including website postings, AGRO e-newsletters, a Facebook page, Youtube videos, blogs, and twitter. Coordinates dissemination of information with other ACS Divisions, scientific societies, industry associations, and affiliated organizations

Chair:
Ellen Arthur, Bayer CropScience, USA
Members:
Sarah Macedo, CropLife America, USA
Laura McConnell, Bayer CropScience, USA
Kenneth Racke, Dow AgroSciences, USA
Pamela Rice, USDA-ARS, USA
Patricia Rice, BASF, USA

PUBLICATIONS COMMITTEE

Responsible for development and implementation of a post-Congress special publications plan of a series of books and special journal issues based on main scientific topic and/or symposia topic.

Chair:
Jay Gan, University of California, Riverside, USA
Members:
John Clark, University of Massachusetts-Amherst, USA
Stephen Duke, USDA-ARS, USA
James Seiber, University of California, Davis, USA
Scott Yates, USDA-ARS, USA

ADDITIONAL VOLUNTEER OPPORTUNITIES

LUNCHEON SEMINAR SERIES COORDINATORS

Co-chairs:
Sharon Papiernik, USDA-ARS, USA
Luis Ruzo, EAG, USA
Members Needed
Responsibilities

- Coordinate with Organizing and Scientific Programming Committees in planning seminars.
- Coordinate food and beverage orders, room and A/V arrangements.
- Additional responsibilities under consideration.

LOCAL ARRANGEMENTS COMMITTEE

Responsibilities

- Organize social program events associated with the San Francisco IUPAC Congress.
- Plan the program for the Congress opening ceremony and reception on Sunday evening, including a memorable musical or performance-related component fitting for the San Francisco location.
- Plan the program for the Congress banquet on Wednesday evening, to include award presentations as well as a memorable performance related event.
- Plan the program for the Congress closing ceremony, including announcement of the 2018 Congress location and introduction of the organizers (with traditional hat exchange).
- Coordinate food and beverage orders, room and A/V arrangements for the opening ceremony, coffee breaks, banquet, closing ceremony in conjunction with the AGRO Social Committee and assigned ACS staff.

PANEL DISCUSSION COORDINATORS

Responsibilities

- Develop guidance for organization of panel discussions in conjunction with oral and/or poster symposia.
- Coordinate planning of panel discussions with the Scientific Program Committee, main topic team leaders, and symposia organizers.

NEWS MEDIA COORDINATORS

Responsibilities

- Explore new media options (web, webinar, email, blog, twitter, Youtube,…) and develop innovative approaches for disseminating events and outcomes of the Congress in cooperation with the Publications Committee and the Scientific Program Committee.
- Organize a press briefing event during the Congress to highlight hot issues and developments for invited news media.
- Serve as liaison for Congress news media efforts in cooperation with ACS headquarters.
- Develop summary articles concerning Congress activities for publication in the AGRO magazine *PICOGRAM*, the ACS publication *C&EN*, and the IUPAC news magazine *Chemistry International*

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13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

August 10-14, 2014, San Francisco, California

SPONSORSHIP OPPORTUNITIES

Every four years the international pesticide community comes together to share their latest research findings and to discuss emerging issues of global significance in agriculture. For the first time, an IUPAC Congress will be held in conjunction with the American Chemical Society (ACS) National Meeting and Exposition. The AGRO Division of ACS, in collaboration with many state, national, and international partner organizations, is developing an outstanding technical program that will attract scientists from around the world. Nine scientific topic areas have been selected.

Expected attendance is 1000 to 1500 delegates. Registration, housing, and social event planning will be supported by the ACS organization. San Francisco is a world-class destination and is typically the most popular of all ACS meeting locales. The Marriott Marquis Hotel will be the Congress venue, providing the feel of a standalone event. AGRO is seeking sponsors to support the technical program, social events, awards, and travel support for scientists from developing countries.

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- Distribute company/institution materials

* Lower level contributions as co-sponsorships available and to be reflected in shared credits in communication materials.

Advertisements
Program booklet (special *PICOGRAM* issue) advertisements are available at $1000 for full-page and $500 for half-page.

Contacts:
Kenneth Racke, Dow AgroSciences, kracke@dow.com
Laura McConnell, Bayer CropScience, USA
laura.mcconnell@bayer.com

13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

August 10-14, 2014, San Francisco, California

SCIENTIFIC PROGRAM COMMITTEE AND SYMPOSIA ORGANIZERS

Chair: Cathleen Hapeman, USDA-ARS, cathleen.hapeman@ars.usda.gov
Associate Chair: Jay Gan, University of California, Riverside, jgan@ucr.edu
Poster Session Chair: John Johnston, USDA-FSIS, john.johnston@fsis.usda.gov

1. EMERGING ISSUES AND CHALLENGES
Cheryl Cleveland, BASF, USA
cheryl.cleveland@basf.com

- Chad Broeckman, DuPont Pioneer, USA
- Allan Felsot, Washington State University, USA
- Lei Guo, California Air Resources Board, USA
- Ole Hertel, Aarhus University, Denmark
- Leah Martin, Syngenta Crop Protection, Switzerland
- Sharon Papiernik, USDA-ARS, USA
- Jeff Pettis, USDA-ARS, USA
- James Seiber, University of California-Davis, USA
- Greg Simpson, CSIRO, Australia
- Toni Voelker, Monsanto Company, USA
- Marty Williams, Waterborne Environmental, USA
- Joseph Wisk, BASF, USA

2. AGRICULTURAL BIOTECHNOLOGY
Jennifer Anderson, DuPont Pioneer, USA,
jennifer.anderson@pioneer.com

- George Harrigan, Monsanto Company, USA
- Gijs Kleter, Wageningen University, The Netherlands
- Patricia Rice, BASF, USA
- Nick Storer, Dow AgroSciences, USA

3. DISCOVERY AND SYNTHESIS
Thomas Stevenson, DuPont Crop Protection, USA
thomas.m.stevenson@dupont.com

- Kamal Chauhan, USDA-ARS, USA
- Joel Coats, Iowa State University, USA
- Ke Dong, Michigan State University, USA
- Peter Maienfisch, Syngenta, Switzerland
- Agnes Rimando, USDA-ARS, USA
- Xin Ling Yang, China Agricultural University, China

4. ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
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- Kazuhiko Matsuda, Kinki University, Japan
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- Philip Brindle, BASF, USA
- Monika Bross, BASF SE, Germany
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- Heidi Irrig, Syngenta Crop Protection, USA
- Dieter Jungblut, BASF SE, Germany
- Steve Lehotay, USDA-ARS, USA
- Leah Riter, Monsanto Company, USA
- Manasi Saha, BASF, USA
- Anna Shulkin, Syngenta Crop Protection, USA
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- Dan Campbell, Syngenta Crop Protection, USA
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- Scott Jackson, BASF, USA
- Keith Jones, CropLife International, Belgium
- Jason Sandahl, USDA-FAS, USA
- Bill Thomas, USDA-ARS, USA

IUPAC 2014 VISION

The Congress will draw on strengths of the ACS-AGRO tradition in bringing together the world's leading experts to share recent discoveries and to debate future directions for advancing research and regulation of agricultural chemistry and pest management science, promoting public health, and preserving environmental quality.

IUPAC 2014 EXPECTATIONS

- The Congress will attract and involve a diversity of attendees and interests, across geographies, scientific disciplines, and organizational affiliations.
- The scientific program will be innovatively structured to merge the traditional strengths of AGRO (oral and award symposia) with the historic design of the IUPAC Congress (interactive poster sessions, discussions, workshops, and plenary lectures).
- The scientific and social programs will create opportunities to learn, to debate ideas, and to build relationships among the world's leading experts.
- The expansive scope of the scientific program topics will reflect the broad and highly-interdisciplinary nature of research related to agricultural chemistry and pest management science in an ever-changing world.
- By inviting scientific presentations and allocating available support, Congress organizers will promote inclusion of diverse perspectives and place a special emphasis on encouraging participation of students and experts from scientifically-emerging regions.
- Congress organizers will partner with ACS Offices and Divisions and other international, national, and local scientific societies and organizations to ensure inclusivity and to promote excellence of the Congress.
- Congress organizers will develop special journal issues, books, and other publications to document to the success of the Congress and to create a lasting dialogue within the scientific community.
- The 2014 Congress will establish a new standard as the most memorable of this long-standing series of events because of its excellent program and the world-class city in which it is held.

13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

August 10-14, 2014, San Francisco, California

SCIENTIFIC PROGRAM OVERVIEW

Chair: Cathleen Hapeman, USDA-ARS, cathleen.hapeman@ars.usda.gov
Associate Chair: Jay Gan, University of California, Riverside, jgan@ucr.edu
Poster Session Chair: John Johnston, USDA-FSIS, john.johnston@fsis.usda.gov

The Congress will bring together the world's leading experts to share recent discoveries and to debate future directions for advancing research and regulation of agricultural chemistry and pest management science, promoting public health, and preserving environmental quality.

IUPAC2014 is designed to maximize the interaction among participants. The focus is on poster sessions and panel discussions, debates, and workshops. *All poster presenters are eligible to compete for prizes.*

The technical program will include four days of oral and poster presentations. Each meeting day will have one or two plenary speakers invited to address global issues related to the Congress theme. The Special Symposia and nine Main Topics Area Symposia will be proportionately divided among the days of the Congress in concurrent sessions. Each Main Topic will have several invited session speakers to provide critical reviews of the subject matter, the state-of-the art, and projections of where the field is headed.

SPECIAL SYMPOSIA

ACS International Award for Research in Agrochemicals, Symposium in Honor of Dr. Ralf Nauen: Insecticide and Acaricide Modes of Action and Their Role in Resistance and its Management
Robert Hollingworth, Michigan State University, USA
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Dr. Ralf Nauen, Bayer CropScience, is the 2014 recipient of the ACS International Award for Research in Agrochemicals. This award is given to a scientist who has made outstanding contributions to the field of agrochemicals at the international level opening new horizons for other investigators in their field and beyond. Dr. Nauen has an outstanding international reputation for his work on the mechanisms of action and biotransformation of insecticides and acaricides and the application of this knowledge to understand and manage resistance. The award symposium will focus on these topics with invited speakers from seven countries covering topics including the use of transgenic *Drosophila* in resistance studies, mode of action classifications to aid resistance management, and studies of the resistance to Bt toxins in transgenic crops.

Developing Global Leaders for Research, Regulation, and Stewardship of Crop Protection Chemistry in the 21st Century
John Unsworth, IUPAC Advisory Committee, UK
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Increasing sophistication of crop protection chemistry, growing expectations for agricultural sustainability, and globalization of the chemical, seed, and food trade will pose a unique array of challenges for the next generation of research and regulatory leaders. The purpose of this symposia is to bring together global crop protection chemistry leadership from academia, industry, government, and NGO's to (i) examine the current state of affairs with respect to research, regulatory, and stewardship leadership development, (ii) discuss unmet needs and future changes in crop protection chemistry that will challenge current approaches, and (iii) develop a set of specific recommendations for ensuring that tomorrow's crop protection chemistry leaders have a well-rounded, science-based and globally informed approach. The session will include both invited oral presentations and panel discussion(s). A possible outcome is a final report of consensus recommendations.

Symposium Honoring Dr. Fumio Matsumura: Fifty Years of Research and Mentoring
John Clark, University of Massachusetts-Amherst, USA
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This special symposium is to honor the life and fifty year scientific career of Professor Fumio Matsumura, Distinguished Professor of Environmental Toxicology and Entomology, University of California, Davis, who passed away December 5, 2012. For some fifty years, Dr. Matsumura has been at the cutting edge of both pesticide and environmental toxicology, and his pioneering research has helped to define both fields. Presenters will be internationally-recognized scientists who have been either mentored directly by Fumio or have been mentored by Fumio's graduate students and postdoctoral fellows. The all-day symposium will have two main topics: Mode of action of insecticides and environmental pollutants in the morning and Genomics, molecular biology and bioinformatics of insecticide resistance in the afternoon.

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MAIN TOPIC AREAS AND SYMPOSIA

1. EMERGING ISSUES AND CHALLENGES
Cheryl Cleveland, BASF, USA
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- Agriculture's Response to Climate Change and Population Growth
- Global Food Production and Food Security
- Pollinator Health: Risk Assessment and Sustainable Management
- Sustainability – A Greener Revolution?

2. AGRICULTURAL BIOTECHNOLOGY
Jennifer Anderson, DuPont Pioneer, USA,
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- Analytical Challenges and Considerations for Protein and RNAi-based Technologies
- Challenges Associated with Global Adoption
- Contributions to Sustainable Agriculture and Food Security
- Development and Application Advances

3. DISCOVERY AND SYNTHESIS
Thomas Stevenson, DuPont Crop Protection, USA
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- New Approaches to the Discovery of Crop Protection Products
- New Chemistries Targeting Fungal, Weed, and Insect Control
- Troubleshooting Pyrethroids

4. ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Aldos Barefoot, DuPont Crop Protection, USA
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- Advancing Surface and Ground Water Exposure and Risk Assessment by Optimized Monitoring and Modeling
- Agroecosystems: Sustaining Biodiversity and Key Ecosystem Services
- Global Approaches to Assessment of Bystander and Agricultural Worker Exposure and Risk
- Implementing a Risk Paradigm for Pesticide Use Decisions in the Real World
- Persistence, Bioaccumulation, and Toxicity of Pesticides and POPs: Classification Schemes and Procedures
- Use of Ecological Models in Regulatory Risk Assessments

5. ENVIRONMENTAL FATE AND METABOLISM
Amy Ritter, PE, Waterborne Environmental, USA,
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- Agrochemicals in Urban Environments
- Bioaccumulation Risk Assessment: Problems and Possibilities
- Fate, Effects, and Risks of Nano-Pesticides
- Handling of Mixtures in the Environment and Ecological Implications
- Improved and Novel Methods to Estimate Pesticide Degradation Patterns and Rates
- Measuring and Modeling Pesticide Fate in Soil, Water, and Atmosphere at Micro- to Macro-Scales
- New Insights in Pesticide-Soil Processes Leading to More Realistic Exposure Assessment
- Scientific and Regulatory Aspects of Chirality in Agrochemicals
- Sediment Partition and Bioavailability

6. FORMULATION AND APPLICATION TECHNOLOGIES
Erdal Ozkan, Ohio State University, USA
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- Technologies for Sustainable Crop Protection

7. MODE OF ACTION AND RESISTANCE MANAGEMENT
Stephen Duke, USDA-ARS, USA
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- Fungicides
- Herbicides
- Insecticides

8. RESIDUES IN FOOD AND FEED
Mike Krolski, Bayer CropScience, USA
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- Going from Macro to Micro – The Future of Sample Processing in Residue Analytical Methods
- Laboratory and Data Management Issues
- Monitoring Results and Dietary Risk Assessment Implications
- Progress in Global Harmonization of MRLs
- Taking Advantage of Advanced Analytical Tools

9. STEWARDSHIP, REGULATION, AND OUTREACH
Jeffrey Jenkins, Oregon State University, USA
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- Common Global Goals in Pesticide Stewardship
- International Trade, Food Safety, and GAP
- Start2Farm: Providing Information to New Farmers

EMERGING ISSUES AND CHALLENGES
Agriculture's Response to Climate Change and Population Growth

Purpose of Symposium

Convincing data indicate that climate is changing as a direct result of human activities. The resulting shifts in weather patterns and the increased frequency of extreme weather events (e.g. drought, flood, extreme heat) are already affecting agriculture. Predicted future impacts vary by region, but all areas are projected to suffer productivity declines by late 21st century, unless successful mitigation measures are implemented immediately.

Exacerbating the climate change challenge is population and income growth, both of which will drive a required doubling of overall crop productivity mid-century. This demand must be met at the same time that crop pests are extending their ranges poleward and into other new geographies due to reduced winter kill and longer growing seasons.

The purpose of this symposium is to review what is currently known about likely future climate change and population growth scenarios, and how these changes will create new adaptation response imperatives for agriculture to meet future basic human needs in more sustainable ways.

Suggested Topics

- Latest model-based projections of climate change, population growth, and the ability of agricultural production systems to meet demand
- Direct impacts of additional heat and moisture stress on agricultural production systems
- Indirect impacts due to the effect of climate change on agricultural pests & disease
- Ammonia emission and deposition as affected by climate change
- Climate change perspectives on future tropospheric ozone formation linked to biogenic hydrocarbons and NOx and its impact on crop production due to ozone stress
- Climate-related impacts on potential public health effects of crop production systems (e.g., fungal spore release during crop harvesting)
- Biogeochemical cycling of carbon and nitrogen within soil and feedbacks between ecosystem management and climate change
- Atmospheric interactions of greenhouse gases sourced primarily by agricultural activities
- Multi-phasic (solid/liquid/gas) cycling of carbon and nitrogen as affected by ecosystem and anthropomorphic process

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Abstracts (150 words or less) must be submitted on-line at abstracts.acs.org
January 13 - March 10, 2014

EMERGING ISSUES AND CHALLENGES
Global Food Production and Food Security

Purpose of Symposium

The Word Food Summit of 1996 defined food security as existing when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life. The world's population is projected to reach 9.4 billion by 2050 – a 54% increase from 2000. Food production globally will need to anticipate the corresponding increase and meet it with new food production technologies in balance with limitations and competition for natural resources, irrigation, shifts in dietary habits in developing countries, climate change, pest pressures, and costs for production, processing and packaging, transport, and storage.

This symposium offers opportunities to exchange science and technology related to meeting the challenges over the next 30 years and beyond with respect to food supply, production technology, resource use, and sustainability.

Suggested Topics

- Cost-effective food production, storage, and distribution in developing countries/areas
- Optimizing food production in arid, humid, and harsh environments
- Improving decision making in operations at an individual farm level
- Technology or techniques to predict, control, or eradicate pest infestation
- Case studies in biopesticides and Integrated Pesticide Management
- Environmental stewardship of pesticides, nutrients, growth hormones, and veterinary medicines

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EMERGING ISSUES AND CHALLENGES
Pollinator Health: Risk Assessment and Sustainable Management

Purpose of Symposium

Domesticated and wild bee pollinators have been declining for several decades. Most recently, public media have conflated pesticide-caused acute toxicity with colony collapse disorder (CCD) syndrome, which is characterized by insufficient number of workers to sustain functional colony health. Fugitive dust generated during planting of insecticide-treated seeds and wrongly-timed sprays have been identified as possible causes of acute bee kills.

A more holistic perspective of pollinator decline encompasses causal agents in the pathosphere of viruses, bacteria, fungi, and parasitic mites, along with nutritional deficiency and colony management practices. Systemic insecticide residues in nectar or pollen, intense use of in-hive acaricides, and field use of fungicides may have sub-lethal effects on honey bees and other pollinators and may potentially raise overall stress levels increasing pathogen susceptibility.

After reviewing pollinator biology and historical aspects of pollinator decline, this symposium will focus on 1) risk assessment paradigms to characterize the role of pesticides more effectively and 2) integrated pest management approaches to sustain pollinator health.

Suggested Topics

- Potential interactions of genetic diversity loss, pathogens, parasites and pesticides in pollinator health
- Acute and sublethal hazards of pesticides to insect pollinators
- Assessing exposure of pesticides to insect pollinators
- Pesticide effects on pollinators under field conditions
- Assessing pesticide risk on pollinators as practiced by industry
- Managing risk through regulations
- Effects of typical beekeeping practices on colony health
- Sustaining pollinator health through an integrated pest management approach

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EMERGING ISSUES AND CHALLENGES
Sustainability: A Greener Revolution?

Purpose of Symposium

The Green Revolution is credited with increasing global agricultural production, but at a cost. Consequently, concerns are raised about devoting more land and resources to production while simultaneously limiting societal and environmental impacts.

Sustainability programs seek to increase productivity over the long-term while balancing environmental, economic, and social values. Progress toward sustaining efficient and viable food production systems can be judged by using metrics of water quality, emissions inventories, carbon footprints, health outcomes, and economic viability.

The objective of this symposium is to provide a forum for diverse perspectives and various definitions of 1) sustainable agriculture in the context of pesticide and nonrenewable resources inputs, 2) food processing and distribution, 3) optimization of animal production and waste management, and 4) life cycle analyses.

Suggested Topics

- Definitions and metrics: How is sustainability measured?
- Carbon footprint analysis
- Emissions inventories
- Health and production impacts
- Water quality and water use
- Life cycle assessment
- Corporate sustainability case studies
- The role of regulations in sustainability
- The agronomy of biofuels
- Biopesticides and other alternatives to synthetics

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AGRICULTURAL BIOTECHNOLOGY
Analytical Challenges and Considerations for Protein and RNAi-based Technologies

Purpose of Symposium

RNA interference (RNAi) is an emerging agricultural biotechnology tool, which provides unique capabilities for engineering insect-resistance and other beneficial agronomic traits in crops. The current tiered-testing framework used in the environmental risk assessment of crops genetically modified through expression of new proteins can be applied to RNAi-based technologies. However, analytical detection methodologies and screening tools (e.g., bioinformatics) for RNAi-based traits will certainly be unique. Improved analytical techniques will be required to assess the concentration, persistence, potential for bioaccumulation, and fate of expressed small molecule RNAs in biological and environmental matrices. Additionally, consensus about the role and utility of bioinformatics in the hazard assessment of non-target organisms requires further definition.

The purpose of this symposium is to discuss analytical challenges and considerations for both protein and RNAi-based assays and to refine the role of bioinformatics in the risk assessment of genetically modified crops.

Suggested Topics

- Optimizing methodologies for the efficient extraction of proteins and small molecule RNAs from complex environmental and biological matrices
- Validating and optimizing analytical methodologies for quantitation of proteins and small molecule RNAs
- Understanding the utility of bioinformatics in the risk assessment of RNAi-based traits
- Discussing the impact of analytical challenges on regulatory assessments

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13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

at the 248th American Chemical Society National Meeting
August 10-14, 2014, San Francisco, California, USA

AGRICULTURAL BIOTECHNOLOGY
Challenges Associated with Global Adoption

Purpose of Symposium

Advances in the field of agricultural biotechnology are fostering the development of a wide variety of insect-resistant, herbicide-tolerant, and nutritionally-enhanced crops. However, there remain many challenges associated with the global acceptance and adoption of this technology. While environmental regulations for the risk assessment of traditional chemistries have evolved over decades and form well-established and standardized frameworks, regulatory guidance for biotechnology-based crops remains inconsistent across different world regions with regard to instructiveness, level of detail, and provision of measurement endpoints.

The purpose of this symposium is to provide a perspective on how regulatory frameworks are structured in different world regions and to debate the merits of developing a harmonized approach to risk assessment based on experiences from the traditional chemistry discipline.

Suggested Topics

- Environmental regulations for traditional chemistries and biotechnology-based crops in different world regions
- Leveraging regulatory structure and framework from the traditional chemistry discipline
- Development of regulatory frameworks for biotechnology-based crops
- Challenges and uncertainty in regulatory frameworks for biotechnology-based crops
- Development of a harmonized approach to risk assessment of biotechnology-based crops
- Benefits and limitations of data-transportability for the risk assessment of biotechnology-based crops

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AGRICULTURAL BIOTECHNOLOGY
Contributions to Sustainable Agriculture and Food Security

Purpose of Symposium

Genetically modified crops offer great potential to promote and improve sustainable agriculture and food security. The purpose of this symposium is to discuss the merits and challenges associated with the adoption of agricultural biotechnology with particular reference to sustainable agriculture and improved food security.

Topics on sustainable agriculture will focus on efficiency in yield and input reduction, integrated pest management, crop protection product application strategies, as well as implications for crop biodiversity and varietal development. Food security topics will focus on enhanced productivity in challenging agronomic regions, enhanced nutritional value, as well as food culture and preference issues.

Suggested Topics

- Applications of agricultural biotechnology in developing hardier crops in food-scarce regions
- Applications of agricultural biotechnology in enhancing agronomic performance and nutrition in major row crops and preferred crops
- Integrating agricultural biotechnology with current tools and agronomic practices
- Maintaining crop biodiversity and assessing environmental risk in developing modern agricultural practices
- Regulatory challenges and risk perceptions.

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AGRICULTURAL BIOTECHNOLOGY
Development and Application Advances

Purpose of Symposium

While the cultivation of genetically modified crops continues to increase globally, it is mostly limited to a few key row crops (e.g., cotton, maize, and soybean) that express insect-resistant crystalline (Cry) proteins from *Bacillus thuringiensis* or that are tolerant to glyphosate and glufosinate-ammonium pesticides. Recent developments in the field of agricultural biotechnology have increased not only the variety of crops being modified (e.g., vegetable crops, grains, biofuel crops, trees, etc.), but also the range of genetic modifications being advanced. These include enhanced nutrition or modified composition, improved digestibility, drought- and stress-tolerance, virus-resistance traits, insect-resistance traits supporting novel modes of action, and tolerance to different herbicide active ingredients.

The purpose of this symposium is to provide a venue for scientists from academia, private organizations, public research institutes, and industry to present innovative research in the generation of new traits and to discuss the application of agricultural biotechnology in their development.

Suggested Topics

- Emerging technologies for improving agronomic and stress tolerances
- Emerging technologies for enhancing composition and nutrition
- Emerging technologies for disease- and virus-resistance
- Emerging technologies in the biofuel industry
- Emerging technologies for new insect-resistance and herbicide-tolerance MOAs
- Regulatory challenges for academia and smaller organizations in the development of new products

For further information, contact the organizers

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DISCOVERY AND SYNTHESIS
New Approaches to the Discovery of Crop Protection Products

Purpose of Symposium

New approaches and directions in the crop protection field will be highlighted including chemical approaches to crop health/yield enhancement, abiotic stress abatement, and nematode control, as well as biological control agents and natural products.

Suggested Topics

- Abiotic stress abatement
- Plan health/yield improvement
- Natural products
- Nematicidal lead and development candidates
- New computational tools for the discovery and optimization of crop protection chemicals

For further information, contact the organizers

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DISCOVERY AND SYNTHESIS
New Chemistries Targeting
Fungal, Insect, and Weed Control

Purpose of Symposium

This topic will highlight recent research and new directions in the synthesis and chemistry of fungicides, insecticides, herbicides, safeners, and plant growth regulants. Talks and posters which describe the design, isolation, synthesis, biology and/or structure-activity relationships of new chemical entities targeting crop and animal protection utilities are welcomed.

Suggested Topics

- New fungicidal, insecticidal, and herbicidal lead and development candidates
- Target based fungicide, insecticidal, and herbicide programs
- Fungicide, insecticide, and herbicide leads from high-throughput screening programs
- Post-harvest control of mycotoxins
- Plant antibacterial agents
- Animal health use of insecticides
- Novel miticides
- New plant growth regulants
- New safeners

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January 13 - March 10, 2014

DISCOVERY AND SYNTHESIS
Troubleshooting Pyrethroids

Purpose of Symposium

The scientific outcome of the symposium will be current knowledge of novel utility, resistance management, and regulatory concerns of pyrethroids as widely-used insecticides and as pesticides with reduced risk to public health.

Research community from industry, academia and government interested in the application and development of reduce risk insecticide would greatly benefit from this symposium. The other interest would be updates on international regulations and perspectives concerning pyrethroids.

Suggested Topics

- Mechanism of resistance development
- Novel utilities of pyrethroids
- Management of resistance
- Novel synergistic QSAR for efficacy, resistance, and toxicity
- International regulations and prospects
- Pyrethroids in crop protection versus public health

For further information, contact the organizers
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POSTER AND DISCUSSION SESSION ONLY

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13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

at the 248th American Chemical Society National Meeting
August 10-14, 2014, San Francisco, California, USA

ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Advancing Surface and Ground Water Exposure and Risk Assessment by Optimized Monitoring and Modeling

Purpose of Symposium

Agrochemical regulatory exposure and risk assessments are becoming increasingly reliant on computer model estimates in many parts of the world. Typically, for aquatic exposure estimation (ecological or drinking water), these are based on conservative model input assumptions and are positioned as "lower tier" assessments with the implication that they generate high-end (protective) estimates of exposure. The lower tier estimates can/should be refined where needed by using approaches to reduce the uncertainty around the estimates, often by building in temporal and spatial data of "real-world" field and watershed conditions. The utility of monitoring data for exposure estimates is determined by the associated sampling design, purpose, and information available on pesticide use, agronomic practices, analytical method performance, and watershed characteristics where the monitoring data are collected.

This symposium will explore and share the latest improvements in monitoring programs and in techniques for validating and extending the use of the monitoring results with predictive modeling. A special focus will be on integrated modeling and monitoring approaches for pesticide water exposure and risk assessment refinement and water footprint analyses.

Suggested Topics

- Challenges of current regulatory models/processes in assessing potential concentrations and exposure patterns of agrochemicals in drinking water sources or for ecological risk assessments
- New development in data mining/big data analytics, exposure inference, and future trend identification
- New higher tier modeling: deterministic and probabilistic across temporal and spatial scales; new mechanistic fate processes and parameters; and mitigation effects, e.g. groundwater well setbacks and surface water buffer zones
- Progressive tiered schemes for making optimal use of modeling and monitoring data
- Representative scenario development based on data and use
- Approaches for matching exposure durations to the duration of concern
- Information required for designing and interpreting monitoring data
- Innovative focused monitoring study designs
- New monitoring technologies for in situ and real time measurements

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ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Agroecosystems: Sustaining Biodiversity and Key Ecosystem Services

Purpose of Symposium

Agroecosystems are formerly natural ecosystems that have been intentionally simplified by humans for the production of food and fiber, often with key functions substituted by introduction of fertilizer, crop protection chemicals, and genetic traits. As a consequence, biodiversity in agroecosystems is generally reduced, which can have an impact on ecosystem services related to regulation of structure and integrity. An on-going challenge in natural resource management is preservation and restoration of natural biological communities while applying management techniques to structure crop communities to meet global food production needs.

Agricultural production can be balanced with land management goals through consideration of sustainability and biodiversity in ecosystem services. Typically, countries have developed mechanisms to manage this equilibrium through regulations related to crop production, risk assessment in the approval process for crop protection chemicals and traits, and encouragement of conservation practices aimed at biodiversity protection. Through a series of case studies, this symposium will examine how chemistry may benefit both agriculture and nature and how the potential for negative effects on the services provided by these resources can be mitigated.

Suggested Topics

- Diversity at different landscape scales
- The importance of plant communities
- Land sparing versus land sharing
- Management of invasive species
- Protection of water quality
- On-farm versus off-farm benefits of diversity
- Habitat heterogeneity
- Resource conservation/restoration and habitat enhancement
- Protecting centers of origin of genetic resources

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ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Global Approaches to Assessment of Bystander and Agricultural Worker Exposure and Risk

Purpose of Symposium

Quantification of both operator and post-application worker exposure to pesticides has been used historically to support regulatory decisions in North America, the European Union, and Australia. The need for such assessments has been expanding to other regions of the world. In addition to workers, questions have been raised recently in North America and the European Union concerning the safety of residents and bystanders who are potentially exposed to pesticides due to the proximity of residences, schools, and rural businesses to agricultural activities.

Data from operator and field worker exposure studies have been collected in support of quantitative exposure risk assessments. Data from monitoring studies are available and can potentially be used to evaluate exposure of residents and bystanders to pesticide residues via inhalation (air), dermal (dry deposition), or oral (wet deposition) routes.

This symposium will discuss the on-going efforts in expanding risk assessment methods globally for operators, re-entry workers, residents, and bystanders and the availability of methodology, monitoring, and modeling to both assess and refine the estimates of the potential exposure and risk.

Suggested Topics

- Hazard-based versus risk-based approaches to operator and bystander exposure assessments
- Epidemiology, biomonitoring, and monitoring use in operator and bystander exposure assessments
- Understanding global pesticide use practices
- Use of environmental/atmospheric conceptual models in exposure assessments
- Atmospheric models for spray drift, volatilization, aerosolization, and dispersion and their use in operator and bystander exposure assessments
- Use and evaluation of global air monitoring data in bystander exposure assessments
- Spray drift data and its use in refining operator and worker exposure assessments
- Air sampling approaches for determining and/or characterizing particulate concentrations from agricultural sources
- Comparison of exposure studies conducted in various regions of the world including developing countries to existing exposure data in North America and the EU
- Existing operator and post-application exposure databases and on-going efforts to create new exposure databases
- Challenges of developing agricultural worker exposure databases in smaller markets

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ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Implementing a Risk Paradigm for Pesticide Use Decisions in the Real World

Purpose of Symposium

Ecological and human health risk assessments have become an integral part of pesticide evaluations and affect decisions on regulatory approval, use directions, and market acceptance. Implementing risk assessment within regulatory decision-making programs requires selection of appropriate data, risk criteria, and exposure and effects characterizations that meet the goals of the legal and policy framework of the regulatory authority.

Risk assessment procedures continue to develop and to be adopted as governments and regulators recognize the need for well-defined frameworks with which to make pesticide registration decisions. Scientists involved in preparing or reviewing risk assessments and in communicating the results to risk managers or the public will find opportunities for learning and networking in this session.

Oral and poster presentations may illustrate specific issues or developments in risk assessment methods, such as case studies showing the rationale for selection of endpoints and uncertainty factors, requirements for local data on environmental fate and effects, utility of tiered assessments and data requirements, or challenges to accepted methodology.

Suggested Topics

- Rationale for the use of risk assessment in regulatory decisions
- Effects of policy and legal frameworks on risk assessments
- Selection of risk criteria for decisions, understanding the consequences of selecting overly stringent or overly lax criteria
- Selection of uncertainty factors – additional information needed to modify the factors
- Data requirements – selecting relevant tests, test organisms, and test systems
- Tiered risk assessments – justification, triggers for higher tiers, goals and data needed
- Risk characterization, communicating the results of the risk assessment
- Uncertainties in the risk assessment
- Interface with risk management decisions

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ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Persistence, Bioaccumulation, and Toxicity of Pesticides and POPs: Classification Schemes and Characteristics

Purpose of Symposium

New regulations in Europe (EC 1107/2009) and REACH will require assessment of the persistence, bioaccumulation, and toxicity (PBT) of a number of chemicals in the next few years. Similar activities are on the horizon for other jurisdictions. When applied to pesticides (EC 1107/2009), this classification will likely result in the loss of a number of products from the market in the EU and this will have global repercussions for agriculture.

The science behind the classification of pesticides as persistent organic pollutants (POPs) under the Stockholm Convention is well-grounded, but the classification of PBTs makes use of a few criteria related to half-life in soil, sediment, and water; bioconcentration factor from water into biota; and toxicity to non-target aquatic organisms. This symposium will focus on the science behind these classifications and how an understanding of the environmental chemistry of pesticides can be used to understand the risks from these substances better.

Suggested Topics

- Characterization of physical properties of POPs and PBT substances: Predictive models, measurements of properties
- Movement and dissipation of POPs and PBTs in water, soil, biota, and sediments: Improved techniques for measuring movement, degradation and dissipation in soils, sediments and water. Metabolism in biota. Uptake by plants
- Long-range transport of chemicals in the atmosphere: Predictive models, measurements in air and calibration of passive samplers
- Measurements and fate of POPS and PBTs in remote environments
- Characterization of biomagnification and toxicity of POPS and PBTs

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ECOSYSTEM AND HUMAN EXPOSURE AND RISK ASSESSMENT
Use of Ecological Models in Regulatory Risk Assessments

Purpose of Symposium

An increasing number of ecological models have been developed to address questions in the risk assessment for chemicals. This session will cover the use of ecological models in prospective and retrospective chemical risk assessment including examples of models, their use in risk assessment, and issues surrounding their implementation in the risk assessment. Models presented at the session will cover both the terrestrial and aquatic environments at a variety of spatial scales. Emphasis will be on process-based, mechanistic models that extrapolate across different levels of biological organization.

Issues will include: linking ecological models with chemical fate models, how much complexity is needed in a model, dealing with data gaps, inclusion of spatial elements, selecting an ecological scenario for modeling, ensuring selected landscapes address situations where the chemical is applied, interpreting results from ecological modeling as part of a regulatory risk assessment, and incorporating output from models to address directly protection goals set for organisms of concern

Examples will be sought describing how ecological models can be used to address all areas of risk assessment, either to address questions that have arisen following higher tier toxicity or exposure assessments or as an alternative to or aligning with conducting higher tier studies (which could be developed into standard models for general use).

Suggested Topics

- Models in regulatory risk assessment of pesticides
- Linking exposure with effects using energy budget and toxicokinetic-toxicodynamic models
- Assessing the effects of time-variable exposure regimes using models
- Using population models to include scale into the risk assessment
- Models to extrapolate across multiple levels of biological organization
- Assessing recovery of affected species in a spatio-temporal context
- Selecting species to model
- Propagation of individual-level effects to the population level using population models
- Predicting indirect effects and bioaccumulation within food chains using food-web models
- Addressing multi-stressor issues using models
- Models to link population and ecological endpoints to ecosystem service delivery
- How to evaluate the model predictions
- Efforts to facilitate effective model communication and stakeholder buy-in

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ENVIRONMENTAL FATE AND METABOLISM
Agrochemicals in Urban Environments

Purpose of Symposium

This symposium will include the work describing the magnitude, transport mechanisms, and potential remediation measures associated with fate and effects of pesticides in urban environments. Many special challenges exist in evaluating pesticides within urban environments. These include the vast array of different use patterns, applicators, and application surfaces, especially when compared to crops; accurately capturing pesticide usage; and the peculiarities of the urban landscape.

This symposium will be of interest to regulators, industry, non-governmental entities, and academic researchers internationally as a number of research initiatives are been underway in various countries.

Suggested Topics

- Monitoring and research studies of pesticide runoff in urban environments, including analytical issues associated with such studies
- Ecological effects of pesticides in urban environments
- Modeling of pesticide transport and degradation in urban environments
- Determining the nature of and amounts of pesticides applied in urban environments
- Understanding the behavior of the urban user/applicator and how this influences environmental inputs in these areas
- Development of scenarios for modeling urban uses of pesticides
- Conducting ecological and human risk assessments for urban uses of pesticides
- Effects of waste water treatment systems on discharges of pesticides used in residential and commercial settings

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ENVIRONMENTAL FATE AND METABOLISM
Bioaccumulation Risk Assessment: Problems and Possibilities

Purpose of Symposium

Pesticides and industrial chemicals are currently undergoing regulatory assessments for their bioaccumulation behavior and risk with far reaching outcomes. New scientific developments provide opportunities for improvement of the regulations and regulatory science assessment procedures, which often have not kept pace with the science.

The focus of this symposium is the assessment and evaluation of risks of chemicals in terrestrial and aquatic wildlife through accumulation in the food web. The symposium will provide a forum for discussion of new developments and their significance in global environmental evaluations. These developments include progress in characterizing biotransformation (kinetics and products), food-web transfer, terrestrial bioaccumulation, and risk estimation for bioaccumulative chemicals.

The symposium will address chemical screening as well as detailed risk analysis of individual substances and will included discussions concerning new developments in the current chemical evaluation and risk assessment practices.

Suggested Topics

- Use of measurement data as input for bioaccumulation modeling
- Screening methods
- Trophic transfer of pesticides in aquatic and terrestrial food webs
- Biotransformation in the food web: rates and products
- Terrestrial bioaccumulation
- Aquatic bioaccumulation
- New developments in bioaccumulation modeling
- Comparing field results with calculations based on lab data
- Calculation and application of the trophic magnification factor and implications for aquatic food web risks

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ENVIRONMENTAL FATE AND METABOLISM
Fate, Effects, and Risks of Nano-Pesticides

Purpose of Symposium

Nanotechnology is emerging as a highly-attractive tool for formulation and delivery of pesticide active ingredients. Some active ingredients are being reformulated, in the form of nanoparticles to harness the extraordinary properties of nanomaterials, as nano-pesticides.

While a clear definition of a nano-pesticide is still being sought, the term commonly refers to application of nanotechnology in delivery or formulation of pesticide active ingredient. The environmental fate, behavior, and ecological risks of nano-pesticides are unknown and may differ from conventionally formulated pesticide active ingredients. A need exists to understand the environmental fate and potential risks associated with nano-pesticides in a harmonized and scientifically-sound manner.

The symposium will address this need, especially to develop a considered set of guiding principles for informing the ecological risk assessment of nano-pesticides in the environment. The symposium will be of interest to researchers, academia, industry, and regulators and will build upon a recent workshop (May 2013) held in the UK.

Suggested Topics

- Nano-pesticides: definitions and regulatory needs and considerations
- Types of nano-pesticides products that are in manufacturing pipeline
- How nano-pesticides differ from conventional pesticides
- Differences in the fate and effects of nano-pesticides in the environment compared to other compounds/pesticides
- Adaptations to existing environmental risk assessment tests and procedures
- Guiding principles for informing the ecological risks of nano-pesticides

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ENVIRONMENTAL FATE AND METABOLISM
Handling of Mixtures in the Environment and Ecological Implications

Purpose of Symposium

The concern over potential effects of mixtures is increasingly being expressed around the world. The toxicological implications of residues of a specific pesticide may be significantly altered by the co-occurrence of other xenobiotics, including pesticides.

Do the safety factors already present in risk assessment adequately protect against such effects? How should the effects of potential mixtures be determined? Is the environmental fate of the individual pesticide affected when present in a mixture? This topic will be of interest scientists from academia, industry, and regulatory agencies globally.

Suggested Topics

- Use of monitoring studies and targeted field studies to identify potential environmental mixtures of concern
- Frequency of environmental mixtures in time and space at toxicologically-relevant concentrations
- Challenges in assessing risks of mixtures because of lack of data and lack of understanding of how mixture components interact
- Methods for determining risks of environmental mixtures with similar and dissimilar modes of action
- Likelihood of synergistic effects at environmentally-relevant concentrations
- Use of uncertainty analysis versus safety factors in risk assessments of environmental mixtures
- Methods for assessing risks of pesticide formulations and tank mixtures

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ENVIRONMENTAL FATE AND METABOLISM
Improved and Novel Methods to Estimate Pesticide Degradation Patterns and Rates

Purpose of Symposium

The demand for more accurate pesticide exposure assessments has driven new research into improving environmental fate predictions for pesticides and their transformation products of toxicological significance. However, data and resource limitations and practical needs may constrain the degree of specificity in modeling that is realistic for decision-making.

Improvements in methods for data development and modeling of pesticide degradation pathways, patterns, and rates in the soil and aquatic environments will be explored, including alternatives to traditional first order kinetics and their incorporation into fate and transport models. Insights will be provided for customization of modeling to optimize exposure estimation for risk analysis based upon the toxicological profiles of parent and degradation products. Use of these methods to improve the specificity and reliability of exposure estimates will facilitate more-accurate prediction of toxicological effects on non-target species.

Suggested Topics

- Data needs for pesticide transformation modeling in soils and surface waters, and methods for dealing with limited measurements
- Using alternative data sources
- Innovative methodologies to relate degradation patterns to site/environmental variables (e.g., pesticide sorption and bioavailability and its relationship to chemical persistence)
- Variability of environmental pesticide transformation patterns and strategies for selecting the most representative kinetic models, parameters or data sets
- Methods to predict metabolic patterns and formation and decline rates
- Characterizing multiple moieties when parent pesticide and transformation products contribute with different intensities to an effect on a non-target organism
- Tiered approaches to incorporation of kinetics into transport and exposure models
- Designing modeling for specific use in exposure assessments (for example when acute exposure concerns are greatest or when chronic concerns predominate)

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ENVIRONMENTAL FATE AND METABOLISM
Measuring and Modeling Pesticide Fate in Soil, Water, and Atmosphere at Micro- to Macro-Scales

Purpose of Symposium

The persistence, degradation, and transport of pesticides in the environment influence 1) their efficacy against targeted pests and 2) their potential to move into unintended areas and adversely affect non-target organisms.

The purpose of this symposium is to examine important chemical, physical, and biological factors influencing pesticide bioavailability, degradation, and transport through leaching, runoff, drift, and volatilization. Pesticide chemistries, use patterns, and management practices are ever changing to meet production needs and maintain protection of plants, animals, and human health. Current and emerging technologies to measure, model, and mitigate pesticide degradation and transport at local to regional scales will benefit producers, users, and regulators of pest control compounds, world-wide.

Suggested Topics

- Emerging technologies for measuring and modeling the fate of pesticides in the environment
- Processes and factors that affect the transformation, bioavailability, and transport of pesticides and pesticide mixtures in soil
- Drift, volatilization, transformation, and long-range atmospheric transport of pesticides and their degradation products
- Transport and persistence of pesticides and pesticide degradation products in surface water and groundwater
- Pesticide degradation, transport, and occurrence in non-target areas as function of land uses, pesticide formulation and application approaches, management practices, or mitigation strategies
- Use of field monitoring data, publically available databases, and geographic information system (GIS) to predict the pesticide environmental fate
- Role of environmental-fate monitoring and modeling in pesticide registration, regulation, and development of decision-making tools
- Current and future needs of pesticide fate modeling for discerning local to transcontinental trends and global transboundary transport

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ENVIRONMENTAL FATE AND METABOLISM
New Insights in Pesticide-Soil Processes Leading to More Realistic Exposure Assessment

Purpose of Symposium

The symposium will address scientific topics that concern specific higher-tier processes of pesticide behavior. The symposium will highlight the state-of-the-art knowledge regarding the respective processes which will be used to discuss the overall relevance of the single processes for the exposure assessment of pesticides.

The symposium will bring together scientists, regulators from authorities and industry representatives to explore and discuss possibilities of implementation of certain processes in environmental models that are used for regulatory purpose. Experiences with existing guidance regarding experimental setups, derivation of parameters as well as implementation of higher tier processes in the exposure assessment of pesticides will be shared and discussed.

Suggested Topics

- Time-dependent sorption (concepts, measurements, modeling, implementation in regulatory framework)
- Influence of surface processes on pesticide behavior (photolysis, volatilization, temperature and moisture effects at the soil interface to atmosphere, consideration for pesticide registration)
- Biogenic residues as sources of bound residues (biogenic non-extractable residues)
- Models to predict the formation of bound residues
- Differences between laboratory and field degradation (dynamic versus static incubation conditions, biofilms, effects on exposure assessment for registration)
- Improved design of laboratory and field studies
- Interaction between sorption and degradation in soils (correlation of sorption and degradation, dependence from soil properties, how to consider in pesticide registration)
- Relationship between sorption and soil properties in tropical soils (usefulness of sorption data from temperate soils for predicting behavior in tropical soils)

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ENVIRONMENTAL FATE AND METABOLISM
Scientific and Regulatory Aspects of Chirality in Agrochemicals

Purpose of Symposium

Much has been published on the fate, metabolism, and analysis of chiral agrochemicals. This symposium will highlight the most recent scientific and regulatory developments pertaining to stereoisomers of agrochemicals. The goal will be to draw attention to the scientific and regulatory issues and difficulties that arise due to chirality and to learn best practices and important lessons from other attendees.

Chirality influences virtually every aspect of agrochemicals including discovery, synthesis, toxicology, environmental fate, ecotoxicology,formulations, consumer safety, and analysis. This topic will include scientists from academia, industry, and regulatory agencies globally. A panel discussion of experts and policy drivers will also be conducted.

Suggested Topics

- Isomer specific environmental and animal metabolism
- Toxicological screening methods for isomeric mixtures and/or pure enantiomers
- Residue definitions of isomeric mixtures versus pure enantiomers
- Risk assessments of enantiomers
- Toxicological and ecotoxicological differences between isomers
- Separation techniques of isomers (HPLC, GC, SFC)
- Analysis of isomers and determination of stereochemistry (VCD, NMR, etc.)
- International approaches to regulation of isomers

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January 13 - March 10, 2014

ENVIRONMENTAL FATE AND METABOLISM
Sediment Partition and Bioavailability

Purpose of Symposium

Sediment pollutant bioavailability is a complex process which includes all kinds of relationships among the pollutant concentrations, physicochemical properties of the environment, and the involved organisms. Increased regulatory scrutiny (for example, legislative changes in Europe) is driving new data needs for a better understanding of pesticide exposure pathways leading to adverse ecological effects.

This symposium will include methods for estimating pore water concentration and other assessment related topics, variability in partitioning due to organic matter characteristics, bioavailability of freely dissolved, particle-bound, and DOC-associated chemicals, and the relation of hydrophobic chemicals with fine particles in depositional areas (including the ecological implications). Moreover, this symposium will include discussion about the state of art of sustainable options for the management of contaminated sediments and will promote multilevel involvement and participation of stakeholders in restoration strategies. The audience will include scientists, regulators, remediation site owners, and other environmental professionals from universities, industries, and consultants.

Suggested Topics

- Behavior of emergent contaminants in sediments and bioavailability for benthic organisms
- Field evaluations of novel techniques to reduce the pollutant availability in sediment
- Role of organic matter and fine particles in pollutant partitioning
- Mechanistic sediment quality guidelines based on pesticide bioavailability
- Pesticide exposure pathways and subsequent ecological adverse effects
- Integrating riparian wetland and restoration strategies of aquatic environments
- Sediment bioavailability tools to human health risk assessment

For further information, contact the organizers
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POSTER AND DISCUSSION SESSION ONLY

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13th IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

at the 248th American Chemical Society National Meeting
August 10-14, 2014, San Francisco, California, USA

FORMULATION AND APPLICATION
Technologies for Sustainable Crop Protection

Purpose of Symposium

The desire to reduce pesticide consumption while improving application efficiency has driven innovations in agrochemical formulation and application. Pesticides are produced in a variety of formulations and using equipment designed for specific application scenarios (field, tree and vine crops as well as for vector control). Applied pesticides may never reach the intended target when application is carried out with inefficient or improper application equipment, especially under adverse environmental conditions. Newer pesticide formulations may be more effective than previous formulations, but may require specific application equipment.

This symposium will bring formulators and application experts together to initiate or re-establish collaborations and to find ways to promote sustainable and effective crop protection, new innovations, and a better understanding of pesticide formulation and application techniques.

Suggested Topics

- New developments in application equipment, nozzle design and performance
- Mitigation of unintended environmental impacts from spray application
- Precision Agriculture
  - real time monitoring of spray applications
  - GPS based spray control
  - variable rate application
  - sensor developments
- Innovative formulation technology advances
  - nanotechnology
  - controlled or triggered release
  - development of complex multi-active products
- Control of spray drift through management of formulation physical properties
- Formulation technologies, predictive testing, and modeling to reduce active ingredient losses during and after spray application
- New methods of improving spray retention on the target and uptake of active ingredients
- Seed treatment and other means of non-spray delivery of active ingredients
- Technology approaches to meet the customer and regulatory needs of emerging economies

For further information, contact the organizers

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MODE OF ACTION AND RESISTANCE MANAGEMENT
Fungicides

Purpose of Symposium

Fungicides are an indispensable tool in disease management to maintain the health and productivity of crops and to ensure reliable and high-quality food and feed production. Fungal pathogens show a high variability enabling them to adapt to environmental factors rapidly. Resistance development against fungicides is a rather common phenomenon due to the selection of less sensitive strains and has been reported for many years. The resistance risk is defined by the fungal pathogen, the mode of action, and the product use. Resistance management strategies are essential to prolong the lifetime of active ingredients and the use of a mode of action.

Over the last decades, the agrochemical industry has developed several new modes of action and molecules. Different types of resistance mechanisms have developed in the field, partly with significant impact on disease control and partly with only limited consequences due to fitness penalty and complex shifting resistance type. Resistance is a continuous threat for fungicides, requiring constant attention and careful evaluation in the scientific arena, in the market place, and stewardship in practice.

The symposium will focus on new modes of action, new products, molecular mechanisms of resistance, new approaches to induce resistance in plants against plant diseases, the use of biologicals as tools in resistance management and the development and implementation of resistance management strategies.

Suggested Topics

- New modes of action of fungicides
- New products and their mode of action
- Molecular modes of resistance
- Developing recommendations for an efficient resistance management - FRAC
- Modes of action and resistance management strategies, examples for:
  - SBI
  - QoI
  - SDHI
  - CAA
- Induced resistance in plants as tool for disease management
- Biologicals as tools for resistance management
- Control of bacterial diseases and resistance development
- Status of Integrated Disease Management

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MODE OF ACTION AND RESISTANCE MANAGEMENT
Herbicides

Purpose of Symposium

Herbicides are a threatened resource that is essential for global food production, especially to attain weed control in the world's major grain crops. However, unique herbicide discovery is very rare, with no new herbicide mode of action introduced for over 20 years. There is widespread evolution of weeds resistant to existing herbicides, compromising weed control in global crops. Many different resistance mechanisms are now evident. Alarmingly, resistance mechanisms, such as cytochrome P450's, confer resistance across several herbicide modes of action. Increasingly, weeds accumulate several resistance mechanisms, enabling multiple resistances across herbicide modes of action.

An urgent need exists for new herbicide modes of action. However, there is also urgent need for better herbicide stewardship and discovery of alternative weed control technologies aimed to achieve herbicide sustainability in global agriculture.

This symposium will cover herbicide mode of action discovery and the need and importance of alternative technologies. The primary focus will be on new approaches to herbicide discovery, herbicide alternative technologies, resistance probability and prediction, as well as the latest approaches to resistance mitigation and thus herbicide sustainability.

Suggested Topics

- New modes of action of herbicides
- Newly evolved mechanisms of resistance to herbicides
- Resistance management strategies
- Natural products as sources of new modes of action
- The alarming threat of cytochrome P450 and other enzyme systems endowing resistance to both existing and potential new herbicides
- RNAi technology for weed management and its potential role in resistance management
- The great rate debate – the effect of herbicide rate on resistance evolution
- Herbicide sustainability strategies

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MODE OF ACTION AND RESISTANCE MANAGEMENT
Insecticides

Purpose of Symposium

The discovery and development of new insecticidal chemistries with novel or underexploited modes of action is an ever-present need as existing products are lost due to the development of resistance, increased regulatory actions demanding more selective toxicological profiles and less environmental impact, and shifting pest spectra brought on by changing agricultural needs and climate change. Over the past 20 years, the agrochemical industry has developed a number of new products that have met these needs. However, due to the continuing development of resistance to these new and existing insecticides, an acute need exists for new insecticidal chemicals along with improved resistance management practices and stewardship.

This symposium will focus on recent and new insecticidal chemistries, emphasizing target identification, molecular mechanisms of action, and resistance mechanisms. With increasing costs of discovery and development and with fewer companies investing in this endeavor, the importance of effective insect resistance management (IRM) to preserve and extend existing and new insecticides will be stressed throughout the symposium.

Suggested Topics

- IRAC update: new targets, biotechnology, public health teams
- Molecular mechanism of action (MOA) at targets
- Mechanisms of resistance to insecticides
- MOA and resistance to biopesticides (e.g., *Bti*)
- RNAi and knockdown strategies in MOA and resistance studies
- Genome wide analysis of MOA and resistance
- Role of ABC transporters in resistance studies
- Symbiont-mediated insecticide resistance
- Status of the control of malaria and dengue vectors
- Status of the control of whiteflies
- Pest species selectivity over beneficial species-Biorational approaches
- New insecticides to address resistance

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RESIDUES IN FOOD AND FEED
Going from Macro to Micro – The Future of Sample Processing in Residue Analytical Methods

Purpose of Symposium

Sample preparation processes in residue analytical methods are often the rate limiting step in the workflow. To address this issue, laboratories have developed different techniques to increase the throughput. Many of these methods include a direct scale down of the amount of sample utilized. However, these methods must not compromise the representative sample from the field. Innovative homogenization approaches are required to achieve samples suitable for miniaturized methods. The homogenization methods need to be rugged enough to produce not only high sample through-put, but also meet regulatory approvals in intra- and inter-laboratory validation trials.

This symposium will generate communication about advanced sample comminution techniques used by agrochemical, food, contract, and regulatory labs globally for miniaturized methods of analysis. Vendors are invited to describe their products. An interactive poster session will encourage discussion and debate about the different approaches to minimizing residue sample size while not compromising analytical integrality of results.

Suggested Topics

- Sample homogenization of agricultural commodities are encouraged
- Sample preparation from challenging matrices.
- Application of innovative analytical techniques (i.e., UHPLC, GC/MS-MS)
- Demonstration of method ruggedness though intra- and inter- laboratory validation processes
- Application of automation in pesticide residue analytical methods
- Availability of different products and proof of performance
- Applications to soil, plant and animal tissues, feeds, and unique matrices

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RESIDUES IN FOOD AND FEED
Laboratory and Data Management Issues

Purpose of Symposium

The intent of this symposium is to share practical and innovative solutions for highly efficient laboratory management and data handling operations designed to meet current needs for high sample throughput, particularly for multiclass, multi-residue analysis. Due to rapidly-expanding food trade throughout the world, and in response to periodic food scares, an increased amount of testing of contaminants in food is being conducted by the food industry, contract laboratories, and regulatory monitoring programs.

Laboratory managers, chemists, and regulators will particularly benefit from discussions of novel, streamlined, cost-effective, and efficient approaches to data handling and management practices to provide greater services of higher quality results, expanded analytical scope, faster sample turnaround time, and lower costs.

Suggested Topics

- Managing evolving data quality standards always for more, more, more analytes
- Non-targeted and targeted chemical analyses
- Establishing and implementing standard operating procedures, good laboratory practices, laboratory accreditation, quality assurance, ISO1705
- Data handling/management tools and software – can automated data processing be trusted?
- Streamlined method validation
- Automation for routine, high-throughput analysis with minimal instrument downtime
- Which instruments to use and how to afford them
- Practical laboratory management principles – examples of successes and failures
- How to contend with uninformed clients
- Experiences of chemists, quality assurance officers, and auditors
- Tough analyses and problem-solving

For further information, contact the organizers

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POSTER AND DISCUSSION SESSION ONLY

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RESIDUES IN FOOD AND FEED
Monitoring Results and Dietary Risk Assessment Implications

Purpose of Symposium

The purpose of this symposium is to share the techniques, methodology, and recent results from both new and ongoing food monitoring programs and to place that data in the context of dietary risk assessment. The methodology used in monitoring programs is changing rapidly, analyses are becoming more sensitive, and application rates for new products are much lower than in the past. How these changes affect data generation, reporting, and use in dietary risk assessment will be a focus of the discussions. Additionally, routes for communication and interpretation of the results of monitoring programs to the general public, along with education on the associated dietary risks, will be addressed.

Monitoring laboratory chemists, managers, and regulators will benefit from discussions of developments in the scientific and regulatory arenas. Risk assessors, modelers, regulators, and risk managers will benefit from discussions on the reporting, interpretation, and use of the data.

Suggested Topics

- Results from new and ongoing residue monitoring programs
- Adoption of new analytical methods to monitoring programs
- Dietary Risk Assessment Processes
- Dietary Risk Assessment in the Developing World
- QA and QC in monitoring programs
- Harmonization of data reporting in monitoring programs
- Establishing a food monitoring program
- MRLs and LOQs: How low is low enough for dietary residues to no longer have an impact on dietary risk assessment?
- Placing dietary exposure in the context of cumulative risk assessment
- Relative importance of water and food in dietary exposure and risk modeling
- Improved ways to report and to explain residue levels in food and the associated risks to the public

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RESIDUES IN FOOD AND FEED
Progress in Global Harmonization of MRLs

Purpose of Symposium

The intent of this symposium is to present the progress achieved during the past few years in the global harmonization of MRLs within different regions, but also from international organizations. Despite all work done, several challenges are still open and will be discussed in this symposium. A clear path forward is still required for setting up globally accepted residue chemistry guidelines and for getting common understanding on evaluation processes / criteria.

The harmonization of MRLs allowing free trade is considered one key element for ensuring safe and affordable food across the globe. This symposium and its accompanying poster presentations and mini-workshop will be of interest to policy makers, regulators, pesticide industry, and grower and trade associations alike.

Suggested Topics

- How to apply for a CODEX MRL (CXL)
- Are CXL really global? Acceptance of CODEX MRLs across the world
- Regional/national practices and policies in the MRL setting processes including import tolerances
- What is the status of the “basics”? What is still missing?
  - Crop grouping concepts
  - OECD Residue chemistry guidelines and guidance documents
- Harmonization of the evaluation criteria and processes
  - Design and regulatory view on global residue studies
  - Use of the principle of proportionality
  - Use of the OECD MRL calculator
- What are the consequences? Impact on stakeholders including grower and trade associations

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RESIDUES IN FOOD AND FEED
Taking Advantage of Advanced Analytical Tools

Purpose of Symposium

The intent of this symposium is to demonstrate the usefulness and limitations of modern analytical instruments to address real-world needs in applications involving pesticides. Not only will analytical chemists and regulators who work in the pesticide residue arena wish to attend, but researchers in many fields looking for new ideas and ways to solve problems, or just to learn about state-of-the-art analytical tools, should attend.

Analytical chemistry is a central science, and new analytical technologies and methods have implications on regulatory policies, pesticide registrations, international trade, risk assessment, environmental and food monitoring, among other subjects.

Suggested Topics

- How modern mass spectrometry could help to screen, identify, quantify, and confirm chemicals of concern in complex matrices
- Is chromatography still needed?
- Fast screening of samples in the field
- What is needed to identify and to confirm violative residues for regulatory enforcement actions?
- Analysis of traditionally difficult pesticides
- Finding the needle-in-the-haystack of ultra-trace residues in super complex samples like tea, spices, feeds, and fatty samples.
- How and when to do rapid sample preparation or even no sample preparation before analysis
- Dealing with matrix effects in quantification
- How low can we go in detection limits vs. how low do we need to go?
- Using the right tool for the job

For further information, contact the organizers

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STEWARDSHIP, REGULATION, AND OUTREACH
Common Global Goals in Pesticide Stewardship

Purpose of Symposium

The goal of this symposium is to discuss practices and policies that have been successfully used around the world to improve pesticide stewardship. The intent is to facilitate presentations and discussion on how the following groups steward pesticide products: pesticide regulators (national and local), educators (university, extension service, etc.), distributors/applicators, non-government organizations, and pesticide registrants.

Exchanging ideas will facilitate a common understanding of pesticide stewardship practices that have been effective (or not effective) for continued improvement in human exposure and safety and environmental stewardship. Stewardship experts from both a wide variety of disciplines, organizations and countries (both developed and developing) will be encouraged to participate.

Suggested Topics

- Voluntary versus regulated (mandatory) stewardship
- Understanding labeling and its impacts on production agriculture (e.g., endangered species, spray buffers, etc)
- Examples of how registrants, regulators, and the grower community work together in stewardship initiatives
- Pesticide stewardship education programs
- The role of the universities and cooperative extension (and its global equivalents) in pesticide stewardship
- Educating across a multi-lingual, multi-cultural, work force

For further information, contact the organizers

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STEWARDSHIP, REGULATION, AND OUTREACH
International Trade, Food Safety, and GAP

Purpose of Symposium

This symposium will bring together experts in food production, pest management science, pesticide regulation, registrants, and others that provide data used for pesticide human health risk assessment, as well as those responsible for protecting the food supply and assuring consumer and worker safety.

The overarching goal of the symposium is a discussion of pesticide human health risk from the farm gate to the table in order to establish a common understanding of how pesticide use practices are related to both international trade and national food safety and food security objectives. The effects of implementing good agricultural practices (GAP) on agronomic practices, production outcomes, and food safety will be examined. Participants will be sought from both the developed and developing world to foster a dialog on technical and policy needs.

Suggested Topics

- International Trade Agreements and Pesticides
- Challenges to pesticide regulation for international trade and food safety and security in the developing world
- History, purpose, and current global implementation of GAP
- How GAP relates to MRLs, IPM, and sustainability
- Challenges to GAP implementation in the developed world and developing world

For further information, contact the organizers
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STEWARDSHIP, REGULATION, AND OUTREACH
Start2Farm: Providing Information to New Farmers

Purpose of Symposium

New farmers face a wide variety of issues, ranging from business planning to a morass of governmental regulations. This especially true when considering about pest management and fertilizer options.

This symposium will focus existing resources that can provide guidance for the new farmer to operate successfully and safely. Discussion will cover the various issues that a new farmer will need to know, including the label, application issues, safety, storage, costs, and other issues. The result of this symposium will be an online compilation of resources that a new farmer can access to develop a basic level of understanding of the issues involved in pesticide and fertilizer use.

Suggested Topics

- Critical issues that new farmers need to know about using pesticides
- Resources for pesticide applicators
- Regulatory issues and nutrient management plans
- Training opportunities
- Online resources
- Farm safety
- Inclusion of nutrient and pest management costs in business planning

For further information, contact the organizers
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POSTER AND DISCUSSION SESSION ONLY

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AGRO Program Committee
Standing Programming and Champions

Pamela J. Rice, AGRO Vice Chair & Program Committee Chair

Long-term programming was identified as critical to the success of the AGRO Division. Currently AGRO programs technical symposia in 15 standing topics. Individual experts in each topic area have been identified from our membership to act as 'Champions' of that topic. These champions serve as liaisons to the current Vice Chair and Program Chair, providing ideas for new and timely symposia within their topic areas and identifying possible organizers. The champions provide long-term institutional memory of the Division's programming efforts because the officers rotate into and out of office. The Vice Chair is responsible for contacting them as necessary and organizing a conference call or two each year.

Additional Volunteers Needed for Boston 2015

Contact: Pam Rice, pamela.rice@ars.usda.gov

Advances in Agrochemical Residue, Analytical and Metabolism Chemistry & Metabolomics
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Bioenergy, Bioproducts, and Biochars: Advances in Production and Use
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Biorationale Pesticides, Natural Products, Pheromones, and Chemical Signaling in Agriculture
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Development of Value-added Products from Agricultural Crops and Byproducts
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Developments in Integrated Pest Management and Resistance Management
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Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals
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Protection of Agricultural Productivity, Public Health and the Environment – General Session
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Regulatory Harmonization and MRLs
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Synthesis of Bioactive Compounds
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Technological Advances and Applications in Agricultural Science (e.g., Nanotechnology, Genetically-modified Organisms and Biocontrol Agents)
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Urban Agriculture- Turf, Ornamentals, Household Products, and Water-Re-Use
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Programming & Outreach Activities
2014 – 2016

Activity/Event	Leaders/ Champions	Status	Actions Required
2013/4 AGRO Lunch and Learn Webinar Series	Laura McConnell	• Program under development and will include IUPAC 2014 emerging topics	• Volunteers are NEEDED!! • Contact Laura McConnell or Julie Eble
51st North American Chemical Residue Workshop July 2013 St Pete Beach, Florida	Steve Lehotay	• Program to be released in February	• Submit abstracts for oral presentations by April 15.
248th ACS National Meeting 13th IUPAC Pesticide Congress San Francisco, California August 10-14, 2014	Laura McConnell Ken Racke Cathleen Hapeman Jay Gan	• Call for papers released • Symposia being organized	• Committee Volunteers needed • Sign up for email updates • Submit abstracts in PACS which closes March 10, 2014
250th ACS National Meeting August 16-20, 2015 Boston, Massachusetts	2014 Vice Chair -- Pamela Rice	• Watch enewsletter for updates • Prepare symposia proposals	• Volunteers and champions NEEDED!! • Contact Pamela Rice
Pacifichem 2015 December 15-20, 2015	John Johnston	• Symposium Proposals under Review	• Contact John Johnston
250th ACS National Meeting August 21-25, 2016 Philadelphia, Pennsylvania	2015 Vice Chair -- Elected July 2014	• Stay tuned for Brainstorming Session information in enewsletter	• Volunteers and champions NEEDED!! • Contact Pamela Rice

Future ACS National Meetings

247th ACS National Meeting & Exposition
Chemistry and Materials for Energy
March 16-20, 2014, Dallas, Texas

248th ACS National Meeting & Exposition
Chemistry and Global Stewardship
August 10-14, 2014, San Francisco, California

249th ACS National Meeting & Exposition
Chemical Resources: Extraction, Refining & Conservation
March 22-26, 2015, Denver, Colorado

250th ACS National Meeting & Exposition
A History of Innovation: From Discovery to Application
August 16-20, 2015, Boston, Massachusetts

251st ACS National Meeting & Exposition
March 13-17, 2016, San Diego, California

252nd ACS National Meeting & Exposition
August 21-25, 2016, Philadelphia, Pennsylvania

254th ACS National Meeting & Exposition
August 20-24, 2017, Washington, DC

256th ACS National Meeting & Exposition
August 19-23, 2018, Boston, Massachusetts

7 Easy Steps for Organizing a Symposium

Thinking about organizing a symposium for a future National Meeting?

It's really not that difficult. Here's how:

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

AGRO Support for Symposium Organizers

- Assistance with developing a symposium summary and Call for Papers
- Help with identifying co-organizers
- Funding to help with travel, non-member registrations ($500 each ½ session)

July 20-23, 2014

TradeWinds Island Grand

St. Pete Beach, Florida USA

JOIN US!

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

Expected Submission Deadlines:
Oral presentations: April 15; Poster presentations: June 1
Manuscripts related to the meeting maybe considered for publication
in a special section of *Journal of Agricultural and Food Chemistry*

www.nacrw.org

Sponsored by FLAG Works, Inc., a non-profit organization, which has an agreement with ACS (via the AGRO Division) to help plan and coordinate the event.

Summary of Pan Pacific/IUPAC Conference on Pesticide Science Beijing, China, September 15-20, 2012

by Jim Seiber

This Conference was organized and hosted by five organizations: Beijing Pesticide Society (BPS), IUPAC, Pesticide Science Society of Japan (PSSJ), China Agricultural University (CAU), Institute for the Control of Agrochemicals, Ministry of Agriculture, China (ICAMA). It was attended by approximately 600 scientists, regulators, industry representatives, and students, with about 150 attendees from outside of China.

The AGRO Division of ACS helped with organization and provided speakers. AGRO representatives attending included Ken Racke, Stephen O. Duke, John Clark, and Jim Seiber. Laura McConnell was involved in early phases of planning, but was unable to attend. Primary organizers were Professor Zhongning Zhang of the Chinese Academy of Sciences, Dr. John Unsworth of IUPAC, and Professor Hiroshi Matsumoto of the University of Tsukuba. The primary focus was on several topics: Pesticide Regulation; Pesticide Residues; Pesticide Environmental Fate and Risk Assessment; Pesticide Formulation and Application; New Pesticide Discovery; and Pesticide Mode of Action and Resistance Management.

The conference was very successful in both the technical programs and in promoting exchange of views among the attendees. The Agrochemical Division representatives felt that this was a very useful lead-in to the13th IUPAC Congress of Pesticide Chemistry, planned for August 10-14, 2014, in San Francisco, CA. All of the attendees were personally invited to the Congress.

Synopsis of AGRO Division at Fall 2013 ACS Meeting & Expo in Indianapolis

by Nancy Ragsdale

"This article appeared in Volume 24 No 6 of Outlooks on Pest Management (OPM), published by Research Information Ltd, and is made available here with the publisher's permission. The electronic editions of OPM are available via our online host IngentaConnect at http://www.ingentaconnect.com/content/resinf/opm".

The American Chemical Society (ACS) held their 246th national meeting September 8–12, 2013 in Indianapolis, Indiana; the meeting theme was “Chemistry in Motion”. More than 10,000 chemists and visitors attended the meeting, including students as well as exposition exhibitors. The Agrochemicals Division (AGRO) organized 21 technical symposia and two poster sessions. The most extensive symposium was *Biopesticides*: *State of the Art and Future Opportunities*. In addition AGRO had extensive programming with the Divisions of Agricultural and Food Chemistry (AGFD) and Environmental Chemistry (ENVR). An Awards Social for all AGRO members was sponsored by Dow AgroSciences and was held at their headquarters in Indianapolis. Abstracts from the AGRO program are available for downloading via the Fall 2013 issue (Vol. 84) of the *PICOGRAM* (http://www.agrodiv.org/picograms/).

International Award

Dr. René Feyereisen, National Institute of Agronomical Research (INRA), France, was the 2013 recipient of the ACS International Award for Research in Agrochemicals. This award, sponsored by DuPont Crop Protection and presented annually by AGRO, is given to a scientist who has made outstanding contributions to the field of agrochemicals at the international level opening new horizons for other investigators in their field and beyond.

Dr. Feyereisen’s early research examined the roles of cytochrome P450 enzymes in biosynthesis of ecdysteroids and juvenile hormones (JH). Our fundamental understanding of the metabolism of hormones regulating insect development and metamorphosis has been greatly enhanced by these studies, which have called attention to insect-specific target sites. He is perhaps best known for his groundbreaking research on the role of cytochrome P450 enzymes in insecticide detoxification and resistance. An aspect of his research that is of key importance to agrochemical toxicologists is pioneering efforts in the use of molecular technologies, such as DNA microarrays or detox chips. These efforts have resulted in a more complete understanding of the regulatory mechanisms leading to the constitutive overexpression of insecticide-metabolizing enzymes in resistant arthropods.

A native of The Hague, Dr. Feyereisen received his Ph.D. from Louis Pasteur University. After postdoctoral fellowships at the University of Sussex and University of Toronto, he served as insect toxicologist on the faculty of the Departments of Entomology and Agricultural Chemistry at Oregon State University, followed by Professor of Entomology at the University of Arizona. He then joined INRA at the Sophia Antipolis Research Center, where he is currently Director of Research. Following presentation of the award, Dr. Feyereisen gave the initial paper, *Insect P450 paradox: too simple as targets, too complicated as detoxifiers?* in a symposium in his honor.

Sterling B. Hendricks Memorial Lectureship Award

The 2013 Sterling B. Hendricks Memorial Lectureship Award winner was Dr. Keith Solomon, Professor Emeritus and Associate Graduate Faculty in the School of Environmental Sciences, University of Guelph as well as Director of the Centre for Toxicology. This award, sponsored by the Agricultural Research Service (ARS)/USDA and co-sponsored by AGRO and AGFD, was presented to honor the memory of Sterling B. Hendricks and to recognize a scientist who has made

outstanding contributions to the chemical science of agriculture. After receiving the award, Dr. Solomon gave a lecture entitled *Arriving at the truth: weight of evidence for assessing risks of agrochemicals*.

Dr. Solomon holds a Ph.D. from the University of Illinois and has more than 40 years of research and teaching experience in pesticide science and toxicology. In addition to an extensive publication record, he has taught numerous short courses on pesticides around the world. He has received numerous awards including the Society for Environmental Toxicology and Chemistry (SETAC) – ABC Laboratories award for Environmental Education, the ACS International Award for Research in Agrochemicals, and the SETAC Europe Environmental Education Award. Currently Dr. Solomon directs an active program of research into the fate and effects of pesticides and other substances in the environment, exposure of humans to pesticides and industrial chemicals, and risk assessment. He serves internationally on a number of advisory committees related to toxicology and pesticides.

AGRO Award for Innovation in Chemistry of Agriculture

Dr. Jeanette M. Van Emon received the 2013 Award for Innovation in Chemistry of Agriculture, sponsored by BASF Corporation. This award is given to an active researcher working in North America for a chemical innovation that significantly enhances agricultural or veterinary pest management and productivity. Dr. Van Emon was recognized for her creative and extensive research into applications of immunochemistry technology for detection and measurement of pesticides and other potentially toxic chemicals in environmental samples and foods. She has been active in promoting meetings that brought together government and academic researchers with chemical registrants to discuss immunoassays and foster the acceptance of this technology. Her research and outreach to other agencies and organizations has brought her recognition through awards from USEPA and ACS. She presented a paper entitled *Immunochemistry in motion: applications to agrochemicals*.

Dr. Van Emon is a research chemist in the USEPA Exposure Research Lab in Las Vegas, Nevada. She received her Ph.D. from the University of California, Davis. In addition to efforts associated with her research, she has been very active in the AGRO Division as well as ACS in general. She is an AGRO Councilor, a member of the ACS Division Activities Committee, Chair of the ACS Western Regional Board and previously Chair of AGRO.

AGRO Division Fellow Award

The Division Fellow Award recognizes members who have provided dedicated and enthusiastic service to AGRO and to the science of agrochemicals. At the Indianapolis meeting four such awards were presented.

Dr. Stephen O. Duke, Research Leader of the ARS/USDA Natural Products Utilization Research Unit, which is in the School of Pharmacy at the University of Mississippi in Oxford, is widely recognized for his research on modes and mechanisms of action of herbicides. His many awards and recognitions include the 2004 International Award for Research in Agrochemicals. Dr. Duke has served on many editorial boards and is currently Editor-in-Chief of *Pest Management Science.* His numerous contributions to AGRO include organization of symposia and editing books from many of these. He has served as Program Chair and is beginning his term as Chair of AGRO.

Dr. Cathleen J. Hapeman, ARS/USDA, has an active research program focused on basic and applied aspects of pollutant fate, blending chemical proficiency and environmental process expertise with her decades of experience in agricultural practices as well as acquired regulatory knowledge. She has been active in AGRO since beginning her professional career, receiving early recognition as the first recipient of the AGRO Young Scientist Research Award. Her many contributions to AGRO include symposia organization, active participation on the Communications Committee, and editor of the *PICOGRAM*, developing it into a premier ACS division publication. Dr. Hapeman is the 2014 AGRO Program Chairman and the Scientific Program Chair of the 13th IUPAC International Congress of Pesticide Chemistry, which will be held August 10–14, 2014, in San Francisco, California.

Dr. Kenneth D. Racke, a global research leader with Dow AgroSciences, has had a variety of roles related to insecticide development and regulation. His interests include environmental chemistry, risk assessment, pesticide residues in food and international trade standards. Dr. Racke is a long-time member of AGRO and has made contributions to the division including having organized symposia on a variety of topics, chaired the AGRO Young Scientist Recognition Committee, chaired the International Activities Committee, and served as Chair of the AGRO Division. He has been active in promoting international crop protection chemistry activities through IUPAC and is currently co-chair for organizing the 13th IUPAC International Congress of Pesticide Chemistry.

Dr. Teresa A. Wehner recently retired from Merial, an animal health company owned by Sanofi. Her professional career involved employment in research activities with a number of companies and included numerous contributions to the field of agrochemistry. She developed methods for determining residues of various agricultural chemicals and veterinary drugs and was instrumental on teams obtaining or retaining approvals and marketing authorizations for many products with registrations that span the globe. In AGRO she was instrumental in broadening the division's concept of agrochemicals to include more than chemicals used on crops. She has been active in organizing symposia and in forging working relations with industry partners, state and federal scientists and policy makers.

Journal of Agricultural and Food Chemistry (JAFC) 2013 Research Article of the Year Award Lectureships

Annually two papers receive this award, presented by JAFC and co-sponsored by AGRO and AGFD – one in the subject area of agrochemicals (pesticides, biofuels, biobased products and related) and one in agricultural and food chemistry (food, health and related). In the area of agrochemicals, the winner was Dr. John Grabber of the U.S. Dairy Forage Research Center, ARS/USDA. A primary focus of his work has been to develop and utilize a biomimetic cell wall model for delineating how variations in lignin composition, structure and cross-linking affect the susceptibility of cell walls to microbial fermentation, chemical pretreatment and enzymatic saccharification. The title of his lecture was *Using biomimetic cell wall models to identify new plant lignin bioengineering targets for improving forage and biomass utilization*.

Dr. Thomas Hofmann was the winner in the area of agricultural and food chemistry. Currently he is located at the Technische Universität München, where he is Chair of Food Chemistry and Molecular Sensory Science, head of the bioanalytics unit of the Center of Nutrition and Food Sciences and vice president for research and innovation. His lecture was entitled *Molecular determinants of the sweet-bitter Janus head of steviol glycosides and development of novel quantitation tools*.

ACS Kansas City Section 2013 Kenneth A. Spencer Award

A symposium was given honoring Dr. Attila Pavlath as the recipient of the Kenneth A. Spencer Award. This award recognizes meritorious contributions to the field of agricultural and food chemistry and is presented by the Kansas City Section of ACS in the hope that it will give added stimulus in research, education, and industry to further progress in agricultural and food chemistry. The award was co-sponsored by AGFD and AGRO. Dr. Pavlath was born in Budapest and received all his education there. After the Hungarian Revolution he and his family left Hungary, and after holding positions at McGill University and Stauffer Chemical Company, Dr. Pavlath joined ARS/USDA at the Western Regional Research Center. He officially retired in 2000 but has continued as a Senior Emeritus Research Chemist. He pioneered research in fluorine chemistry, glow discharge, biomass, biodegradable films and a variety of agricultural chemistry problems. He developed a worldwide program to educate the public about the benefits of chemical developments. His numerous awards and honors include president of ACS, 1997 Pioneer of the Year by the American Institute of Chemists, honorary lifetime president of the ACS Hungarian International Science Chapter, and elected to membership in the Hungarian Academy of Science. Dr. Pavlath gave a presentation entitled *Edible films and coatings on processed fruits and vegetables*.

New Investigator Award

Dr. Daniel Swale, Vanderbilt University, received the New Investigator Award sponsored by Dow AgroSciences and presented by AGRO to scientists who have obtained a doctoral degree within the past five years and are actively conducting academic, industrial, consulting or regulatory studies related to aspects of agrochemicals. Dr. Swale gave a presentation entitled *Neurotoxicity and mode of action of N,N-diethylmeta-toluamide (DEET) on the insect nervous system and mammalian neurons.* His research was conducted as a graduate student at Virginia Tech and the University of Florida, where he received his Ph.D., and has continued at Vanderbilt University Medical Center, where he is a postdoctoral fellow.

AGRO Education Awards for Student Travel

AGRO has established an endowment fund in collaboration with Bayer CropScience to promote an understanding of the role of chemistry in agriculture. Selected undergraduate and graduate students received funds to help defray costs of attendance at the ACS meeting to give poster presentations in AGRO. The posters were judged, and first, second and third place winners received additional cash awards. This year 15 students received travel awards. Winners of the poster contest along with their affiliations, presentation titles and faculty advisors follow.

First Place: Lacey Johnson, University of Florida, *Voltagesensitive potassium channels expressed by hormone treatment in mosquito cell lines*, advisor – Dr. Jeff Bloomquist.

Second Place: Aaron Gross, Iowa State University, *Deorphanizationand pharmacological profile of a tyramine receptor from the southern cattle tick (*Rhipicephalus microplus*)*,advisor – Dr. Joel Coats.

Third Place: Joshua Wallace, University of Buffalo, *Assessment of conventional waste management and advanced waste treatment systems in removing veterinary antibiotics*, advisor – Dr. Diana Aga.

Future AGRO Programming

AGRO will meet next at the 248th ACS National Meeting, August 10–14, 2014, in San Francisco, California. AGRO will organize the 13th IUPAC International Congress of Pesticide Chemistry in conjunction with this meeting. Visit the website for details and sign up for email updates at www. iupac2014.org.

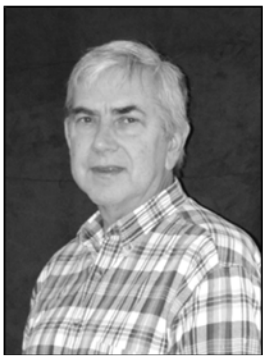
NOTES

2014 AGRO Division Officers

Stephen O. Duke
Division Chair

Cathleen J. Hapeman
Program Chair

Pamela J. Rice
Vice Chair



Del A. Koch
Treasurer

Sharon K. Papiernik
Secretary

AGRO Division Past Chairs

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

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Barry Cross, Alternate

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Will Ridley
David Soderlund
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Jeff Jenkins – Public Relations
Laura McConnell – Ads/Website Coordinator
Nancy Ragsdale – Pesticide Outlook Liaison
Sharon Papiernik – Awards Coordinator
Yelena Sapozhnikova – eNewsletter Editor

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Al Barefoot
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Scott Jackson
Kenneth Racke

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(con't)

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Programming Committee - See p. 65

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Ellen Arthur
Al Barefoot
Ashli Brown
Keri Carstens
John Clark
Steve Duke
Jay Gan
Amrith Gunasekara
Marja Koivunen
Ken Racke
Will Ridley
Jeanette Van Emon

AGRO Division Annual Business and Governance Meeting

246th ACS National Meeting & Exposition

Indianapolis, Indiana USA

Sunday, September 8, 2013, 5:00-9:30 pm

Grand Hall Ballroom, Crowne Plaza Indianapolis at Union Station

Minutes

Attending:
Officers: John Clark, Chair, Steve Duke, Program Chair, Cathleen Hapeman, Vice Chair, Del Koch, Treasurer, Sharon Papiernik, Secretary
Others: Troy Anderson, Kevin Armbrust, Ellen Arthur, Aldos Barefoot, Michael Barrett, John Beck, Rodney Bennett, Brian Bret, Joel Coats, Julie Eble, Jay Gan, Aaron Gross, Cody Howard, John Johnston, Marja Koivunen, Mike Krolski, Steve Lehotay, Kalumbu Malekani, Laura McConnell, Ken Racke, Paul Reibach, Pamela Rice (call-in), Patricia Rice, Philip Sarff, Jim Seiber, Keith Solomon, Jeanette Van Emon, and Teresa Wehner

Introductions and Agenda – John Clark

Secretary's Report – Sharon Papiernik
Major Accomplishments:

- Consolidated sponsorship under Development Committee; increased number of sponsors and total contributions
- Provided professional support for editing and producing the *PICOGRAM*
- Organized a membership drive for this meeting
- Finalized revision of AGRO bylaws
- Initiated ECYART/AGRO Peru lecture series sponsored by Luiz Ruzo

- Submitted first-rate award nominations, including JAFC and Kavli lectureships
- Achieved excellent progress on IUPAC Congress

Still open:

- Managing AGRO Archives
  - No progress since Philadelphia meeting
- Finance Committee to check into mechanism and cost of bonding AGRO Treasurer.
- Develop a Wikipedia page for AGRO
- Consider incorporating the Division

2013 Nominating Committee – Al Barefoot

Outcome of 2013 Nominating Committee and Election

- The Nominating Committee consisting of Al Barefoot, Ken Racke and Troy Anderson prepared a ballot for the 2013 election with candidates for Vice-Chair, Treasurer, Secretary and Executive Committee Members-at-large.
- The voting was carried out by Vote-now.com LLC with the ballot opening on July 1 and closing on July 31. There were 275 votes in the final count; 24% of the electorate voted.
- The winners were determined by plurality, and the Tellers committee certified to the Secretary that the following candidates were elected:
  - Vice Chair – Pam Rice
  - Secretary – Sharon Papiernik
  - Treasurer – Del Koch
  - Executive Committee members-at-large – John Beck, Cheryl Cleveland, Ke Dong, Marja Koivunen, Amy Ritter
- Thanks to all the candidates for their generous willingness to serve the division. Those who did not win election are encouraged to consider running again and provide the leadership that AGRO needs to maintain the programming and activities that are needed to carry out our service to our membership and agrochemical science.
- Formation of 2014 Nominating Committee: Clark will chair; Barefoot, Racke, Swale will serve as members.

Treasurer's Report – Del Koch

Through 9/3/13: Total AGRO income $86K; expenses $37K; expenses for the Indy meeting have not been realized. Investments have not been tapped for operational expenses (except graduate student travel) since 2012.

Finance Committee – Joel Coats

- 2013 Budget: AGRO investment accounts have rebounded very well over the past 5 years. Principal funds are with T.Rowe Price and J.P. Morgan; the largest one is the J.P. Morgan Educational Trust fund. In the summer of 2008, the investment funds' total value was $556K. By the winter of 2008, their total value had fallen to $394K, which was a loss of 29% of value. AGRO losses due to the financial crisis were very noticeable but modest because the investments have always been relatively conservative. They have recovered 82% of the losses, and they now are worth 95% of their pre-recession value. Their current total value is $527K.
- 2014 Budget: The preliminary budget developed by the Finance Committee was discussed on the summer EC conference call. There is a projection for a small surplus next year ($5K). A small deficit was projected for 2013 ($8K). Finance Committee will continue to encourage symposium organizers to search for sponsors for their symposia, because it helps contain meeting costs. Minimizing the coffee service at most sessions has also saved on meeting costs.
  - Cathleen Hapeman moved to reinstate morning and afternoon coffee in Boston so that attendees do not leave the meetings in search of coffee. Bennett seconded. Discussion: It is difficult to defend AGRO coffee against interlopers. Keeping it in the rooms also creates problems with staggered program; could put coffee in poster session during breaks. Vote: 12 Yes, 3 No. AGRO coffee will be reinstated. Coffee logistics will be program chair's responsibility.
- Ken Racke is an ad hoc member of the Finance Committee to facilitate coordination of the AGRO budget with that of the IUPAC International Congress of Pesticide Chemistry. The committee will discuss ways to integrate the two budgets, and they welcome input from the EC and others.

Awards Committee – Jim Seiber

- Fellow Awards: Steve Duke, Cathleen Hapeman, Ken Racke, Teresa Wehner
- International Award: Rene Feyereisen, INRA-CNRA, Sophia Anipolis, France
- Innovation Award: Jeanette Van Emon, US EPA
- JAFC Lectureship Awards: John Grabber (USDA-ARS) and Thomas Hoffman (Univ. of Munich)
- Sterling Hendricks Award: Keith Solomon (Univ. of Guelph)
- Kenneth Spencer Award: Atilla Pavlath
- Daniel Swale will be official photographer for 2013 award presentations.
- 2014 International Award winner is Ralf Nauen, Bayer.
- Seiber recognized the volunteer efforts of the awards committee and asked that the EC consider some formal means of recognition.
  - Steve Lehotay moved that AGRO purchase 200 coffee mugs to express appreciation for AGRO service and for sale. Johnston seconded. Discussion: At SETAC, you buy a mug and use it to access refreshments. Could use mugs to express appreciation for symposium organizers and other volunteers. Who will take this on? Membership committee? $10/cup? Motion was amended: membership committee will propose idea to EC. Recommendation that membership committee use graphic designer for consistent "branding". Note that mugs are difficult to ship. Look for unbreakable mugs. Motion withdrawn.

Bylaws Committee – Rod Bennett

- ACS Bylaws committee is revamping how they want bylaws written. ACS may have some minor modifications that will not require the EC to revisit. Should be able to submit revised bylaws to ACS before the next ACS meeting. Bylaws should be finalized and approved by ACS before the San Francisco meeting.

Early Career Scientist Committee

- *Graduate Poster Awards – Marja Koivunen*
  All 15 submissions were accepted. Committee will ask ENVR for more complete instructions for extended abstract next year to provide more consistent nominations. They are asking for volunteer judges.
- *New Investigator Award – Steven Lehotay*
  There were 5 applicants for this award. Judges chose 3 of them: Chloé de Perre, Daniel Swale, and Chitvan Khajuria. Their presentations are embedded within program. Judges represented industry, academia, and government. Awards will be given at AGRO social; award funds are from Dow.

Programming/Program Chairs

Indianapolis – Steve Duke

- AGRO program for Indianapolis contains: 21 symposia, 5 award presentations, and 2 poster sessions (general and student), with a total of 432 abstracts for the entire program. As of late August, less than a dozen papers were withdrawn. There are 38 half-day sessions with 4 concurrent sessions from Sunday afternoon through Thursday morning and 3 concurrent sessions on Sunday morning and Thursday afternoon.
- The most extensive symposium is *Biopesticides: State of the Art and Future Opportunities* that will run two and a half days. This symposium is supported by an ACS Innovation Grant and a grant from the Agricultural Biotechnology Stewardship Technical Committee.
- Al Barefoot generously volunteered his time to help solicit symposia sponsors and to keep the efforts along these lines organized. In total, we had about $27,000 of either direct or indirect support for our symposia from sponsors.
- One symposium is cosponsored by AGFD and ANYL and several are cosponsored by ENVR.
- Several of the symposia fit the theme of the meeting: Chemistry in Motion. These include: *ADME - The Motion of Veterinary Drugs and Xenobiotics*, cosponsored by AGFD and ENVR; *Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals* cosponsored by ENVR; and *Terrestrial Field Dissipation Studies in Global Agrochemical Registration Programs.*
- For the first time, there were so many oral sessions, that the General Session (*Protection of Agricultural Productivity, Public Health, and the Environment*) is scheduled as a poster session held at the Indiana Convention Center.
- Due to a slightly better financial situation, we have arranged for coffee and tea for all oral sessions in the mornings.
- Dow AgroScience generously offered their facilities, transportation, and sponsorship for our Awards Social on Tuesday evening.
- Marja Koivunen and Diana Aga organized our Education Awards and students' poster session. Steve Lehotay coordinated the New Investigator Award (NIA) in which three finalists will be judged by their oral presentations early in the week. The winner will be announced Wednesday afternoon. The NIA finalists and the Student Poster Presenters will be recognized with awards and grants for travel. Please plan on attending the poster session and the NIA presentations to encourage these budding scientists.
- The achievements of five of our most eminent colleagues will be honored with award symposia. On Monday, the International Award for Research in Agrochemicals symposium in honor of Dr. Rene Feyereisen is sponsored by BASF. Four award presentations are planned for the same venue on Tuesday morning: (1) recipients of newly-instituted Best Paper Awards of the *Journal of Agricultural and Food Chemistry,* (2) Innovation in Chemistry of Agriculture Award lecture of Dr. Jeannette Van Emon sponsored by BASF, (3) Sterling B. Hendricks Memorial Lecture of Prof. Keith Solomon is sponsored by USDA, ARS and co-hosted by AGRO and AGFD.
- Jim Sieber noted that the JAFC award will likely continue another year.
- John Clark recognized Barefoot for sponsorship activity. Al Barefoot: The Executive Committee agreed to a special effort to secure symposium sponsorships for the Indianapolis Meeting. Through the work of the symposium organizers and the special funding efforts of Innovative Grants and targeted solicitation, the division raised $26,500 in additional funding specifically for supporting speaker travel and registrations. Of the 11 sponsors contributing additional funds, 4 are new patrons with particular interests in the symposium topic.

San Francisco – Cathleen Hapeman/Jay Gan

- Formed a committee of 9 teams. Jay Gan is Vice Program Chair. Have had several conference calls and numerous meetings with teams. Each team has developed draft symposia. Goal is for more audience participation than usual for AGRO programming. Leaders met today, and all but 1 team lead were represented. One of the topic areas is Emerging Issues, in which one of the 4 symposia will be co-sponsored with ENVR: Food Production in Developing Countries. There will be 9 concurrent sessions.
- Thematic programming for ACS in 2014 is Chemistry and Global Stewardship. Tangible outcomes: proceedings will consist of at least 8 plenary lectures + notable lectures. Each team is charged with developing at least one special publication from the meeting. Options include publishing in JAFC, IUPAC publications, Pest

Management Science, etc. as well as ACS Symposium Series.

- John Johnston has agreed to manage poster session. Stuart Cohen will help with interaction at poster session. Call for papers will be finalized by the end of this month. Most papers will be posters as is customary for IUPAC.
- All programming will be at Marriott Marquis, beginning Monday.
- International Award winner: Ralf Nauen will present at one of the symposia. Innovation and New Investigator Awards will be incorporated into appropriate spots. JAFC award lectures will be programmed in AGFD. Sterling Hendricks will be hosted by AGFD. Student posters are being discussed. There will be other IUPAC awards, such as the best poster award open to all.
- Abstracts will open in January through mid-March. **There will be no extension of deadlines.**

Co-sponsored Meetings/Symposia

50th North American Chemical Residue Workshop – Steve Lehotay

- Was a great meeting. North American Chemical Residue Workshop will not be coordinated with IUPAC but will be in July in St. Pete Beach. Maybe more focus on veterinary medicine.

Pacifichem 2015 – John Johnston

- Will be held Dec 2015. 3 AGRO-sponsored symposia: (1) Molecular understanding of secondary metabolites in agrochemistry: from birth to mode of actions (Duke) (2) Opportunities and advancements in rice research and aquaculture research (Johnston, Sandahl); (3) Proteomics and metabolomics in agricultural, environmental, and public health sciences (Johnston, Li, Van Emon)
- John Johnston moved that AGRO provide travel support for 4 organizers' travel up to $3000/person (John Johnston, Steve Duke, Jason Sandahl, Jeannette Van Emon). Will submit receipts for reimbursement from Pacifichem to AGRO. Contingent on presence of a mechanism for Pacifichem to reimburse AGRO. No guarantee that Pacifichem will reimburse 100%. In addition, requested $500/session for coffee/tea * 6 sessions. Bennett seconded.
    - Discussion: Can't this wait until next year? Yes, but would rather know sooner than later. Asking for full reimbursement of travel expenses? Yes.
      Vote 15 Yes 0 No. AGRO will front Pacifichem travel for 4 organizers at $3000 each and request reimbursement from Pacifichem. AGRO will fund coffee/tea at 6 sessions at $500/session.

ECYART/AGRO lecture series – John Johnston/Keith Solomon

- Luiz Ruzo is sponsoring distinguished lectureship series in Peru. 6 speakers include Bloomquist, Perez-Jones, Johnston, Duke, Solomon, and Ruzo. Ruzo is pleased with outcome and wants AGRO to think about speakers for 2014-2015. Consider nominating yourself or your colleagues. Submit nominations to Johnston. Speakers give 2 lectures in 1 day; Ruzo covers all travel expenses for 4 days in Lima. There might be funding from Division Affairs Committee from ACS?

2015 AGRO Programming – Boston, MA, August 16-20 – Pam Rice

- Bring programming ideas to Brainstorming for Boston and Beyond; see page 41 of *PICOGRAM* for details.

Dinner Break

IUPAC 2014 (AGRO-ICPC) – Ken Racke/Laura McConnell

- Organizing committee will meet on Sept. 9. Penny Patton has been hired to assist. In the next few months, need to continue to work on the scientific program; publicity; issue call for papers; confirm sponsorships.
- Ellen Arthur is chairing Communications and Publicity Committee. At the Indy meeting, AGRO is shooting video clips about IUPAC to be produced into a YouTube video. Intend to try to use webinars to publicize IUPAC. Example: have key Europeans speak with the broadcast time convenient for their home country. McConnell asks that members send the contacts for social media/marketing in their organization (universities, corporations, etc.)
- Ken Racke is chair of Sponsorship and Finance Committee. Updated budget will be distributed at organizing committee meeting, totaling $447,000. Expenses will scale with income. $80K in intended sponsorships so far. Two major donors may contribute >$50K each, CropLife International and Nutrichem Corp. 2 Innovative Grant Proposals have been submitted ($12.5K total). Organizers expect an increased commitment from AGRO for student participation.
- Sharon Papiernik and Luis Ruzo are coordinating sponsored luncheon/evening seminars; contacts have been made and some positive responses have been received.
- Ann Lemley is coordinating development and receipt of applications for support for participations from scientifically emerging regions.
- IUPAC Award for Internally Harmonized Approaches will be awarded at the meeting, in addition to AGRO awards.
- Also coordinating with local sections in California; example to provide sponsorships for undergraduates.
- IUPAC Organizing Committee will put together a proposal to support student poster awards at IUPAC (undergraduate and graduate).
    - When should we have the AGRO EC business meeting, because IUPAC has a reception on Sunday evening? To be determined.

Councilor's Report – Jeanette van Emon/Rod Bennett

- Both Van Emon and Bennett are on the Divisional Affairs Committee, which coordinates Innovative Project Grants (IPG). They are using a new mechanism (e-mail) to let divisions know whether or not their IPG was successful. One AGRO IPG for $7500 (Developing International Leaders…) was successful. Only 1 IPG was forwarded by the ACS – status of the other proposal is unknown.
- Scholar 1 will be new vendor for abstracts. It is easy to use. Divisions will have option to be trained or have an ACS staff liaison help with scheduling, etc.
- Colloids will include "nano."
- Briefing about ACS climate toolkit from former ACS president; he is championing $3K mini-grants, as well as ACS mini-grants on global water initiative. This may be an opportunity for support for IUPAC emerging issues and other symposia.
- ACS.org will be redesigned in 2014.
- Allocations will be reassessed in 2014.
- Publication On Demand will be free for 1 year to all members and will be on the web for another 6 months, open to the public. Will have to see how this affects AGRO publications, webcasts, etc.
- Presiders need to announce that photographing and video in meeting rooms/posters is not allowed.
- Membership Committee - Dan Stout/Steve Lehotay/John Johnston
- Membership has remained relatively stable over the past several years at about 1200 members, not including division affiliates.
- More students are joining AGRO.
- ACS does not provide historical information in eRoster which makes tracking trends difficult.
- Membership drive is underway.
- Please try to recruit new members.

Strategic Planning Committee – Laura McConnell

- Current plan runs through 2014. Major accomplishments: (a) reorganization of AGRO committees; (b) email newsletter initiated; (c) live webcast of symposium in Philly with follow-up article in JAFC; (d) launched "Lunch and Learn" webinar series; (e) program topic champions for long-term planning; (f) IUPAC 2014 Congress to be held at ACS meeting.
- 2015 Strategic Planning: ACS provides funding for facilitators for strategic planning but we need to set a date. Options: standalone meeting or in conjunction with Boston meeting. Need approximately 12 persons to serve on Strategic Planning Committee: desire a mix of age groups, affiliations, experience. McConnell would like to pass the baton to a new Strategic Planning leader; she will provide support.

Communications Committee – Cathleen Hapeman

- Jennifer Klemens was contracted to work with Hapeman on Picogram. Current volume of Picogram is larger than previous versions. Advertisements are in color online. This is the last volume that includes abstracts. Current version is difficult to read on a smart phone.
- Website – Laura McConnell: If someone wants to help with the website, let Laura know.

Social Committee – Pat Rice/Jeff Jenkins

- Nothing to report. Enjoy the AGRO social! Thanks to Dow AgroSciences for organizing and hosting.

Development Committee Scott Jackson

- Developed a new outreach letter that consolidated requests for sponsorship; revised the contribution categories and benefits; sponsorship opportunities were added to the division website; started a database of past sponsors, including contacts and responses. Plan to continue to simplify requests for funding; increase transparency.

International Activities Committee – Ken Racke/Jay Gan

- Have a number of excellent international contacts. Using IUPAC to strengthen ties.

New Business

- *Incorporation of the AGRO Division – Steve Duke* Information was sent to AGRO EC in advance of this meeting. Barefoot moved that we seek incorporation. Hapeman seconded. Amended to Not to exceed $2000 cost. Amendment accepted. Discussion: Consider looking into insuring Division against liability. Motion passed unanimously. AGRO (led by Duke) will pursue incorporation of the Division, with a cost not to exceed $2000.

Next AGRO Business and Governance Meeting

- San Francisco, time and location to be determined

Recognition of Incoming and Outgoing Chairs

- Clark passed gavel to Duke.
- Papiernik presented Barefoot with Past Chair pin and Clark with Certificate of Appreciation.

Councilor Report for the 246th ACS National Meeting Indianapolis, Indiana September 8-12, 2013

Jeanette M. Van Emon and Rodney Bennett, Councilors

Hello AGRO members! The Indy meeting was a success with over 10,000 registrants. The following is a summary of Council and the Board of Directors activities. Both AGRO Councilors attended several governance and committee meetings as well as the Local Section's Annual Celebrate Science- Indiana Science Fair. This tremendous event was held at the Indy Motor Speedway and was much fun. Please let us know if you want additional information on any Council activities. We are soliciting your input as to ideas for future national meeting themes. Please email us with your ideas.

Council Highlights

- By electronic ballot, the Council elected Janet L. Bryant, Dee Ann Casteel, Amber S. Hinkle, Wayne E. Jones, Jr., and V. Michael Mautino to the Committee on Committees; Harmon B. Abrahamson, Judith H. Cohen, Alan M. Ehrlich, and Angela K. Wilson to the Council Policy Committee; Lisa M. Balbes, Jeannette E. Brown, Martha L. Casey, D. Richard Cobb, and Lisa Dulany to the Committee on Nominations & Elections all for the 2014-2016 term.
- The candidates for President-Elect, Directors-at-Large and Districts II and IV Directors were announced for the fall 2013 ACS national election.
- The Committee on Economic and Professional Affairs reported that employment is up and unemployment is down for ACS chemists. The complete review of the Comprehensive Salary Survey appeared in the September 23 issue of C&EN.

- The Committee on Project SEED needs mentors in Alaska, Arkansas, Connecticut, Hawaii, Maine, Nebraska, Nevada, New Mexico, North Dakota, Rhode Island, South Dakota, Utah, Washington, and Wyoming. Contact Cecilia Hernandez (c_hernandez@acs.org) for more information.
- After much debate, a proposed name change for the Division of Colloid and Surface Chemistry to the Division of Colloids, Surfaces, and Nanomaterials was defeated by the Council in a very close vote.
- ACS President Marinda Wu moderated a discussion on "What can we – as the Society and as individual citizens – do to help create jobs or demand for chemists?" Recommendations from her task force "Vision 2025" were given: share information about the skills and competencies needed in the workplace; expand resources which help our members to position themselves for successful careers in the global chemistry enterprise; enable entrepreneurs to create and strengthen startups that hire chemists; advocate policies that improve the business climate and promote the creation of chemistry jobs; and work with other stakeholders to understand and influence the supply and demand of chemists and jobs. This subject was also discussed by the Board of Directors at their meeting.

Key Actions of the Board Of Directors

- The Board voted to approve an advance member registration fee of $380 for each 2014 national meeting. The Board also voted to reauthorize funding for the ACS International Center, and the ACS Entrepreneurial Initiative, and to authorize funding for a new program, the National Association of Chemistry Teachers (NACT). The NACT will provide teachers a professional home, and access to ACS and specialized resources.
- The Board confirmed the recommendation of the ACS Executive Director/CEO of the new President of Chemical Abstracts Service (CAS). He is Manuel (Manny) Guzman, most recently Executive Vice President of Learning and Research Solutions of Cengage Learning. Mr. Guzman succeeds Robert J, Massie, who is retiring after leading CAS with great distinction and success for 21 years and is retiring in March 2014.

URLs and Email Addresses Presented at the Council Meeting

www.my.acs.org
Showcases stories and photos submitted by members describing what best defines their ACS membership experience. If your story is selected, you receive a T-shirt.

www.acs.org/getinvolved
Describes ways to get involved with ACS at the local, regional, and national levels.

www.acs.org/cta
Information about the Committee on Technician Affairs and its fiftieth anniversary will be posted here.

www.ACS.org/ChemistryAmbassadors
Provides ideas and resources to deliver positive messages about chemistry.

Your Councilors go the extra mile for you at the Indy 500 Motor Speedway!

The Indiana Local Section held its Science Fair at the Speedway. Special buses from the ACS meeting were provided to go to the event. ACS made arrangements with the speedway for ACS attendees to ride around the track in a pace car. It was very exhilarating to say the least!

***BYLAWS OF THE
DIVISION OF AGROCHEMICALS of the
AMERICAN CHEMICAL SOCIETY

*** *Proposed bylaws submitted August 2012.*
Effective TBD. Approved, as amended,
by the Committee on Constitution and Bylaws,
acting for the Council of the American Chemical Society.

Bylaw I. Name and Objects

Section 1. The name of this organization shall be the Division of Agrochemicals (hereinafter referred to as the "Division") of the AMERICAN CHEMICAL SOCIETY (hereinafter referred to as the "SOCIETY").
Section 2. The objects of the Division shall be to bring together persons particularly interested in agrochemicals, to consider all scientific aspects of chemistry relevant to the control of pests of agricultural or public health significance and to other methods for enhancing or modifying agricultural productivity, to develop and improve the professional stature of chemists with these interests, and to render whatever service it may to the scientific and lay communities on the topic of agrochemicals.

Bylaw II. Members and Affiliates

Section 1. Membership in the Division shall be open to all members of the SOCIETY. Application for membership shall be made in writing to the Secretary of the Division and shall be accompanied by one year's dues.

Section 2. A Society Affiliate of the SOCIETY may apply to the Secretary to become a Society Affiliate of the Division. Provided that Division dues established for Society Affiliates are paid, a Society Affiliate shall have all the privileges of membership in the Division except those of voting for or holding an elective position of the Division, voting on articles of incorporation or bylaws of the Division, or serving as a voting member of its Executive Committee.

Section 3. The Division may accept Division Affiliates who are not members or Society Affiliates of the SOCIETY but who wish to participate in the activities of the Division. Such affiliates shall be entitled to all the privileges of membership in the Division save those withheld by the Bylaws of the SOCIETY.
Section 4. Members may resign their membership in the Division by submitting their resignation, in writing, to the Secretary during the year for which their dues are paid.

Section 5. The name of any member of the Division who is in arrears in payment of dues by as much as one year shall be stricken from the rolls. A member dropped for nonpayment of dues may be reinstated upon payment of arrearages.

Section 6. Affiliates shall retain affiliate status only so long as payment is made of Division dues. An affiliate's name is to be stricken from the rolls as soon as the affiliate is in arrears in the payment of dues.

Section 7. The anniversary dates of Division members and National Affiliates of the Division shall coincide with their anniversary dates in the SOCIETY.

Bylaw III. Officers and Councilors

Section 1. The officers of the Division shall be a Chair, a Chair-Elect, a Vice-Chair, a Secretary, and a Treasurer. The Chair-Elect shall automatically succeed to the office of Chair upon expiration of the latter's term of office or if this office becomes vacant. The Vice-Chair shall automatically succeed to the office of Chair-Elect upon expiration of the latter's term of office or if this office becomes vacant. The offices of Secretary and of Treasurer may be held by one individual. Only MEMBERS are eligible to hold elective positions.

Section 2. The duties of the Chair shall be to preside at meetings of the Executive Committee, to carry into effect the decisions and recommendations of the Committee, to preside at stated meetings of the Division, and to appoint all committees except as otherwise provided.

Section 3. The duties of the Chair-Elect shall be to serve in the absence of the Chair of the Division and to act as Chair of the Program Committee.

Section 4. The duties of the Vice-Chair shall be to serve in the absence of the Chair-Elect and to act as Assistant Chair of the Program Committee, with particular emphasis on planning and developing technical programs.

Section 5. The duties of the Secretary shall be to keep minutes of all meetings of the Division and of the Executive Committee; to keep a roll of Division members and affiliates and to submit the same annually to the Executive Director of the SOCIETY for verification as provided in the Bylaws of the SOCIETY; to conduct the business correspondence of the Division as assigned to the Secretary by the Chair or by the Executive Committee; to prepare and submit an annual report of Division activities to the SOCIETY as required in the SOCIETY's Bylaws; to perform such other duties as may, from time to time, be assigned by the Chair or Executive Committee or required by the SOCIETY's Bylaws.

Section 6. The Treasurer shall act as custodian of the funds of the Division, collect dues and other revenues, and pay the bills of the Division after the same have been authorized by the Executive Committee. The Treasurer shall maintain accurate records of receipts and disbursements and shall submit a report of the financial condition of the Division at the annual meeting of the Division. The Treasurer shall furnish a surety bond, the premium for which shall be paid from Division funds.

Section 7. Councilors and Alternate Councilors shall represent the Division on the Council of the SOCIETY as provided in the Constitution and Bylaws of the SOCIETY.

Section 8. The Division shall have an Executive Committee, which shall consist of the officers of the Division; the Immediate Past Chair of the Division; the Councilors and Alternate Councilors; the Chairs, Chairs-Elect, Vice-Chairs, and Immediate Past Chairs of Subdivisions, if any; and fifteen (15) Members-at-Large. The Chair of the Division shall serve as Chair of the Executive Committee.

Section 9. The officers of the Division other than the Chair and the Chair-Elect shall be elected by ballot as described elsewhere in these bylaws.

Section 10. At the annual meeting of the Division, the Executive Committee shall appoint a Nominating Committee consisting of at least three members, one of whom shall be the Immediate Past Chair of the Division, who shall serve as Chair of this Committee. This Committee shall nominate two candidates for the office of Vice-Chair and at least ten (10) candidates for the positions as Members-at-Large to be filled on the Executive Committee. This Committee shall nominate candidates for each of the following offices to be filled: Councilor, Alternate Councilor, Secretary, and Treasurer. This Committee shall submit a report in writing to the Chair of the Division for preparation of the ballot to be mailed to the membership. Additional nominations may be made in writing by any group of at least five members and presented to the Chair of the Division not less than three months prior to the fall meeting.

Section 11. Officers and Members-at-Large shall be elected by the members and Division Affiliates of the Division. Only members of the Division may vote for Councilors and Alternate Councilors. The Secretary or other designated officer of the Division shall prepare an election ballot, on which shall appear the names in order chosen by lot of all candidates nominated and found willing to serve The form of the ballot and procedures for balloting will be in compliance with the overall procedures of the Society. The Tellers shall count the ballots thus received, using the list of members provided by the Secretary to verify the eligibility of all those voting. Any ballot envelope not validated by the voter's accompanying hand-inscribed name shall be rejected. The Secretary shall set and announce in advance of the balloting the interval during which ballots must be received to be counted; this interval shall not be less than four nor more than seven weeks following the ballot mailing. The Tellers Committee, appointed by the Chair of the Division, shall be responsible for counting all valid ballots received within the interval and shall certify the results to the Secretary, who shall in turn certify the results to the SOCIETY, the elected officials, and the Division. Elections are to be by plurality, should there be more than two candidates for an office. Resolution of a tie vote shall be made by the Executive Committee.

Section 12. The Chair, the Chair-Elect, the Vice-Chair, the Secretary, and the Treasurer of the Division shall serve for one year or until their successors are elected.

Section 13. The terms of office of the Members-at-Large of the Executive Committee shall be three years. Five Members-at-Large shall be elected each year.

Section 14. The terms of Councilors and Alternate Councilors and all officers excluding the Chair, Chair-Elect, and Vice-Chair shall begin on January 1 following their election. The terms for Chair, Chair-Elect, and Vice-Chair shall begin at the conclusion of the fall meeting of the SOCIETY.

Section 15. Vacancies in offices other than Chair and Chair-Elect shall be filled by the Executive Committee. Incumbents so selected shall serve until the next regular election.

Bylaw IV. Councilors

The Division shall have Councilors and Alternate Councilors whose terms of office shall be three years. Alternate Councilors shall serve only for specific meetings of the Council when a Councilor is not able to attend.

Bylaw V. Committees

Section 1. There shall be a Program Committee, consisting of three or more members, one of whom shall be the Chair-Elect of the Division, who shall serve as Chair of the Committee. A second member of the Committee shall be the Vice-Chair. The Program Committee shall have the entire responsibility for organizing the program of papers for all Division meetings. It shall work cooperatively with other Divisions of the SOCIETY and other bodies in planning joint sessions and symposia of mutual and timely interest.

Section 2. There shall be a Membership Committee of three or more members. This Committee shall aggressively promote membership in the Division by members of the SOCIETY.

Section 3. There shall be a Finance Committee of two or more members. This Committee shall audit the accounts of the Treasurer prior to the business meeting of the Division and report its findings at the annual meeting. This Committee shall advise the Executive Committee on financial resources.

Section 4. There shall be an Awards Committee of at least six members. This Committee shall maintain and develop the Division and International Awards Programs.

Section 5. There shall be a Social Committee of at least two members. This Committee shall direct social events in coordination with other committees and maintain a hospitality table at Division meetings.

Section 6. There shall be a Communications Committee of at least three members. This Committee shall be responsible for coordination of the communication and publication activities of the Division, (including newsletter, *PICOGRAM,* and other Division publications).

Section 7. Special committees may be appointed to consider, conduct, and report upon such special matters as may be delegated to them.

Section 8. Except where otherwise provided, committee appointments shall be made by the Chair, with the advice and approval of the Executive Committee.

Bylaw VI. Dues

Section 1. Members of the Division shall pay annual dues, the exact amount to be decided by the Executive Committee. Dues are payable in advance. Members who have been granted emeritus status by the SOCIETY and who are interested in the work of the Division shall be granted all privileges of Division membership without the payment of annual dues.

Section 2. Affiliates shall pay annual dues of $2.00 more than members, except that Division Affiliates who are regularly matriculated students specializing in a chemical science shall pay annual dues of an amount to be decided by the Executive Committee.

Bylaw VII. Subdivisions

Section 1. Composition. The Division may sponsor Subdivisions devoted to specialized fields within the area of Division interest. Membership in the Division shall be a requirement for membership in a Subdivision.

Section 2. Formation. Formation or discontinuance of a Subdivision shall be at the discretion of the Executive Committee of the Division. Steps to initiate a Subdivision may be made by petition of a group of Division members to the Executive Committee or by the action of the Executive Committee. The scope of the activities of any Subdivision shall be defined by the Executive Committee.

Section 3. Officers. Upon approval of the formation of a Subdivision, the Executive Committee of the Division shall appoint a Chair, Chair-Elect, Vice-Chair, and Secretary for the Subdivision. The Chair-Elect shall assume the office of Chair after one year. In succeeding years the Subdivision shall elect at the annual meeting a Chair-Elect and a Secretary. The Chair, a Chair-Elect, and Secretary shall constitute a Steering Committee for the Subdivision. This Steering Committee shall report through the Chair of the Subdivision and be responsible to the Executive Committee of the Division, of which Subdivision Chairs shall be members *ex officio*.

Section 4. Funds. The necessary expenses for each Subdivision shall be authorized by the Executive Committee of the Division from Division funds and shall be paid by the Treasurer of the Divison upon the usual authentication.

Bylaw VIII. Meetings

Section 1. There shall be a meeting of the Division at each a national meeting of the SOCIETY at least once per year, unless the Executive Committee votes otherwise, provided the requirements for a minimum number of meetings as specified in the SOCIETY Bylaws shall be met.

Section 2. The annual meeting of the Division shall be held at one of the national meetings of the SOCIETY. The fall meeting of the SOCIETY will be designated as the annual meeting unless otherwise instructed by the Executive Committee. Division business requiring vote of the membership shall be conducted only at this meeting, except as provided elsewhere in these bylaws. or as directed by the Executive Committee.

Section 3. Special meetings of the Division may be called by the Executive Committee, provided notice is given to the membership in writing or by publication in *Chemical & Engineering News* at least two months in advance.

Section 4. Fifteen (15) members of the Division shall constitute a quorum for the conduct of business.

Section 5. The fee for registration at any special meeting shall be decided by the Executive Committee in accordance with the Bylaws of the SOCIETY.

Section 6. The rules of order in the conduct of Division meetings not specifically provided in these bylaws or in the SOCIETY's documents shall be the most recent edition of *Robert's Rules of Order, Newly Revised*.

Bylaw IX. Papers

Section 1. The Program Committee may approve or reject papers submitted for presentation before any meeting of the Division.

Section 2. The rules for papers presented before meetings of the SOCIETY as outlined in the Bylaws and Regulations of the SOCIETY shall govern the Division.

Bylaw X. Amendments

Section 1. These bylaws may be amended at any annual meeting of the Division by a two-thirds (2/3) vote of the members present. All amendments shall be submitted in writing to the Secretary at least sixty (60) days prior to the meeting. Upon approval of the Executive Committee, the Secretary shall send the text of the proposed amendment to the members of the Division at least thirty (30) days prior to the annual meeting.

Section 2. Amendments shall become effective upon approval by the Committee on Constitution and Bylaws, acting for the Council, unless a later date is specified.

Bylaw XI. Dissolution

Upon dissolution of the Division, any assets of the Division remaining thereafter shall be conveyed to such organization then existent as is dedicated to objects similar to those of the Division and the AMERICAN CHEMICAL SOCIETY, or to the AMERICAN CHEMICAL SOCIETY, so long as whichever organization is selected by the governing body of the Division at the time of dissolution shall be exempt under Section 501(c)(3) of the Internal Revenue Code of 1954 as amended or under such successor provision of the Code as may be in effect at the time of the Division's dissolution.

AGRO Division

Chemistry for and from Agriculture
www.agrodiv.org

Email Newsletter

The AGRO publishes a monthly email newsletter designed to keep members informed about what is happening in our Division. Content will include calls for papers, announcements, awards opportunities, information on elections, career opportunities, new AGRO publications and other timely announcements. Previous issues can be found on the AGRO website.

If you are not currently receiving the newsletter, you can sign up on our webpage, www.agrodiv.org, by clicking on the button that says "Subscribe to our Newsletter."

Members can submit items to be included by the last Tuesday of the month to:

Yelena Sapozhnikova, PhD
USDA-ARS
215-233-6655
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You may unsubscribe at any time.

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PICOGRAM V. 85

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