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# FROM THE CHAIR'S DESK

JOHN M. CLARK

It seems like the Philadelphia meeting just ended, but I am already four months into my year as Chair of the AGRO Division. As in previous years, AGRO continues to reinvent itself by finding innovative ways to improve agricultural productivity and protect human health and the environment while maintaining a strong sense of community and support. Our current vision is to provide a supportive environment for professional growth through innovative programming, services, and opportunities for collaboration. To implement this vision, AGRO has focused its energies on three areas central to our continued success as a valuable and growing professional society.

## **Programming**

The AGRO program for the 244<sup>th</sup> National Meeting in Philadelphia last August was large with 6 award symposia, 18 technical symposia, 327 submitted abstracts and extensive co-programming with the AGFD and ENVR Divisions. The program being put together by Steve Duke for the 246<sup>th</sup> National Meeting in Indianapolis "Chemistry in Motion" is likely to be even larger and more diverse with at least 2 award symposia and 23 technical symposia planned to date. The implementation of a Programming Committee with Symposium Topic Champions and chaired by the Vice-Chair, the re-establishment of the Sunday Programming Meeting and the continuation of the Blues and Brew wrap-up meeting appears to be paying off in robust and engaging programs.

From all accounts, the technical program being put together by Cathleen Hapeman, for the 248<sup>th</sup> ACS National Meeting, which will be held in conjunction with the 13<sup>th</sup> IUPAC International Congress of Pesticide Chemistry in San Francisco in August 2014 is very likely to set a record in the number of symposia and attendance. 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. Visa information is found on the [iupac2014.org](http://iupac2014.org) website.

AGRO continues its effort to co-program in related conferences and has co-sponsored the 5<sup>th</sup> Pan Pacific Conference on Pesticide Science, the 4<sup>th</sup> International Symposium on Pesticides and Environmental Safety, the 8<sup>th</sup> International Workshop on Crop Protection, the Latin American Chemical Residue Workshop, the 50<sup>th</sup> North American Chemical Residue Workshop and PacificChem (the International Chemical Congress of Pacific Basin Societies). In April 2013 at the 245<sup>th</sup> National Meeting in New Orleans, AGRO will be co-programming with the ENVR and AGFD Divisions by offering a 2 day symposium "Arsenic Contamination of Food and Water." AGRO has also begun conversations with the Chemistry Advisory Group of the Society of Environmental Toxicology and Chemistry (SETAC) to improve the atmosphere and increase the potential for interactions for chemists with other disciplines within SETAC and between other chemistry organizations.

Our Division has agreed to support two new and exciting programming opportunities by partnering with the Foundation for the Study of Traditional Sciences and Arts (ECYART) in Peru and with the ACS Publication Division and the Journal of Agriculture and Food Chemistry (JAFC) by establishing a lectureship series.

Dr. Luis Ruza has established ECYART as an educational/research entity in Peru and has created a lecture series at the Universidad Nacional Agraria La Molina in Lima Peru. As a long-time AGRO member and supporter, Dr. Ruza will be working with John Johnston and Keith Solomon in implementing the lecture series. In a similar development, Dr. James Seiber, in his role as Editor-in-Chief of JAFC, has been working with ACS Publications, AGFD and AGRO in the establishment of a lectureship focusing on the Research Article of the Year Award for JAFC. Two awards will be given each year; one for the best paper in agrochemical research and one in the area of food chemistry. In addition to a monetary award, there will be a symposium honoring the awardees that will precede the Sterling Hendricks award symposium at the fall meeting.

## **Governance**

The health and prosperity of AGRO is completely dependent on members stepping forward and offering their services for the common good. Cathleen Hapeman has been elected Vice-Chair and has the daunting task of organizing the combined AGRO/IUPAC meeting for San Francisco. Del Koch has been elected Treasurer with John Johnston stepping down. John has done an extraordinary job working with the Financial Committee and getting AGRO on a stable fiscal program. Sharon Papiernik is continuing as Secretary and Al Barefoot is serving as past chair and Chair of the Nominating Committee. Troy Anderson, Michael Barrett, Wenlin Chen, John Johnston and Steve Lehotay have been elected to the Executive Committee with Todd Anderson, Rodney Bennett, Alan Felsot and Laura McConnell stepping down. When you see these folks, please say THANKS!

The financial health of AGRO is good overall, 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 still are spending more than we receive annually, a non-sustainable situation. To stem this revenue short fall, we have recently created a "Sponsorship Champion" position that will work closely with the current Program Chair and who will focus solely on raising money in the support of specific symposia in the technical program for each ACS/AGRO national meeting. Al Barefoot has graciously volunteered to be the first Sponsorship Champion and will be working with Steve Duke on the ACS/AGRO meeting in Indianapolis.

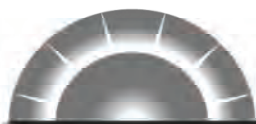
## **Committee Structure and Leadership**

Volunteers are needed for the AGRO/IUPAC meeting in San Francisco (August 2014): including coordinator(s) for Congress communications and publicity; program booklet; local arrangements; new media (webinars, etc.); luncheon seminars; development of workshops; poster sessions and awards; etc. See page 51 or contact either Ken Racke or Laura McConnell.

## **Fumio Matsumura (1934-2012)**

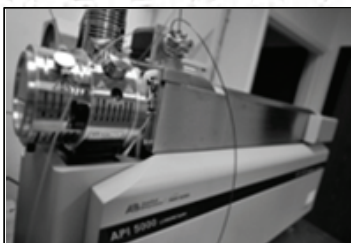
Professor Fumio Matsumura, UC Davis, passed away on Dec. 6, 2012, after a brief illness. His obituary on page 74 or web site: [fumiomatsumura.com](http://fumiomatsumura.com).



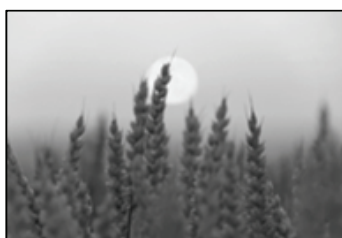


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1972	Mr. Wendell F. (Bud) Phillips Dr. Don G. Crosby Dr. Elvins Y. Spencer	1979	Dr. Rodney D. Moss	1994	Dr. James Heitz Dr. Ralph Mumma Dr. Willis Wheeler
1973	Mr. Roger C. Blinn Dr. Philip C. Kearney Dr. Julius J. Menn	1980	Dr. G. Wayne Ivie Dr. John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

## AWARDS COMMITTEE REPORT

**Dr. René Feyereisen** of INRA Centre de Recherche de Sophia Antipolis in France is the recipient of the 2013 International Award for Research in Agrochemicals. Dr. Feyereisen receives this award in recognition of his exceptional accomplishments in research into the regulation of insect development, leading to the discovery of biorational targets for insecticidal agrochemicals. A symposium in his honor will be organized by Dr. Jim Ottea for the 246th ACS National Meeting in Indianapolis.

**Dr. Keith Solomon** of the University of Guelph, School of Environmental Sciences is the winner of the 2013 USDA-Agricultural Research Service Sterling Hendricks Lectureship Award. Dr. Solomon will present his lecture at the ACS meeting in Indianapolis which will be hosted by AGRO and cosponsored by AGFD.

**Dr. Jeanette Van Emon** received the ACS Fellow Award in Fall 2012, for development and application of immunoassay methods for environmental contaminants, and her many contributions to the ACS Community.

In cooperation with the AGRO and AGFD divisions, beginning at the Indianapolis Meeting in 2012, the *Journal of Agricultural and Food Chemistry* (JAFC) will sponsor 2 lectureships for outstanding papers in JAFC. Early in 2013 a call for nominations of papers published in 2012 will be solicited from AGRO and AGFD members, and from the public through the JAFC website. Papers will be divided according to journal subject category and forwarded to review committees from each division, who will select the winners. Awards will be given at symposia at the Fall National meeting. The awardees will receive a plaque, a monetary award, and travel expenses to the meeting.

Congratulations to **Dr. Xin Zhang**, Kansas State University, who received the 2012 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. 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 AGRO Education Awards for Student Finalist: First Place: Fnu Astha, Virginia Tech (Dr. Paul R. Carlier); Second Place (tie): Aaron Gross, Iowa State University (Dr. Joel Coats) and Lijuan Su, University at Buffalo (Dr. Diana Aga); and Third Place: Ngoc Pham, Virginia Tech (Dr. Troy Anderson).

Nominations for the 2014 International Award for Research in Agrochemicals and the 2013 AGRO Award for Innovation in Chemistry of Agriculture are currently being evaluated by the Awards Committee. The nomination criteria for the 2015 International and 2014 Innovation Awards can be found on pages 9 and 11, 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 2014 Sterling Hendricks Lectureship Award are being solicited by USDA-ARS. The nomination criteria can be found on page 13. Nominations for the Kenneth A. Spencer Award are being solicited by the ACS Kansas City Section, and criteria can be found on page 15. 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 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, Awards Committee Chair  
Environmental Toxicology  
University of California-Davis  
One Shields Avenue, 4143 Meyer Hall  
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# AMERICAN CHEMICAL SOCIETY 2012 FELLOW AWARD JEANETTE M. VAN EMON



**DR. JEANETTE M. VAN EMON**, an AGRO Councilor, has been named a 2012 ACS Fellow by the American Chemical Society. The new Fellows were announced at the ACS fall national meeting in Philadelphia. The Fellows Program began in 2009 as a way to recognize and honor ACS members for

outstanding achievements in and contributions to science, the chemistry profession, and the American Chemical Society.

The ACS Southern Nevada Section with support from the AGRO Division nominated Dr. Van Emon for the Fellow Award in recognition of her work in developing and applying some of the first immunoassay methods for environmental contaminants.

Dr. Van Emon became a member of the ACS during her graduate school days at University of California-Davis working in the labs of Bruce Hammock and Jim Seiber. She credits ACS for providing her with a variety of skills, such as public

speaking. ACS has also given her the opportunity to interact with chemists and scientists across an array of fields from all over the globe.

Currently, Dr. Van Emon is a research chemist in the U.S. Environmental Protection Agency, National Exposure Research Laboratory in Las Vegas, Nevada. She fostered the acceptance of immunoassay technology by building partnerships and facilitating information exchanges within and outside EPA. In 1991, Van Emon developed and sponsored annual Immunochemistry Summit meetings which brought together scientists from around the world to discuss developments in the field. Some of these Summit meetings were held in conjunction with AGRO programming at ACS National Meetings. She received the EPA Office of Research and Development Statesmanship Award, and was twice awarded the EPA and American Chemical Society joint Science Achievement Award in Chemistry for her research and outreach to other agencies and organizations.

Dr. Van Emon has been very active in the ACS. In addition to being an AGRO Councilor, she is a member of the Division Activities Committee and Innovative Project Grants Subcommittee. She is Chairman of the Western Regional Board of the ACS and a member of the Editorial Advisory Board for the *Journal of Agricultural and Food Chemistry*. She is past Chair and Program Chair for the AGRO Division. She is a past editorial board member for the journal *Analytical Chemistry*. She has been twice chairman for the Southern Nevada Local Section, co-organizer of the 2008 Western Regional Meeting, and is currently chair of the Section's Women Chemist Committee. She has organized several ACS symposia which have resulted in ACS symposium series books.

*Congratulations Jeanette!  
And thank you for all your scientific contributions  
and your efforts in support of  
the American Chemical Society,  
its Sections, and Divisions*

## PAST AWARDEES OF THE BURDICK & JACKSON INTERNATIONAL AWARD

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

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

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

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

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2012	Thomas C. Sparks, Dow AgroSciences, Indianapolis, Indiana	2013	René Feyereisen, INRA Centre de Recherche de Sophia Antipolis, France
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**CALL FOR NOMINATIONS**  
**ACS INTERNATIONAL AWARD FOR**  
**RESEARCH IN AGROCHEMICALS**  
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## 2015 Fall ACS National Meeting in Boston, Massachusetts

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, Awards Committee Chair  
Environmental Toxicology  
University of California-Davis  
One Shields Avenue, 4143 Meyer Hall  
Davis, Ca 95616-8598

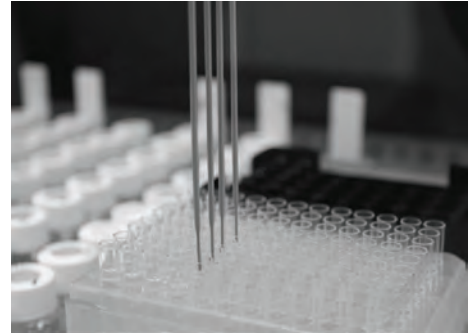
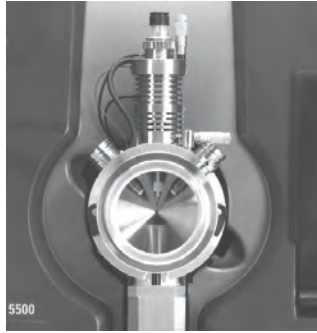
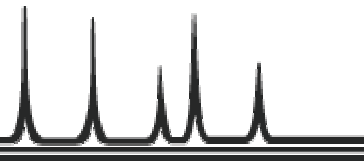
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jnseiber@ucdavis.edu

**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 2015 Fall National ACS Meeting in honor of the awardee.

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- Agricultural Commodity Screening
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Email:rp@adpen.com



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**2014 Fall ACS National Meeting in San Francisco, California**

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, Awards Committee Chair  
Environmental Toxicology  
University of California-Davis  
One Shields Avenue, 4143 Meyer Hall  
Davis, Ca 95616-8598

530-752-1141 - phone  
jnseiber@ucdavis.edu

**Deadline:** Nominations must be received by the Committee Chair by **December 31, 2013** with balloting to take place in January. The results will be announced shortly thereafter.

The Awardee will given the opportunity to present their work in a special lecture at San Francisco National ACS Meeting in August 2014.

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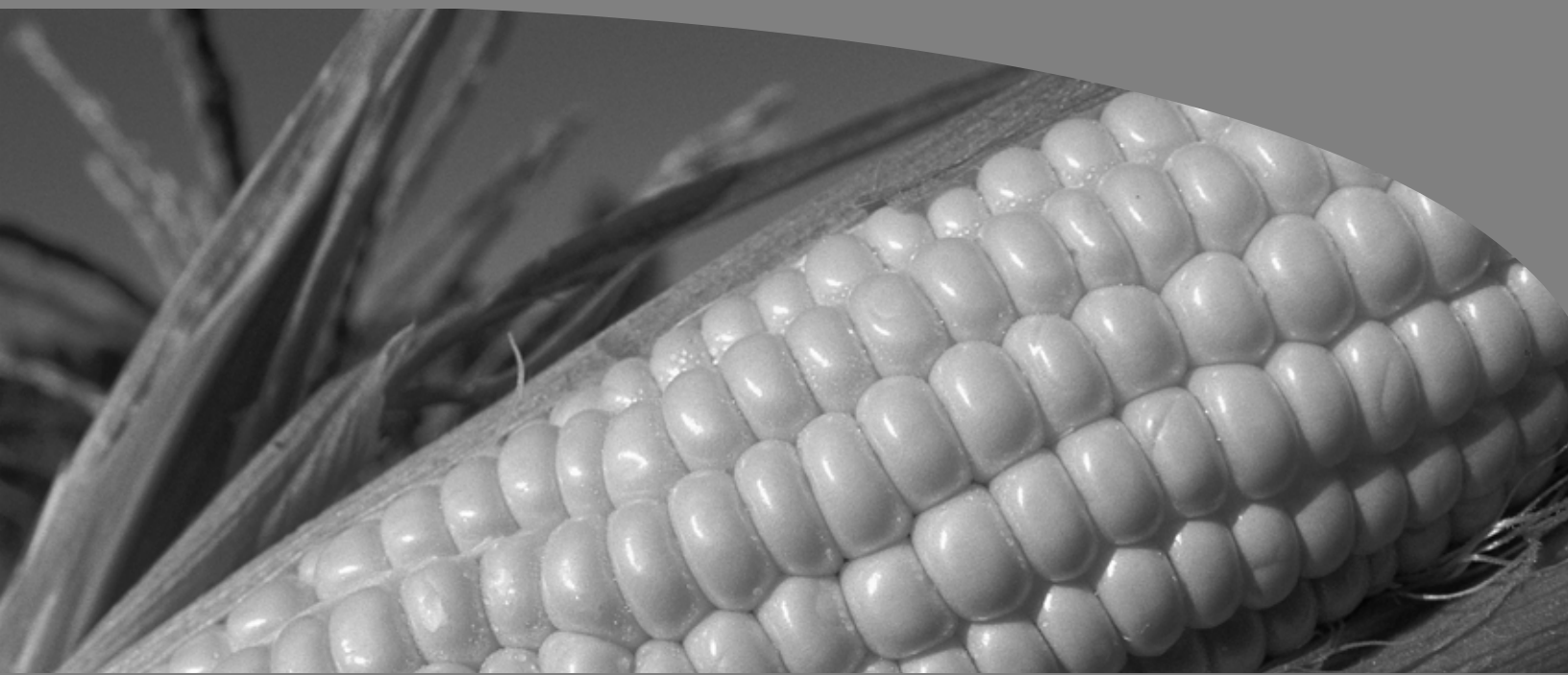
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2012 Steven J. Lehotay, USDA-Agricultural  
Research Service, Wyndmoor, Pennsylvania





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## CALL FOR NOMINATIONS

### 2014 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 2014 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 1, 2013**.

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 during an American Chemical Society National Meeting held in 2014 in Indianapolis, Indiana 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	1996	Hugh D. Sisler, University of Maryland
1982	Warren L. Butler, University of California, San Diego	1997	Ernest Hodgson, North Carolina State University
1983	Melvin Calvin, Nobel Laureate, University of California, Berkeley	1998	Morton Beroza, USDA-ARS, Maryland (retired)
1984	Frederick Ausubel, Harvard Medical School and Massachusetts General Hospital, Boston, MA	1999	Bruce D. Hammock, University of California, Davis
1985	Alan Putnam, Michigan State University	2000	William S. Bowers, University of Arizona
1986	Ralph Hardy, Cornell University and BioTechnica International	2001	Malcolm Thompson, USDA-ARS, Maryland (retired)
1987	Mary-Dell Chilton, Ciba-Geigy Corporation, Research Triangle Park, NC	2002	Ervin E. Leiner, University of Minnesota
1988	Bruce N. Ames, University of California at Berkeley	2003	Kriton Kleanthis Hatzios, Virginia Polytechnic Institute and State University
1989	Sanford A. Miller, University of Texas Health Science Center at San Antonio	2004	Robert L. Buchanan, Food & Drug Administration
1990	Roy L. Whistle, Purdue University	2005	Donald L. Sparks, University of Delaware
1991	Peter S. Eagleson, Massachusetts Institute of Technology	2006	Stanley B. Prusiner, Nobel Laureate, University of California, San Francisco
1992	John E. Casida, University of California, Berkeley	2007	Bruce E. Dale, Michigan State University
1993	Philip H. Abelson, Deputy Editor, <i>Science</i> , and Scientific Advisor to AAAS	2008	Fergus M. Clydesdale, University of Massachusetts, Amherst
1994	Wendell L. Roelofs, Cornell University	2009	Charles J. Arntzen, Arizona State University, Tempe
1995	Winslow R. Briggs, Carnegie Institution of Washington	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

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- Biological field report preparation
- Manuscript, articles, and newsletter preparation

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## CALL FOR NOMINATIONS

### 2014 KENNETH A. SPENCER AWARD

Sponsored by ACS KANSAS CITY SECTION

The Kansas City Section of the American Chemical Society is soliciting nominations for the 2014 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](http://cas.umkc.edu/chemistry/kcacs/spencer/AwardLogistics/spencer_nomination.pdf)

Send nomination by November 15, 2013 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

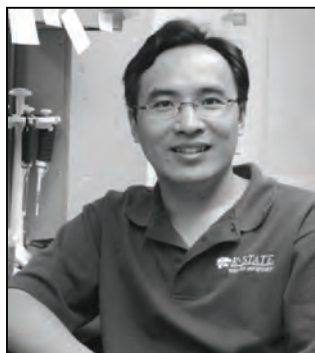
1955	Ralph M Hixon, Iowa State University	1984	Richard H. Hageman, University of Illinois
1956	Conrad A Elvehjem, University of Wisconsin	1985	Bruce N. Ames, University of California, Berkeley
1957	William C Rose, University of Wisconsin	1986	John M. Brenner, Iowa State University
1958	EV McCollum, Johns Hopkins University	1987	Hector F. DeLuca, University of Wisconsin, Madison
1959	Karl Folkers, Merck, Sharpe & Dohme Res. Labs.	1988	Boyd L. O'Dell, University of Missouri-Columbia
1960	CH Bailey, University of Minnesota	1989	Robert H. Burris, University of Wisconsin
1961	HL Haller, USDA-Agricultural Research Service	1990	John E. Kinsella, University of California, Davis
1962	AK Balls, USDA-Agricultural Research Service	1991	George Levitt, DuPont Experimental Station
1963	CC King, Rockefeller Foundation	1992	Clarence A. Ryan, Jr., Washington State University
1964	Daniel Swern, Temple University	1993	Bruce Hammock, University of California, Davis
1965	Aaron M. Altschul, USDA-Agricultural Research Service	1994	William S. Bowers, University of Arizona
1966	Robert L. Metcalf University of California, Riverside	1995	Robert T. Fraley, Ceregen, A Unit of Monsanto Co.
1967	Melville L. Wolfrom, The Ohio State University	1996	James N. BeMiller, Purdue University
1968	Herbert E. Carter, University of Illinois	1997	William M. Doane, USDA-Agricultural Research Service
1969	Edwin T. Mertz, Purdue University	1998	Mendel Friedman USDA-Agricultural Research Service
1970	Lyle D. Goodhue, Phillips Petroleum Company	1999	James A. Sikorski, Monsanto Co.
1971	William J. Darby, Vanderbilt University	2000	Wendell L. Roelofs, Cornell University
1972	Emil M. Mrak, University of California, Davis	2001	James Tumlinson USDA-Agricultural Research Service
1973	Esmond E. Snell, University of California, Berkeley	2002	Daniel W. Armstrong, Iowa State University
1974	Roy L. Whistler, Purdue University	2003	Eric Block, University at Albany, State Univ. New York
1975	Thomas H. Jukes, University of California, Berkeley	2004	Steven D. Aust, Utah State University
1976	E. Irvine Liener, University of Minnesota	2005	Don R. Baker, Berkeley Discovery Inc.
1977	N. Edward Tolbert, Michigan State University	2006	Russel Molyneux USDA-Agricultural Research Service
1978	John E. Casida, University of California, Berkeley	2007	David A. Schooley, University of Nevada, Reno
1979	Charles W. Gehrke, University of Missouri-Columbia	2008	Ron G. Buttery, USDA-Agricultural Research Service
1980	George K. Davis, University of Florida, Gainesville	2009	George P. Lahm, DuPont Crop Protection
1981	John Speziale, Monsanto Agricultural Products Co.	2010	Clive A. Henrick, Trece, Inc.
1982	Howard Bachrach, USDA-Agricultural Research Service	2011	Michael W. Pariza, University of Wisconsin--Madison
1983	Peter Albersheim, University of Colorado	2012	James N. Seiber, University of California, Davis



## AGRO DIVISION

### 2012 NEW INVESTIGATOR AWARD WINNER

Sponsored by Dow AgroSciences



**DR. XIN ZHANG** is the 2012 winner of the New Investigator Award sponsored by DOW Agrochemicals and the AGRO Division. He received his Ph.D. of Entomology from Kansas State University in 2010 under the direction of Dr. Kun Yan Zhu.

While conducting Ph.D. research, Dr. Zhang identified and characterized chitin synthase genes and chitinase gene family from *Anopheles gambiae*. He adapted and optimized a non-radioactive high-throughput assay for chitin synthase activity and developed a chitosan/dsRNA nanoparticle-based RNA interference through mosquito larval feeding. His research

significantly advanced the understanding on chitin synthesis and degradation in mosquitoes and other arthropods and may lead to the development of new insecticides targeting on chitin metabolic pathway. His results have shown a great potential for using a nanoparticle-based RNAi technology for high-throughput screening of gene functions and for developing novel strategies for mosquito control and other insect pest management.

Dr. Zhang is currently a research associate with Dr. Kristin Michel, Division of Biology, Kansas State University. His work focuses on the analysis of extracellular protease cascades that regulate innate immune responses in *An. gambiae*. He uses a combination of biochemical and reverse genetic tools to determine how serpins and their target proteases regulate melanization pathways, which are against malaria parasite and possibly other disease agents.

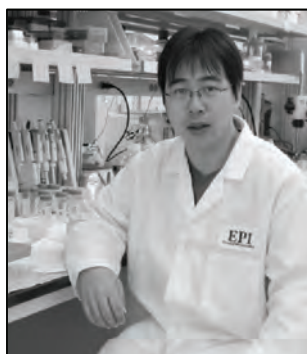
## 2012 NEW INVESTIGATOR AWARD FINALISTS



**DR. JEREMY L. CONKLE** hails from the Department of Environmental Sciences, University of California-Riverside (UCR), California. Dr. Conkle earned dual bachelor's degrees in Biology and Chemistry at Longwood University in Farmville, Virginia. Following graduation, he

worked as a chemist on hazardous waste cleanup sites, emergency responses, and natural disasters for an EPA contractor. He continued to work for the contractor while completing a Masters in Environmental Studies at the College of Charleston in 2006.

Dr. Conkle completed his Ph.D. in Oceanography and Coastal Sciences at Louisiana State University in 2010, where he studied the fate and transport of "emerging contaminants" in wetland ecosystems. For the past 2 years, he has been a post-doctoral scholar with Dr. Jay Gan at UCR where he has continued to study emerging contaminants as well as expanding his work into legacy contaminants (DDT and PCBs), current use pesticides, and MeBr alternatives.



**DR. FAN TONG** received his Ph.D. in Toxicology in 2010 from the Department of Entomology at Iowa State University under the direction of Dr. Joel Coats. His Ph.D. dissertation work focused on modes of action of a type of botanical insecticides, monoterpenoids, on insect GABA and nicotinic

acetylcholine receptors. He currently is a post doctoral research associate working with Dr. Jeffrey Bloomquist in the Emerging Pathogens Institute at the University of Florida, Gainesville, Florida.

Dr. Tong's current work is to design and to develop new insecticides, including carbamate insecticides and plant essential oils, for the control of malaria vector mosquito, *Anopheles gambiae*, and some other vector pests, including southern cattle tick, yellow fever mosquito, and horn fly. His recent work revealed structural differences between human's and *Anopheles gambiae*'s acetylcholinesterase peripheral anionic site, which is considered to be a potential target for new anticholinesterases for malaria mosquito control.

*Congratulations to Our New Investigators!*



**CALL FOR APPLICANTS**  
**AGRO DIVISION**  
**2013 NEW INVESTIGATOR AWARD**  
Sponsored by Dow AgroSciences

**2013 Fall ACS National Meeting in Indianapolis, Indiana**

The AGRO Division seeks nominations for the New Investigator Award to be awarded at the ACS meeting in Indianapolis in September 2013. 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 especially 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 2013, applications will be considered from **scientists who have obtained their doctorates no earlier than the year 2008.**
- A panel consisting of at least three AGRO members will choose 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 or a business manager, departmental chair).
4. Deliver an oral presentation in ad AGRO Division Symposium at the National Meeting

**Deadline:** Both the extended abstract and letter of the New Investigator Award Coordinator by **March 18, 2013.**

**For more information, please contact the NIA Coordinator:**

Dr. Steven J .Lehotay, NIA Coordinator  
USDA-Agricultural Research Service  
600 East Mermaid Lane  
Wyndmoor, PA 19038

phone: 215-233-6433  
[steven.lehotay@ars.usda.gov](mailto:steven.lehotay@ars.usda.gov)

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





## 2012 AGRO EDUCATION TRAVEL AWARDS

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### 2012 AGRO EDUCATION TRAVEL AWARD WINNERS

FRONT: JUYING LI, ZHIJIANG LU, FNU ASTHA, XIAO XIAO, FANG JIA, GAYATRI SANKARAN, LIJUAN SU, ALISON REEVES  
BACK: NICHOLAS LARSON, NGOC PHAM, JENNIFER WILLIAMS, DANIEL SWALE, LACEY JENSON, VURTICE ALBRIGHT, III,  
AARON GROSS, KATE NEAFSEY ENGLER, JOSEPH FELIX



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## 2012 AGRO EDUCATION AWARD FINALISTS

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### **FIRST PLACE**

**FNU ASTHA** is a Ph.D. candidate in the research group of Dr. Paul R. Carlier in the Department of Chemistry at Virginia Tech. She received her Bachelor's (2004) and Master's degree (2006) in Chemistry from Panjab University, Chandigarh, India. In 2006,

she joined Jubilant Drug Discovery and Development Centre (CRO). She was part of a team that worked on the synthesis of anti-cancer agents for Eli Lilly and Co. Her current research focuses on the synthesis of five membered ring heterocyclic carbamates and carboxamides for resistance breaking, species selective acetylcholinesterase inhibitors targeting the malaria mosquito (*Anopheles gambiae*). Such compounds could be deployed on insecticide treated nets (ITNs) to prevent malaria transmission in sub-Saharan Africa. Astha is highly ambitious and believes every obstacle can be overcome with hard work and perseverance. In her free time, she loves to travel and make friends.



### **SECOND PLACE (tie)**

**AARON GROSS** is a Ph.D. Student in Toxicology, with minors in Neuroscience and Entomology, and is co-advised by Drs. Joel Coats (Department of Entomology) and Michael Kimber (Department of Biomedical Sciences) at Iowa State University, Ames IA. Aaron

earned his Bachelor's degree in Biochemistry and Biomedical Science, minor in Criminal Justice, from St. Cloud State University (St. Cloud, MN) in 2007 and his Masters of Science degree in Toxicology (2010) at Iowa State University under the direction of Dr. Coats. His M.S. research was investigating the ability of terpenoids to interact with an octopamine receptor using a yeast-histidine-auxotrophic assay. His primary Ph.D. research concern is the examination of biopesticides interacting with GPCRs in the southern cattle tick.



### **SECOND PLACE (tie)**

**LIJUAN SU** is a third year Ph.D. student in Environmental Analytical Chemistry under the supervision of Drs. Diana Aga and Troy Wood in the Department of Chemistry at University at Buffalo, State University of New York. Lijuan received her

Bachelor's (2006) and Master's (2008) degree at Wuhan University in Wuhan, China. Her research is focused on analysis of trace organic compounds in complex environmental matrix. Currently, she is working on the fate of pharmaceuticals in wastewater treatment plants using high performance liquid chromatography coupled with tandem mass spectrometer and high resolution Fourier transform ion cyclotron resonance mass spectrometer. Aside from science, she enjoys playing tennis, doing Yoga, and watching movies.



### **THIRD PLACE**

**NGOC PHAM** is a second year Master of Life Sciences candidate in Insect Toxicology and Pharmacology with Dr. Troy D. Anderson in the Department of Entomology and Fralin Life Science Institute at Virginia Tech. She earned a Bachelor of

Science in Biological Sciences at Virginia Tech in 2010. Her thesis research focuses on the P-glycoprotein modification of insecticide toxicity to the vector mosquito, *Aedes aegypti*. In her spare time, Ngoc enjoys hiking, cooking, and spending time with family and friends.

*Congratulations to all our travel grant winners*





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<b>Analytical Chemistry:</b>	Method development and validation, ILV, clinical sample analysis, analysis of agrochemicals and metabolites in soil, water, air, crops and animal tissues.
<b>Field Studies:</b>	Terrestrial and aquatic dissipation, rotational crops, nature and magnitude of residues in crops, lysimetry and small plot dissipation studies utilizing radiolabels. Volatility and flux determination.
<b>Exposure:</b>	Cow and hen feeding studies, dislodgeable foliar and turf residues, mixer/loader and applicator dosimetry. Environmental monitoring (air and water). Tobacco pyrolysis.
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Support for Poster Presentations

At the 2013 Fall ACS National Meeting in Indianapolis, Indiana

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 2013 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 ACS 2013 Fall Meeting, which will be held September 8 - 12, 2013 in Indianapolis, Indiana. 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, biotechnology, delivery, risk assessment, resistance, residues, mode of action, 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 18, 2013 (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.
3. A short letter of nomination from the faculty advisor.

Submit item 1 to the ACS OASYS 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  
marjakoivunen@eurofins.com

**For more information, please contact the co-organizers:**

Dr. Marja Koivunen  
Eurofins Agroscience Services, Inc.  
328 N. Bethel Ave  
Sanger, CA 93657  
tel: 559-399-4510  
email: marjakoivunen@eurofins.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 2013.*

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For a detailed list of capabilities, please contact Battelle (1.800.201.2011 or +41 827 2800) and mention **AgriFood**. Email questions to [AgriFood@battelle.org](mailto:AgriFood@battelle.org).

# Notes from the Program Chair

*Stephen O. Duke*

We have a full slate of symposia planned for the 246th National Meeting in Indianapolis, September 8-12, 2013. There will be 2 award and 23 technical symposia. Symposia organizers are now busy soliciting speakers. This is the fullest program that I can remember. The program is so rich with diversity that I hope that it will keep you there through the entire program.

I remind you that the Programming Committee re-invigorated itself by formally appointing the Vice Chair as the Chair of the Programming Committee. In 2013, Dr. Cathleen Hapeman of USDA-ARS fills this role. She will be the Program Chair for the San Francisco joint National ACS/IUPAC meeting to be held in August, 2014. The Programming Committee continues to increase its membership and has identified Symposium Topic Champions for each of the 15 technical topics that AGRO tries to program for each year. This allows us to establish programming ideas for several years into the future and to identify 'hot' topics for new symposia in an efficient and timely manner. I thank all Champions who have served the Division in this important capacity. This approach appears to be paying off, considering our recent very robust and diverse programs.

The 15 AGRO topics are covered by 23 technical symposia in our 2013 program, and several that also relate to the ACS National Meeting Theme for Indianapolis, **CHEMISTRY IN MOTION**. Those that fall into the latter category are entitled:

- ADME-The Motion of Veterinary Drugs and Xenobiotics,
- Environmental Fate, Transport, and Modeling of Agriculturally-Related Chemicals,
- Spray Application Technology,
- Terrestrial Field Dissipation Studies in Global Agricultural Registration Programs
- Uptake, Translocation, and Distribution of Agrochemicals in Plants.

These symposia also fall within the 15 topic areas of AGRO.

**Biotechnology and technological advances** in agrosience are represented by symposia entitled:

- Advanced Bioanalytical Technologies for GM Detection
- Herbicide Resistant Crops and Weeds
- RNAi interference (RNAi) as an Agrochemical
- Using Metabolic Engineering and Omics Technologies in the Production of Agrochemicals, Biofuels, and Pharmaceuticals.

**Human health protection and exposure**, as well as **environmental protection** are covered by:

- Assessing Potential Ecological and Human Health Effects from Fertilizer and Pesticide Use in Urban Environments,
- Ecotoxicological Risk Assessment for Agricultural Use of Chlorpyrifos in the US
- Pesticide Residues in Food and Feed: Scientific and Regulatory Global Needs
- Regulatory Risk Assessment: New Paradigms for Human Health Exposure
- 21st Century Vision for Testing and Risk Assessment: Implications for Agrochemicals

Several ongoing, longstanding symposia will be presented in **residue and analytical chemistry**,

- Accurate Mass Analyses in Support of Agricultural Chemical Research and Development
- High-Throughput Pesticide Residue Analysis

**synthesis**,

- Synthesis and Chemistry of Agrochemicals

**and environmental fate**,

- Air Quality at the Interface: Megacities and Agroecosystems
- Non-First Order Dissipation and Time-Dependent Sorption of Organic Chemicals in Soil: Measurement, Modeling, and Impact on Environmental Exposure Predictions.

**Newer topics** include symposia covering:

- Pesticide Regulatory Science in the 21<sup>st</sup> Century: Merging Research and Regulations
- Pollinators and Pesticides
- Biopesticides: State of the Art and Future Opportunities

The AGRO Division was recently awarded an **ACS Innovative Project Grant** to develop the latter symposium.

We will also recognize the achievements of our colleagues in agrochemical research through our award symposia and lectures. This year, we honor **Prof. René Feyereisen** of INRA with the International Award for Research in Agrochemicals. This year AGRO will host the Sterling B. Hendricks Memorial Lecture which is sponsored by the USDA-ARS and is co-hosted by AGFD Division. **Dr. Keith Solomon** of the University of Guelph will present this lecture. The **AGRO Innovation Award** winner, who will be named in late February, will also present in a paper in a symposium of their choice.

Drs. Diana Aga and Marja Koivunen are organizing the **AGRO Education Awards** and students' poster session, and Dr. Steven Lehotay will organize the **New Investigator Competition**. As we did last year, the three New Investigator finalists will be preselected from the applications, and each will present their papers in symposia of their choice. The New Investigator Finalists and the student poster presenters will be recognized with awards and grants for travel.

As you can see, AGRO will be hosting a large number of oral symposia this year, so the

- **General Session:** Protection of Agricultural Productivity, Public Health, and the Environment

will be posters only.

We look forward to an exciting five days of science and interacting with our colleagues. The ACS Program and Abstract Creation System (PACS) **opens January 21, 2013 and closes March 18, 2013**, so please get your abstracts in before the deadline. I hope to see you all in Indy!

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*ps....If you are going to the ACS Meeting in New Orleans, AGRO is co-sponsoring the following symposium (p. 25):*

- *Arsenic Contamination of Food and Water*



**JRF GLOBAL**



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JRF Global is a non-clinical Contract Research Organization, with its multinational presence in India (Jai Research Foundation, Gujarat), the USA (JRF America, PA) and the UK (GC Laboratories, Stotfold).

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**AGRO Division Co-Sponsored Programming**  
**245th ACS National Meeting**  
**April 7 - 11, 2013**  
**New Orleans, Louisiana USA**  
S. Duke, *Program Chair* and J. Clark, *Division Chair*

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## **Arsenic Contamination of Food and Water**

*Hosted by AGFD*

*Cosponsored by AGRO, ENVR, and SCHB*

B. Burton-Freeman, L. Jackson, J. Johnston, J. Maclachlan,  
B. Mindak, *Organizers*

*DoubleTree by Hilton New Orleans  
Madewood B*

Arsenic is present in nature in many chemical forms/species that differ in their toxicities. Arsenic contamination of food and water can occur through various avenues such as from natural deposits present in the soil and from agrochemical and industrial sources. Concern over arsenic has increased recently due to the discovery of arsenic in some foods, particularly those consumed by infants and young children. This symposium will bring together scientific experts on the topic of arsenic contamination of water and food.

Topics that will be discussed are sources of arsenic contamination of water and food, toxicological properties of arsenic and arsenic-containing compounds, surveys of arsenic in food and water, methods for detecting and quantifying the chemical forms of arsenic in food and water, regulations pertaining to arsenic levels in food and water, and ways for reducing arsenic exposure from the diet and drinking water.

### **WEDNESDAY MORNING – APRIL 10**

**8:30** Introductory Remarks.

**8:35** – Poisoner's cupboard: The long (and sometimes homicidal) history of arsenic in everyday life. D. Blum

**9:20** – Distribution of arsenic in soils of the conterminous United States. D. B. Smith, W. F. Cannon, L. G. Woodruff

**9:50** – Sources and perspectives of arsenic in the environment. K. L. Armbrust

**10:20** Intermission.

**10:35** – Arsenic speciation, biotransformation, and toxicity in the environment. L. Ma

**11:05** – Arsenic behavior in flooded rice soils. P. A. Moore, Jr., R. Chaney

**11:35** – Arsenic in rice and rice products: FDA activities. P. C. Spiller, W. R. Mindak, D. Zink, S. Fitzpatrick

### **WEDNESDAY AFTERNOON**

**1:30** Introductory Remarks.

**1:35** – Overview of the toxicological properties of arsenic and arsenic-containing compounds. P. B. Tchounwou

**2:05** – Development of a method for assessing perinatal exposures to heavy metals using residual dried blood spots from newborn screening programs. W. E. Funk, D. J. Sauter, A. F. Olshan, T. W. McDade

**2:35** – Low, slow, and Next Gen impact: Arsenic, human health, and cancer risks. J. M. Hock, X. Li, R. Van Beneden

**3:05** – Using in vitro gastrointestinal bioaccessibility methods to measure arsenic bioavailability and risk from ingestion of food and soil. N. T. Basta

**3:35** Intermission.

**3:50** – Dietary arsenic: Forms, hazards, and risks. P. Bolger

**4:20** – Arsenic in rice and rice products. B. P. Jackson, V. F. Taylor, T. Punshon

**4:50** – Pick your poison? Arsenic in harvested country foods, edible mushrooms, and wine from Canada. K. Reimer, I. Koch, J. Dee, K. House, J. Sui, J. Zhang, A. McKnight-Whitford

**5:20** Concluding Remarks.

### **THURSDAY MORNING - APRIL 11**

**8:30** Introductory Remarks.

**8:35** – Comparison of sensitive methods for the measurement of inorganic arsenic in apple juice: Photoionization (PID) and ICP-MS. J. Driscoll, J. Maclachlan, J. B. Foley

**9:05** – Analysis for arsenic species in food. W. R. Mindak, S. Conklin

**9:35** – Arsenic species in seaweed harvested for consumption and for fertilizer. V. F. Taylor, B. Jackson

**10:05** – Transforming ICP-MS technology: Advances in interference removal for accurate arsenic analysis in food and beverages. A. Liba

**10:35** Intermission.

**10:50** – Multi-faceted approach to arsenic speciation analysis for characterization of food products using selective extraction followed by IC/RP/GC-ICP-MS. R. Gerads, H. Gurleyuk

**11:20** – Extension of a method for speciation of arsenic in rice to other rice-based products, and propagation of the method to other laboratories. S. Conklin, P. Gray, D. Heitkemper, K. Kubachka, N. Shockey

**11:50** – Remediation of arsenic contamination of groundwater in Asia and USA. S. Ahuja

### **THURSDAY AFTERNOON**

**1:30** Introductory Remarks.

**1:35** – Water remediation as a method to reduce exposure to arsenic. A. Apblett

**2:05** – Potential for soil amendments to reduce concentrations of As in soils and waters. D. Norton, J. M. Bigham, E. R. Venteris, N. Basta, C. Ramsier

**2:35** – Genetic and field management strategies for limiting accumulation of arsenic in rice grains. S. R. Pinson, L. Tarpley, W. Yan, D. E. Salt

**3:05** Intermission.

**3:20** – Ongoing arsenic mitigation research in the U.S. rice industry. S. Hensley, R. Langley

**3:50** – Arsenic and brown rice: Industry challenges and Nature One's solution. P. Anloague

**4:20** Panel Discussion.



**Call for Papers**  
**246<sup>th</sup> ACS National Meeting & Exposition**  
**September 8 - 12, 2013**  
**Indianapolis, Indiana USA**

***Accurate Mass Analyses in Support of Agricultural  
Chemical Research and Development***

**Purpose of Symposium**

Advances in instrumentation have been one of the most important drivers in the way we conduct agricultural research and development. Newer mass spectrometer instrumentation has provided better analyte selectivity, better sensitivity, and higher sample throughput.

High resolution accurate mass (HRAM) mass instrumentation is poised to be the next major breakthrough. Instruments incorporating accurate mass and high mass resolution capabilities will significantly impact how studies are analyzed.

As instrument costs have dropped these instruments are now more available to laboratories in Industry, CRO's and Academia. Laboratories are incorporating accurate mass technology into all aspects of Agricultural R&D ranging from product discovery and development, product registration, and monitoring of food and environmental samples.

**Suggested Topics**

- Use of High resolution accurate mass (HRAM) / accurate mass instrumentation for metabolite identification
- Use of role of High resolution accurate mass (HRAM) / accurate mass instrumentation for quantitative residue analyses
- LC coupled accurate mass instrumentation
- GC coupled accurate mass instrumentation
- Use of accurate mass instrumentation multi-residue analyses
- Mass spectrometry for confirmation of the identity of animal drug residues
- Analytical issues associated with accurate mass instrumentation
- New and novel approaches in accurate mass (e.g. data interpretation / handling, ionization source technology, ion mobility)
- Food and feed screening analyses
- Environmental monitoring studies
- Targeted and non-targeted pesticide analyses
- Use of accurate mass instrumentation for pesticide discovery

**For further information, contact the organizers**

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*Abstracts (150 words or less) must be submitted on-line at  
abstracts.acs.org by **March 18, 2013***



**Call for Papers**  
**246<sup>th</sup> ACS National Meeting & Exposition**  
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***ADME - The Motion of Veterinary Drugs and Xenobiotics***

**Purpose of Symposium**

ADME studies of veterinary drugs and xenobiotics encompass research on the absorption, distribution, metabolism and excretion (ADME) of animal health compounds and environmental contaminants in animals. Such research is essential for the development of new products to promote the health and well-being of animals, including food producing species. Industrial, governmental and academic laboratories evaluate methods to determine ADME as well as conduct the experiments measuring ADME.

ADME of veterinary drugs or xenobiotics have global implications for securing the human food supply and such data are important for establishing the safety of products, meeting regulatory requirements imposed around the world. A symposium discussing the motion of vet drugs and xenobiotics within the animal will be of interest not only to AGRO, but also to AGFD and ENVR.

**Suggested Topics**

- Metabolism and/or residue depletion of animal health drugs or xenobiotics
- Methods to establish metabolism or residue depletion
- Methods to monitor chemical residues in food sources from animals (meat, milk, eggs, etc.), including multiresidue procedures or new technologies
- Pharmacokinetics of animal health products for both companion animals and food producing animals
- Consumer or handler safety during and after use of animal health products (e.g. haircoat distribution studies)
- *In vitro* vs *in vivo* determinations
- Environmental implications for excreta from treated animals

**For further information, contact the organizers**

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*Abstracts (150 words or less) must be submitted on-line at [abstracts.acs.org](http://abstracts.acs.org) by **March 18, 2013***





**Call for Papers**  
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***Advanced Bioanalytical Technologies for GM Product Detection***

**Purpose of Symposium**

Since the first genetically engineered (GE or GM) crop was commercialized in 1996, adoption of GM crops has become one of the most exciting movements in agricultural history. In the past 16 years, the annual growth rate of GM-crop acreage worldwide has been steady at ~20%, and this trend is expected to continue in the foreseeable future. In 2011, more than 160 million hectares of GM crops were planted in 29 countries worldwide.

The novel genes and proteins in GM plants need to be monitored and tracked in every phase of product development and in the supply chain. From early discovery to product development, farmer cropping, food/feed processing, grain import and export, environmental monitoring, and risk assessment, a rapid and reliable qualitative or quantitative detection method for either DNA/RNA or protein is required. Recently, the need for highly sensitive and higher throughput assays has led to the development and application of many new technologies.

This topic has worldwide interest and ramifications. Interested parties should include academia, AgBiotech companies, the seed industry, the food and feed industry, kit manufacturing and instrument companies, research and testing laboratories in the public and private sectors, and government agencies. Intended outcomes from the presentations and discussions will allow participants to have a better scope of current status of GM testing and a clearer picture for the future trend of emerging new technologies. Other ACS divisions that may be interested include AGFD and Analytical.

**For further information, contact the organizers**

Guomin Shan, Dow AgroSciences, 317-337-4118, [gshan@dow.com](mailto:gshan@dow.com)

Cathy Zhong, DuPont Pioneer, 302-695-2169, [cathy.zhong@cgr.dupont.com](mailto:cathy.zhong@cgr.dupont.com)

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**Suggested Topics**

**Nucleic acid detection**

- Amplification based : RT-PCR, Digital PCR, Isothermal amplification technologies
- Hybridization based: Arrays (chip based), New technologies (e.g. Nanostring)
- Sequencing based: Next gen technology (different platforms); Applications (Flanking sequence generation, RNAseq, RNAi detection)

**Protein detection**

- Antibody-based method
  - ✓ Multiplexing GM protein analysis using MSD technology
  - ✓ High throughput GM crop detection by Luminix technologies
  - ✓ High throughput AlphaLISA analysis for GM proteins
  - ✓ Immunoassay and new automation technologies
- Non-antibody-based method
  - ✓ Biacore system for protein detection
  - ✓ Application of LC/MS/MS for GM protein detection in *planta*
  - ✓ LC/MS technology for protein quantitation in agricultural biotechnology

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***Air Quality at the Interface: Megacities and Agroecosystems***

**Purpose of Symposium**

This symposium will address the effects of mega-cities and agricultural practices on air quality with particular attention being given to potential interactions among the two sources. The number and size of mega-cities has increased dramatically over time as human populations have concentrated in cities. Agricultural production in the areas around megacities has intensified to meet the needs of increasing populations.

Emissions from urban sources like NO<sub>x</sub> can interact with VOC emissions from agricultural sources to increase ozone and particulate pollution. Contaminants from urban or agricultural sources like PCBs or pesticides can be transported across the interface. Progress in understanding these interactions requires cooperation between atmospheric scientists, analytical and organic chemists, and modelers along with urban and agricultural pollution specialists.

This symposium follows upon a recent NSF-SETAC graduate course held in Argentina for graduate students and post-docs from the US and Latin American countries.

**Suggested Topics**

- Environmental challenges associated with megacity environments
- Developments in agricultural production systems to support increasing populations
- Novel technologies or approaches to measure atmospheric pollutants (such as improved passive sampling)
- Emissions measurements from agricultural and urban systems/processes
- Chemical conversion and removal in "Aged air" from urban and agricultural areas
- Atmospheric transport and deposition of contaminants/air pollutants from agricultural or urban sources.
- Advances in atmospheric chemical reactivity modeling
- Advances in atmospheric transport modeling
- Improved approaches to mitigate urban or agricultural pollutant emissions.
- Connections between air quality and other environmental issues such as water quality and greenhouse gases – especially, looking for solutions to multiple challenges

***Co-sponsored by SETAC Chemistry Advisory Group and ACS-ENVR***

**For further information, contact the organizers**

George Cobb, Baylor University, 254-710-6556, [george\\_cobb@baylor.edu](mailto:george_cobb@baylor.edu)

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***Assessing Potential Ecological and Human Health Effects  
from the Fertilizer and Pesticide Use in Urban Environments***

**Purpose of Symposium**

The potential impact of fertilizers and pesticides used in urban settings is receiving increasing attention from academic and industry researchers as well as regulatory agencies.

This symposium seeks to bring together scientists conducting research and monitoring studies on the fate and effects of fertilizers and pesticides in the urban environment with model developers.

Another goal of this symposium is the application of these research and modeling results to robust risk assessments for evaluating potential for ecological and human health effects.

**Suggested Topics**

- Use of fertilizers and pesticides in urban environments
- Monitoring and research studies of water, fertilizer, and pesticide runoff in urban environments (includes analytical issues associated with such studies)
- Modeling of water, fertilizer, and pesticide runoff in urban environments
- Ecological effects of urban runoff in urban water bodies
- Human exposure issues as a result of fertilizer and pesticide use in urban environments
- Development of scenarios for modeling urban uses of pesticides and fertilizers
- Conducting ecological and human risk assessments for urban uses of fertilizers and pesticides
- Effects of waste water treatment systems on discharges of chemicals and fertilizers used in residential and commercial settings

**For further information, contact the organizers**

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***Biopesticides: State of the Art and Future Opportunities***

**Purpose of Symposium**

The area of biopesticides is growing exponentially. This symposium will bring together international experts on this burgeoning area of pest management to discuss discovery, regulation, and development of these products, as well as the toxicological and environmental aspects of their use.

Current products and those in the pipeline, as well as future needs and opportunities in this research area will be covered.

**Suggested Topics**

- Natural products for management of weed, insect, and pathogen pests
- Semiochemicals for insect management
- Regulation of biopesticides
- Bringing biopesticides to market
- Insect repellents and attractants
- Engineering natural pest management compounds into crops
- Toxicology of biopesticides
- Environmental impacts of biopesticides

**For further information, contact the organizers**

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***Ecotoxicological Risk Assessment for  
Agricultural Use of Chlorpyrifos in the US***

**Purpose of Symposium**

The purpose of the symposium is to illustrate new approaches to assessment of the ecological risks of pesticides with a case example of chlorpyrifos.

Techniques for modeling fate of pesticides in the environment have evolved in recent years and refined approaches are now available that provide better estimates of exposures. These approaches, together with a wealth of refined studies on toxicity in the laboratory and occurrence and effects in the field have allowed the development of a higher-tier assessment of the risks from agricultural uses of chlorpyrifos.

This symposium is focused on uses in the US, however, the information presented will be relevant to other regions and the techniques used are transferable to other risk-assessments for other stressors. This symposium will have broad interest to the attendees of the ACS AGRO sessions.

This symposium will cover five main topics and one overview presentation to summarize the findings. The symposium will finish with an interactive panel discussion with encouraged audience participation.

**Papers to Be Presented**

- Properties and uses of chlorpyrifos (Uses in terms of locations and quantities, changes in the label, mode of action, role of the oxon, other responses)
- Fate and movement of chlorpyrifos in the environment (Environmental properties, persistence, transformation in the environment, bioaccumulation, long-range transport)
- Modeling of exposures of birds to liquid and granular formulations of chlorpyrifos
- Assessment of risks of chlorpyrifos to birds
- Modeling of exposures to chlorpyrifos in aquatic systems and characterization of measured values.
- Assessment of risks of chlorpyrifos to aquatic organisms.
- Risks of chlorpyrifos to pollinators, the conceptual models.
- Risks of chlorpyrifos to pollinators, risk assessment
- Overview of the ecological risk assessment of chlorpyrifos

**Speakers Include:**

J Giesy, K Solomon, M Williams, J Purdy, D Moore,  
J Gddings, D Mackay, C Cutler

**For further information, contact the organizers**

Keith Solomon, University of Guelph, 519-824-4120 x 58792, ksolomon@uoguelph.ca  
Nick Poletika, Dow AgroSciences, 317-337-3476, npoletika@dow.com  
John Giesy, University of Saskatchewan, 306-966-2096, jgiesy@aol.com

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**Call for Papers**  
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***Environmental Fate, Transport, and  
Modeling of Agriculturally-Related Chemicals***

**Purpose of Symposium**

Effective risk assessment of pesticides requires detailed measurement and or prediction of their environmental fate in target use regions. This symposium will improve knowledge and identify research needs on this critically important topic.

Results are expected to improve the accuracy and confidence in pesticide exposure/risk assessments and in the process facilitate harmonization of pesticide registration globally. Spatial and temporal variability, fate process coupling and interaction, conservation practice implementation, and changing climates may also add substantial variability to pesticide fate assessments.

Presentations describing original research, cases studies, and literature reviews which address these and related topics are encouraged. Scientists and regulators engaged in all aspects of pesticide exposure assessment, modeling, and fate evaluation will benefit by active participation.

**Suggested Topics**

- Relating laboratory and field fate measurements
- Conduct and interpretation of environmental monitoring
- Regulatory relevance of modeling, monitoring, and environmental fate measurements.
- Use of modeling vs. monitoring
- Advances in modeling of the environment
- Policy implications of modeling, monitoring or environmental fate.
- Improving model accuracy
- Establishing model calibration and validation criteria
- Coupling fate processes and models
- Assessing climate change impact

**For further information, contact the organizers**

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**Call for Papers**  
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***Herbicide-Resistant Crops and Weeds - Current Status***

**Purpose of Symposium**

As the most heavily used crop protection chemicals, herbicides play a major role in the efficient production of food, fiber, and fuel in the United States. The last generation of producers has watched a revolutionary change occur as chemical weed control became more complete, simpler, and at lower cost to many farmers, due the nearly complete adoption of glyphosate-tolerant crops which use RoundupReady™ traited seeds. Given the immense selection pressure placed upon the agricultural landscape, it was inevitable that some weedy plant species would be selected for that could withstand glyphosate application, and thus become glyphosate-resistant (GR).

Although differential weedy plant susceptibility was confirmed more than a decade ago in the United States and other countries, large scale changes in agronomic practices did not occur for several years. Presently, some areas of the country are radically changing their weed control programs in response to weeds that have evolved to be resistant to glyphosate.

This symposium focuses on this change in agronomic realities. The goals of this symposium will be to 1) clearly demonstrate the vast changes in weed sensitivity to glyphosate, 2) delineate how producers and crop protection companies are currently responding to this change in the immediate future, and 3) propose novel methods to encourage weed control that are effective, economical, and environmentally sustainable in our agricultural productions systems.

**For further information, contact the organizers**

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**Suggested Topics**

- Field and greenhouse surveys of differential herbicide response
- Altered weed control in agricultural production systems where glyphosate-resistant weeds are present
- Best management practices in the presence of glyphosate-resistant weeds
- Advances in technology to control glyphosate-resistant weeds in 2 to 5 years
- Potential advances in technology to control weeds in the beyond 5 years

*Abstracts (150 words or less) must be submitted on-line at [abstracts.acs.org](http://abstracts.acs.org) by **March 18, 2013***



*Call for Papers*  
**246<sup>th</sup> ACS National Meeting & Exposition**  
**September 8 - 12, 2013**  
**Indianapolis, Indiana USA**

***High-Throughput Pesticide Residue Analysis***

**Purpose of Symposium**

This symposium will highlight new approaches to pesticide residue analysis that utilize modern analytical and/or automation technology to reduce timelines and cost while maintaining a high level of data quality and consistency.

Insights from process efficiency gains would be of interest to agrochemical registrants and government agencies that enforce tolerances. This symposium would also be of interest to ANAL and ENVR division members.

**Suggested Topics**

- Novel approaches for residue sample preparation including sample homogenization
- Implementation of modern analytical instrumentation to solve residue analysis challenges
- Feasibility tests or development of new analytical methods for higher throughput residue analytics
- Innovative technologies such as miniaturization or automation used to improve throughput
- Lean or six sigma process improvements to residue analysis workflows

**For further information, contact the organizers**

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***Non-First Order Dissipation and Time-Dependent  
Sorption of Organic Chemicals in Soil:  
Measurement, Modeling, and Impact on  
Environmental Exposure Predictions***

**Purpose of Symposium**

Dissipation patterns often do not follow first order kinetics as witnessed by countless laboratory metabolism and field dissipation studies. This can be caused by a wide range of factors such as time-dependent sorption, microbial activity, soil properties, volatilization, plant uptake, runoff and leaching. Regardless of the mechanisms, degradation, dissipation, and sorption parameters provide the framework for quantifying environmental fate. This can be accomplished by providing the necessary inputs and algorithm refinements for developing more accurate comparative empirical rankings and predictive mechanistic models of environmental fate. This symposium will bring together cross functional experimental, regulatory, and modeling scientists together to share ideas and observations to broach the frequency of occurrences for non-first order dissipation and non-linear/time-dependent sorption and appropriate techniques to quantify these observations to better represent pesticide environmental fate when conventional first order kinetics approaches fail.

**Suggested Topics**

- Experimental observations of non-first order behavior (dissipation and sorption)
- Historical overviews of traditional approaches to measure, approximate or quantify physical fate parameters
- Future trends in non-equilibrium and transient sorption quantification
- Ramifications of exposure modeling using simple and complex expressions for dissipation and sorption
- Regulatory use of degradation half-life's and sorption coefficients in assessment procedures
- Standardized alternatives to first order dissipation assumptions
- Approaches for fate parameter estimation

**For further information, contact the organizers**

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***Pesticide Regulatory Science in the 21<sup>st</sup> Century:  
Merging Research and Regulations***

**Purpose of Symposium**

As public concerns over their environment and exposure to chemicals have grown, US EPA has struggled to maintain a balance of risk versus benefit. The Agency has found themselves having to measure more chronic and certainly more obtuse exposures to pesticides and to evaluate long term effects of these products. In attempts to understand the mechanisms of toxic action and relationship of these mechanisms to various populations, more complex and targeted research has been required. This has required US EPA to go outside the box to areas beyond simple studies involving tried and true methods and protocols.

This type of innovation does not come without a price. Since the 1980's the US EPA has tried to maintain standards of documentation diligence well beyond what is practical in a research setting. Now they find themselves needing to rely on research data while maintaining a commitment to the public that the data is completely defensible in all manners.

This symposium will look at these evolving regulatory issues in pesticide chemistry. It will look at how and why industry is working to help universities produce defensible data, and will feature discussions from researchers who are doing or have done studies that have regulatory impact.

**Suggested Topics**

- Why public concerns are evolving towards harder to measure effects
- What are the potential effects on the pesticide industry
- How industry is working with academia to produce quality data without the paperwork burden
- To the question of data integrity, what aspects of Good Laboratory Practices are appropriate/necessary for research in academic environments
- How university researchers are producing sound science that regulatory agency's can rely
- CA issues and how CalDPR approaches nonconventional studies
- The role of consulting in bridging the gap between industry and university research
- the importance of broadening data sources and how this relates to the Endangered Species Act
- Stewardship and Public Opinion in difficult science
- Interpretations of FIFRA and FQPA policies

**For further information, contact the organizers**

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***Pesticides Residues in Food and Feed:  
Scientific and Regulatory Global Needs***

**Purpose of Symposium**

In spite of significant advances in the past several years to globally harmonize Maximum Residue Levels (MRLs), fundamental differences exist in national/regional regulatory policies resulting in international trade barriers when it comes to setting MRLs. National differences in the referral to international MRLs such as those established under the framework of the United Nations Codex Alimentarius Commission lead to trade irritants for exporters and importers.

The use of crop protection chemicals is an essential tool for sustaining a food supply for the world's ever-increasing population - currently 7 billion consumers. The continual updating of national/regional regulations for controlling the authorization and use of crop protection chemicals ensures safety for consumers, farm workers, bystanders and the environment, and provides growers with tools to produce an abundance of food. However, establishing national/region MRLs that facilitate the international trading of growers' produce is still overly complex and time consuming.

This symposium intends to review and debate recent ideas and advances related to harmonizing MRLs in support of international trade, and identify future needs to be further addressed by all stakeholders of the global food chain. The organizers invite individuals to offer papers and/or posters for consideration under the suggested topics opposite. Other topics are also welcome, as appropriate for the symposium.

**For further information, contact the organizers**

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Phil Brindle, BASF Agricultural Solutions, 919-547-2654, philip.brindle@basf.com  
Heidi Irrig, Syngenta, 336-632-7243, heidi.irrig@syngenta.com

**Suggested Topics**

- Evidence supporting the use of the principle of proportionality in setting MRLs
- Crop groupings, representative-crops, and the extrapolation process
- Criteria for mutual acceptance of residue data
- Harmonized criteria of assumptions for MRL proposal
- Opportunities for revising and modernizing the Codex process
- Emerging residue and MRLs regulations in Asian countries
- Main trading issues and causes
- Residue needs from developing regions
- Opportunities for residue data systematization
- Relevance of Codex today
- Initiatives of the USA/Canada Regulatory Cooperation Council
- OECD-joint submission feedback
- Updated OECD guidelines
- Monitoring needs
- Residue data use for tiered dietary assessment

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***Protection of Agricultural Productivity, Public Health,  
and the Environment – General Session***

**Purpose of Symposium**

The AGRO Division currently programs in fifteen topic areas, but not all topics are developed into a technical symposium at every meeting.

The General Session therefore allows our members and other scientists to submit papers even though a specific symposium topic is not offered. This year only poster presentations are possible; every attempt is made to group papers into “mini-symposia” within this session.

**Technical Topics for AGRO**

- Advances in Agrochemical Residue, Analytical and Metabolism Chemistry & Metabolomics
- Air Quality and Agriculture
- Agrochemical Toxicology and Mode of Action
- Bioenergy, Bioproducts, and Biochars: Advances in Production and Use
- Biorational Pesticides, Natural Products, Pheromones, and Chemical Signaling in Agriculture
- Development of Value-added Products from Agricultural Crops and Byproducts
- Developments in Integrated Pest Management and Resistance Management
- Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals
- Human and Animal Health Protection: Vector Control, Veterinary Pharmaceutical, Antimicrobial and Worker Protection Products
- Human Exposure and Risk Assessment
- Protection of Agricultural Productivity, Public Health, and the Environment
- Regulatory Harmonization and MRLs
- Synthesis of Bioactive Compounds
- Technological Advances and Applications in Agricultural Science (e.g., Nanotechnology, Genetically-modified Organisms and Biocontrol Agents)
- Urban Agriculture- Turf, Ornamentals, Household Products, and Water-Re-Use

**For further information, contact the organizer**

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***Pesticides and Pollinators***

**Purpose of Symposium**

Pollinators are a critical component to the plant health and production of agricultural systems. The decline of wild and managed pollinators has become a nationally recognized problem, demanding attention from both the scientific and regulatory community.

Multiple interacting factors are implicated in the loss of pollinator populations; however, one outstanding threat is the unintentional exposure to agrochemicals that protect agricultural systems.

This symposium will bring together academic, government, and industry scientists to discuss the health risks of agrochemical exposures to wild and managed pollinators and the motivation for developing ecologically- and chemically-based strategies to minimize the risk of these exposures to pollinators.

**Suggested Topics**

- Pollinator ecotoxicology and risk assessments
- Pollinator nutrition, immunity, and pathogen studies
- Pesticide toxicity, interaction, and metabolism studies
- Pesticide residue exposure surveys and analyses
- Pesticide and pollinator regulatory issues

**For further information, contact the organizers**

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***Regulatory Risk Assessment:  
New Paradigms for Human Health Exposure***

**Purpose of Symposium**

The purpose of the symposium is to promote discussion of evolving and/or proposed regulatory policies and their emerging impact on human health risk assessments for agrochemicals. Discussion of methods for exposure, risk assessment, as well as policy perspectives are sought.

In particular, the US EPA has recently proposed or partially implemented several new policies and/or models for risk assessments for: dietary, worker, bystander, drinking water, and residential exposure which all can impact aggregate exposure assessments for approved pesticide uses in the US. Procedures for evaluating/modeling off-site movement of pesticide residues from spray drift and semi-volatiles are evolving. The impact of the finalized 2011 Residential SOPs are now assessable: what variables drive them, are there refinements, and how will they be placed into aggregate and cumulative models? As actives move through EPA's registration review process, what are the broader foci that have emerged relative to human health policies?

This symposium will focus on US risk assessment procedures, but talks which compare and contrast procedures from other regions and regulations are germane. Discussions of considerations beyond pesticide regulation that overlap and shape interpretations within Office of Pesticides Programs for EPA are also welcome.

**Suggested Topics**

- Implications of the 2011 Residential SOPs
- Impact of updated dietary consumption data
- Acute non-dietary exposure assessments
- Advances for drinking water approaches
- Spray drift and semi-volatile considerations for the bystander
- FQPA factors: past and Present
- What role of epidemiology, use of linked physiological/exposure models or biomonitoring data in crop protection risk assessment?
- Cumulative assessments - beyond MOA for pesticides?
- Interpretations of FIFRA and FQPA policies for human health

**For further information, contact the organizers**

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***RNA interference (RNAi) as an Agrochemical***

**Purpose of Symposium**

Agrochemical companies are making major investments into the development and deployment of RNA interference (RNAi) technologies, which have the potential to dramatically change the types and quantities of chemicals used in crop production and protection in the near future.

This symposium on RNAi as an agrochemical will inform scientists, industry representatives, and producers about the technology as applied to plants and how it will be used to improve crop performance and control crop pests.

Presentations will identify the challenges in implementing this technology, explore methods of delivery, and address environmental and regulatory issues.

**Suggested Topics**

- Introduction to RNAi technology
- Key challenges facing RNAi for agricultural applications
- Delivering oligonucleotides into plants
- RNAi as a tool for pesticide target validation
- Examples of successful RNAi implementation for pest control
- RNAi enhanced plant traits
- Non-pesticide applications of RNAi in agriculture
- Environmental impacts of RNAi
- Regulatory and intellectual property issues

**For further information, contact the organizers**

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***Spray Application Technology***

**Purpose of Symposium**

The use and application of crop protection products continues to be an area of importance for multiple reasons including ensuring the costly products find their intended target to making sure there are no off target concerns. Measuring the on and off target chemical from applications is important for determining both environmental impacts and product efficacy.

This symposium welcomes papers for oral presentations that describe advances in our understanding of spray application technology. Topics of interest include but not limited to Wind Tunnel Research, Field Deposition Studies, Precision Application, Modeling Pesticide Fate, Regulatory relevance of modeling, Monitoring, and Policy implications of spray topics.

Interested researchers are encouraged to contact the symposium organizers regarding the suitability of their paper for this symposium.

**Suggested Topics**

- Wind Tunnel Research
- Field Deposition Studies
- Precision Application
- Modeling Pesticide Fate
- Regulatory relevance of modeling, monitoring, etc.
- Policy implications of spray topics

**For further information, contact the organizers**

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***Synthesis and Chemistry of Agrochemicals***

**Purpose of Symposium**

This symposium will highlight recent research in the synthesis and chemistry of agrochemicals. Talks which describe the design, isolation, synthesis, biology and/or structure-activity relationships of new chemistry targeting crop protection are welcomed.

**Suggested Topics**

- Insecticides: Agronomic, Urban or Animal Health
- Herbicides
- Fungicides
- Nematicides

**For further information, contact the organizers**

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***Terrestrial Field Dissipation Studies in  
Global Agrochemical Registration Programs***

**Purpose of Symposium**

The Organization for Economic Co-operation and Development (OECD) is developing harmonized international guidance for conducting terrestrial field dissipation studies and a crosswalk between North American and European eco-regions. The crosswalk identifies similar regions between North America and Europe; provides a GIS-based decision support system to assist in selection of regions for field study sites; aids assessment of their relevance for global registration; and provides background information on crop-based use areas, soils and climate.

This symposium will bring together the OECD workgroup and stakeholders involved in the conduct and evaluation of these studies within a global regulatory environment. The OECD team will present the proposed guidance on the conduct of studies and the decision support systems to aid in their evaluation. Additional presentations are sought from stakeholders on their experiences of generating and utilizing data in different regions. A closing discussion forum will aid OECD in the finalization of this project as well as broadening an understanding of the utility of field studies in the assessment of the behavior of agrochemicals in the environment.

**Suggested Topics**

- Development of conceptual models for terrestrial soil dissipation studies.
- Study designs to address specific dissipation pathways such as biotic and abiotic degradation, leaching, plant uptake and volatilization.
- Challenges to design studies to determine degradation rate input parameters for environmental fate model simulations.
- Use of terrestrial field dissipation data in exposure and risk characterization.
- Tools and methods to define and compare ecoregions in North America and Europe.
- Experiences of utilizing data from different geographical locations in the assessment of agrochemical behavior.

**For further information, contact the organizers**

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**21<sup>st</sup> Century Vision for Testing and Risk Assessment:  
Implications for Agrochemicals**

**Purpose of Symposium**

This Symposium will explore how emerging 21<sup>st</sup> century technologies, including *in silico*, *in vitro*, and high through-put testing as well as more effective and efficient approaches to risk assessment might impact development of agricultural products. How do new technologies and more progressive approaches to testing and assessment fit in the process of discovery, registration, product defense and stewardship? How can these new approaches improve characterization of real-world exposures? What is the process for improving science-informed hazard prediction and risk assessment? How do promising new ideas gain regulatory acceptance?

Participants are invited to comment on many associated sub questions such as: How can adverse outcome pathway (AOP) knowledge inform new approaches? What elements comprise a progressive and integrated testing strategy? How can new toxicity and exposure methodologies provide a data-driven, evidence base for risk assessment? How can other industries or agencies inform practices for Agrochemicals? What have we learned from case studies? How can these new technologies and approaches reduce uncertainty?

**Suggested Topics**

- Ongoing research programs in key areas such as:
  - High-throughput systems
  - *In vitro* models
  - Metabolomics
- Adverse outcome pathway research, including but not limited to endocrine systems
- Regulatory adoption of new technologies and paradigms
- "Risk Assessment in the 21<sup>st</sup> Century" paradigms
- New technologies for exposure assessment
- Low-level exposure considerations
- Predictive tools for exposure or toxicology
- Cumulative risk
- Communication approaches
- Practical hurdles to implementation
- Implications for animal use and the 3R's

**For further information, contact the organizers:**

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***Uptake, Translocation, and Distribution of  
Agrochemicals in Plants***

**Purpose of Symposium**

Uptake, translocation, and redistribution of agrochemicals in plants can influence their biological activities against their target species. Thus, fundamental understanding of chemical and biochemical processes driving their behaviors in plants is of great interest among scientists in industry and academia. This symposium will present recent studies addressing some of the following suggested topics. The goal will be to create a forum for recent studies that aim to gain a better understanding of behaviors of agrochemicals in plants.

Even though the topics related to agrochemicals are within the scope of the symposium, other divisions including AGFD and ENVR might be interested in this symposium as the scientific outcomes can be applied to their chemistries of interest in other biological systems.

**Suggested Topics**

- Influences of formulation on plant uptake of agrochemicals
- Stability of agrochemicals on leaf surface
- Investigations on uptake, translocation, and distribution of agrochemicals in plants
- Factors affecting partitioning of agrochemicals within plants
- Impact of mobility of agrochemicals in plants on their biological activities
- New technology to study behavior of agrochemicals within plants

**For further information, contact the organizers**

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***Using Metabolic Engineering and Omics Technologies in the  
Production of Agrochemicals, Biofuels, and Pharmaceuticals***

**Purpose of Symposium**

Rapid progress has been made over the last few years with regard to the metabolic engineering of microorganisms for the production of value-added products from agricultural commodities and their by-products, agricultural wastewater, and agrochemical residues. In large part, this progress has been achieved through the application of “omics” technologies to facilitate or assist value-added production or product discovery.

The purpose of this symposium is to provide an overview of the latest trends and “hot topics” in this field, including the production of biofuels, agrochemicals, pharmaceuticals, and bioactive plant metabolites.

Scientists from academia, industry and government should attend, including graduate students and postdocs. Members of other ACS Technical Divisions with potential interest or overlap (e.g., ENFL, I&EC, CELL, ENVR, BIOT, MEDI and DBC) are also highly encouraged to attend.

**Suggested Topics**

- Systems metabolic engineering of microbial factories
- Next-generation platforms for evolutionary engineering
- Genomic and transcriptomic-guided metabolic engineering
- Integration of synthetic biology and high-throughput genomic or proteomic screening technologies
- Application of next-generation sequencing for bioactive compound discovery and value-added production
- Automated high throughput screening systems
- All other research topics pertinent to the symposium!

**For further information, contact the organizers**

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## 13<sup>TH</sup> IUPAC INTERNATIONAL 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.

Partner organizations are being sought to participate in the development of events and technical programming.

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### 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
- Food Residues, Analytic Advances, and MRLs
- Formulations and Application Technologies
- Stewardship, Regulation, and Outreach

### Organizer Co-Chairs

Laura McConnell, [laura.mcconell@ars.usda.gov](mailto:laura.mcconell@ars.usda.gov)

Kenneth Racke, [kracke@dow.com](mailto:kracke@dow.com)

### Scientific Program

Chair Cathleen Hapeman, [cathleen.hapeman@ars.usda.gov](mailto:cathleen.hapeman@ars.usda.gov)

Vice-Chair Jay Gan, [jgan@ucr.edu](mailto:jgan@ucr.edu)

**AUGUST 10-14, 2014**

San Francisco, California USA

[www.iupac2014.org](http://www.iupac2014.org)



ACS  
Chemistry for Life<sup>®</sup>



# 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, USDA-ARS, laura.mcconnell@ars.usda.gov

### 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.

#### Co-Chairs:

- **Dr. Laura McConnell, USDA-ARS, USA**
- **Dr. Kenneth Racke, Dow AgroSciences, USA**

#### Members:

- Dr. Kevin Armbrust, Office of the State Chemist-Mississippi, USA
- Dr. Ellen Arthur, Bayer CropScience, USA
- Dr. Aldos Barefoot, DuPont, USA
- Dr. Rod Bennett, JRF America, USA
- Prof. John Clark, University of Massachusetts, USA
- Dr. Stephen Duke, USDA, USA
- Prof. Jay Gan, University of California-Riverside, USA
- Dr. Cathleen Hapeman, USDA, USA
- Prof. Ann Lemley, Cornell University, USA
- Dr. John Johnston, USDA-FSIS, USA
- Dr. Sharon Papiernik, USDA-ARS, USA
- Dr. Pamela Rice, USDA-ARS, USA
- Dr. Patricia Rice, BASF, USA
- Prof. James Seiber, University of California-Davis, USA
- Dr. Jeanette VanEmon, EPA, USA
- Dr. Scott Yates, USDA, 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:

- Prof. Jay Gan, University of California-Riverside, USA

#### Members:

- Dr. John Clark, University of Massachusetts, USA
- Dr. Stephen Duke, USDA-ARS, USA
- Prof. James Seiber, University of California-Davis, USA
- Dr. Scott Yates, USDA-ARS, USA

### 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 ensuring an internationally diverse program of platform and poster presentations.

#### Chair:

- Kenneth Racke, Dow AgroSciences, USA

#### Members:

- Prof. Elizabeth Carazo, Univ. of Costa Rica, Costa Rica
- Dr. Bernhard Johnen, CropLife International, Belgium
- Prof. Hisashi Miyagawa, Kyoto University, Japan
- Prof. Hideo Ohkawa, Kobe University, Japan
- Prof. N.A. Shakil, IARI, India
- Dr. Greg Simpson, CSIRO, Australia
- Dr. John Unsworth, IUPAC, UK
- Prof. Zhang Zhongning, Chinese Academy of Sciences, China

### Sponsorships and 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:

- Dr. Kenneth Racke, Dow AgroSciences, USA

#### Members:

- Dr. Rodney Bennett, JRF America, USA
- Dr. John Johnston, USDA-FSIS, USA
- Dr. Del Koch, ABS Labs, USA
- Dr. Ann Lemley, Cornell University  
- Coordinator for attendee grants
- Dr. Laura McConnell, USDA-ARS, USA
- Prof. James Seiber, University of California-Davis, USA
- Dr. Scott Yates, USDA-ARS, USA

[www.iupac2014.org](http://www.iupac2014.org)



# IUPAC INTERNATIONAL CONGRESS OF PESTICIDE CHEMISTRY

## Volunteer Opportunities

### Communications and Publicity Committee

Chair: Dr. Ellen Arthur, Bayer CropScience, USA

- Promote interest and awareness of the Congress among potential attendees in the U.S. and internationally.
- Contribute to development of promotional materials and brochures for the Congress in cooperation with the Organizing Committee and Scientific Program Committee.
- Coordinate dissemination of information on Congress plans to the AGRO membership, other ACS Divisions, sister scientific societies, industry associations, and affiliated organizations in the U.S. and other countries.
- Arrange for distribution of IUPAC 2014 promotional materials at relevant scientific conferences around the world.
- Publicize the Congress via advertisements in suitable scientific journals and newsletters.
- Initiate electronic means of communication for promotion of the Congress including website postings, AGRO e-newsletters, a Facebook page, Youtube videos, blogs and twitter.
- Contribute to development and enhancement of the [www.iupac2014.org](http://www.iupac2014.org) website as a vehicle for publicizing the Congress in cooperation with the Organizing Committee.

### Local Arrangements Committee

- 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

- 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.

### Program Book Development Coordinators

- Oversee development of the fall 2014 *Picogram*, which will constitute the final Congress program for distribution at the time of the Congress.
- Develop a means of communicating attendee and abstract information to the Congress delegates, via either hard copy or electronic (data stick, CD) format.
- Coordinate collection of articles, Divisional information, Congress details, and award information for the program booklet.
- Coordinate appearance of sponsor and advertiser information in cooperation with the Sponsorship and Finance Committee.

### News Media Coordinators

- 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*.

### Luncheon Seminar Series Coordinators

- Listed as Topic Sponsor in Program
- Logo on Sponsorship Page of Program

### Poster Session Coordinators

- Plan the Congress poster sessions in cooperation with the Scientific Program Committee, main topic teams, and symposia organizers.
- Develop innovative approaches for coordinating poster sessions with oral symposia, panel discussions, and workshops.
- Develop guidelines for poster author contributors regarding design and format requirements.
- Promote submission of poster session abstracts in cooperation with the Scientific Program Committee and Communications and Publicity Committee.
- Supervise judging and recognition of posters through development of a "best poster" award program; monetary awards to be coordinated with the Sponsorship and Finance Committee.
- Coordinate the daily placement and replacement of posters.
- Assist with food and beverage orders for poster session coffee breaks in cooperation with assigned ACS staff.



# COMMENTS FROM THE VICE CHAIR

## CATHLEEN J. HAPEMAN

Preparations are well underway for the IUPAC International Congress of Pesticide Chemistry which will be held at the ACS 248th National Meeting in San Francisco. Taking the 15 Standing Programming of AGRO and the traditional topics of the IUPAC Pesticide Congress, the Organizing Committee identified nine topic areas for the IUPAC 2014. The Committee also identified Topic Team Leaders and a number of team members.

As Scientific Program Committee Chair, I have asked Jay Gan to serve as the Committee Vice Chair. Together we have formed the Scientific Program Committee (see below). We have

developed a program approach and have asked each team to begin planning their symposia and seek additional members if needed. If you have suggestions/input for any of the nine topic teams, please contact the topic team leader. As details are finalized, they will be posted on the website, [www.iupac2014.org](http://www.iupac2014.org).

As for Boston 2015, AGRO has identified Champions for most topics (see the next page), but we still need more volunteers. Please let me know if you would like to participate in this important AGRO activity ([cathleen.hapeman@ars.usda.gov](mailto:cathleen.hapeman@ars.usda.gov)). As always, I welcome all your comments and ideas.

### Scientific Program Committee Members by Topic Area (Team Chair) as of January 7, 2013

#### 1. Emerging Issues and Challenges

- Dr. Cheryl Cleveland, Dow AgroSciences, USA  
[cbcleveland@dow.com](mailto:cbcleveland@dow.com)
- Dr. Lei Guo, California Air Resources Board, USA
- Prof. Allan Felsot, Washington State University, USA
- Dr. David Gustafson, Monsanto, USA
- Prof. Ole Hertel, Aarhus University, Denmark
- Dr. Sharon Papiernik, USDA-ARS, USA
- Prof. James Seiber, University of California-Davis, USA
- Dr. Greg Simpson, CSIRO, Australia

#### 2. Mode of Action and Resistance Management

- Dr. Stephen Duke, USDA-ARS, USA  
[sduke@olemiss.edu](mailto:sduke@olemiss.edu)
- Prof. Jeff Bloomquist, University of Florida, USA
- Prof. John Clark, University of Massachusetts, USA
- Prof. René Feyereisen, University of Nice, France
- Prof. Kazuhiko Matsuda, Kinki University, Japan
- Dr. Thomas Sparks, Dow AgroSciences, USA

#### 3. Discovery and Synthesis

- Dr. Thomas Stevenson, DuPont, USA  
[thomas.m.stevenson@dupont.com](mailto:thomas.m.stevenson@dupont.com)
- Prof. Joel Coats, Iowa State University, USA
- Dr. Peter Maienfisch, Syngenta, Switzerland
- Dr. Agnes Rimando, USDA-ARS, USA
- Prof. Xinling Yang, China Agricultural University, China

#### 4. Agricultural Biotechnology

- Dr. Jennifer Anderson, Pioneer, USA  
[jennifer.anderson@pioneer.com](mailto:jennifer.anderson@pioneer.com)
- Dr. George Harrigan, Monsanto, USA
- Dr. Gijs Kleter, Wageningen University, The Netherlands
- Dr. Patricia Rice, BASF, USA
- Dr. Nick Storer, Dow AgroSciences, USA

#### 5. Environmental Fate and Metabolism

- Ms. Amy Ritter, PE, Waterborne Environmental, USA  
[rittera@waterborne-env.com](mailto:rittera@waterborne-env.com)
- Dr. Michael Barrett, EPA, USA
- Prof. Ettore Capri, Università Cattolica del Sacro Cuore, Italy
- Dr. Russell Jones, Bayer CropScience, USA

- Dr. Rai Kookana, CSIRO, Australia
- Prof. Weiping Liu, Zhejiang University, China
- Prof. Karina Miglioranza, University of Mar del Plata, Argentina
- Dr. Pamela Rice, USDA-ARS, USA

#### 6. Exposure and Risk Assessment

- Dr. Aldos Barefoot, DuPont, USA  
[aldos.c.barefoot@dupont.com](mailto:aldos.c.barefoot@dupont.com)
- Dr. Wenlin Chen, Syngenta, USA
- Prof. Qing Li, University of Hawaii, USA
- Dr. Curt Lunchick, Bayer CropScience, USA
- Dr. John Johnston, USDA-FSIS, USA
- Prof. Keith Solomon, University of Guelph, Canada
- Dr. Paul VandenBrink, Alterra, The Netherlands
- Dr. Joe Wisk, BASF, USA

#### 7. Food Residues, Analytical Methods, and MRLs

- Dr. Mike Krotski, Bayer CropScience, USA  
[mike.krotski@bayercropscience.com](mailto:mike.krotski@bayercropscience.com)
- Dr. Jerry Baron, Rutgers University/IR-4, USA
- Ms. Lori Berger, California Specialty Crops Council, USA
- Dr. Caroline Harris, Exponent, UK
- Dr. Dieter Jungblut, BASF, Germany
- Dr. Steve Lehotay, USDA, USA

#### 8. Formulation and Application Technologies

- Prof. Erdal Ozkan, Ohio State University, USA  
[ozkan.2@osu.edu](mailto:ozkan.2@osu.edu)
- Dr. Andreas Herbst, BBA, Germany
- Dr. Andrew Hewitt, Lincoln Ventures, Ltd, New Zealand
- Dr. Holger Tank, Dow AgroSciences, USA
- Prof. He Xiongkui, China Agricultural University, China

#### 9. Stewardship, Regulation, and Outreach

- Prof. Jeffrey Jenkins, Oregon State University, USA  
[jeffrey.jenkins@oregonstate.edu](mailto:jeffrey.jenkins@oregonstate.edu)
- Dr. Scott Jackson, BASF, USA
- Dr. Barbara Glenn, CropLife America, USA
- Dr. Kean Goh, California Department of Pesticide Regulation, USA
- Prof. Ivan Kennedy, University of Sydney, Australia





# AGRO Standing Programming and Champions

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 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: Cathleen Hapeman, [cathleen.hapeman@ars.usda.gov](mailto:cathleen.hapeman@ars.usda.gov)

### **Advances in Agrochemical Residue, Analytical and Metabolism Chemistry & Metabolomics**

Kevin Armbrust, [armbrust@msci.msstate.edu](mailto:armbrust@msci.msstate.edu)  
Steve Lehotay, [steven.lehotay@ars.usda.gov](mailto:steven.lehotay@ars.usda.gov)  
Michael Krolski, [mike.krolski@bayercropscience.com](mailto:mike.krolski@bayercropscience.com)  
Rod Bennet, [rodney@bennett@jframerica.com](mailto:rodney@bennett@jframerica.com)  
Chad Wujcik, [chad.e.wujcik@monsanto.com](mailto:chad.e.wujcik@monsanto.com)  
Teresa Wehner, [teresa.wehner@merial.com](mailto:teresa.wehner@merial.com)

### **Air Quality and Agriculture**

Laura McConnell, [laura.mcconnell@ars.usda.edu](mailto:laura.mcconnell@ars.usda.edu)  
Jim Seiber, [jnseiber@ucdavis.edu](mailto:jnseiber@ucdavis.edu)  
Amrith Gunasekaram, [amrith.gunasekara@cdph.ca.gov](mailto:amrith.gunasekara@cdph.ca.gov)  
Scott Yates, [scott.yates@ars.usda.gov](mailto:scott.yates@ars.usda.gov)

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

John Clark, [jclark@vasci.umass.edu](mailto:jclark@vasci.umass.edu)  
Tom Sparks, [tcsparcks@dow.com](mailto:tcsparcks@dow.com)  
Dave Soderlund, [dms6@cornell.edu](mailto:dms6@cornell.edu)

### **Bioenergy, Bioproducts, and Biochars: Advances in Production and Use**

Cathleen Hapeman, [cathleen.hapeman@ars.usda.gov](mailto:cathleen.hapeman@ars.usda.gov)

### **Biorationale Pesticides, Natural Products, Pheromones, and Chemical Signaling in Agriculture**

Steve Duke, [stephen.duke@ars.usda.gov](mailto:stephen.duke@ars.usda.gov)  
Joel Coats, [jcoats@iastate.edu](mailto:jcoats@iastate.edu)  
Marja Koivunen, [mkoivunen@marroneorganics.com](mailto:mkoivunen@marroneorganics.com)

### **Development of Value-added Products from Agricultural Crops and Byproducts**

Jim Seiber, [jnseiber@ucdavis.edu](mailto:jnseiber@ucdavis.edu)

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

Jeff Bloomquist, [jbquist@epi.ufl.edu](mailto:jbquist@epi.ufl.edu)  
Tory Anderson, [anderst@vt.edu](mailto:anderst@vt.edu)  
Si Hyeock Lee, [shlee22@snu.ac.kr](mailto:shlee22@snu.ac.kr)

### **Environmental Fate, Transport, and Modeling of Agriculturally-related Chemicals**

Tom Potter, [tom.potter@ars.usda.gov](mailto:tom.potter@ars.usda.gov)  
Pam Rice, [pamela.rice@ars.usda.gov](mailto:pamela.rice@ars.usda.gov)  
Jay Gan, [jgan@ucr.edu](mailto:jgan@ucr.edu)

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

George Cobb, [george.cobb@tiehh.ttu.edu](mailto:george.cobb@tiehh.ttu.edu)  
Laura McConnell, [laura.mcconnell@ars.usda.gov](mailto:laura.mcconnell@ars.usda.gov)  
Jay Gan, [jgan@ucr.edu](mailto:jgan@ucr.edu)  
Teresa Wehner, [teresa.wehner@merial.com](mailto:teresa.wehner@merial.com)

### **Human Exposure and Risk Assessment**

Bob Krieger, [bob.krieger@ucr.edu](mailto:bob.krieger@ucr.edu)  
Curt Lunchick, [curt.lunchick@bayer.com](mailto:curt.lunchick@bayer.com)  
Dan Stout, [stout.dan@epa.gov](mailto:stout.dan@epa.gov)

### **Protection of Agricultural Productivity, Public Health and the Environment – General Session**

Program Chair

### **Regulatory Harmonization and MRLs**

Ken Racke, [kracke@dow.com](mailto:kracke@dow.com)  
Philip Brindle, [philip.brindle@basf.com](mailto:philip.brindle@basf.com)  
Heidi Irrig, [heidi.irrig@syngenta.com](mailto:heidi.irrig@syngenta.com)

### **Synthesis of Bioactive Compounds**

Thomas Stevenson, [thomas.m.stevenson@dupont.com](mailto:thomas.m.stevenson@dupont.com)  
Wenming Zhang, [wenming.zhang@dupont.com](mailto:wenming.zhang@dupont.com)

### **Technological Advances and Applications in Agricultural Science (e.g., Nanotechnology, Genetically-modified Organisms and Biocontrol Agents)**

John Clark, [jclark@vasci.umass.edu](mailto:jclark@vasci.umass.edu)  
Daniel Goldstein, [daniel.a.goldstein@monsanto.com](mailto:daniel.a.goldstein@monsanto.com)

### **Urban Agriculture- Turf, Ornamentals, Household Products, and Water-Re-Use**

John Clark, [jclark@vasci.umass.edu](mailto:jclark@vasci.umass.edu)

# Programming & Outreach Activities

## 2013 – 2015

Activity/Event	Leaders & Champions	Status	Actions Required
245 <sup>th</sup> ACS National Meeting New Orleans April 7-11, 2013	John Johnston Kevin Armbrust	<ul style="list-style-type: none"> <li>Co-sponsoring symposium <i>Arsenic Contamination in Food and Water</i></li> </ul>	<ul style="list-style-type: none"> <li>Symposium to be held on April 10-11; see program on page 25</li> </ul>
50 <sup>th</sup> North American Chemical Residue Workshop July 2013 St Pete Beach, Florida	Kevin Armbrust Steve Lehotay	<ul style="list-style-type: none"> <li>Registration open January 31 <a href="http://www.nacrw.org">www.nacrw.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Submit abstracts by April 15 (oral) and June 1 (poster)</li> </ul>
246 <sup>th</sup> ACS National Meeting Indianapolis, Indiana September 8-12, 2013	Steve Duke	<ul style="list-style-type: none"> <li>Program under development</li> </ul>	<ul style="list-style-type: none"> <li>Submit abstracts in January 21 - March 18, 2013</li> </ul>
<b>Activities 2014 – 2015</b>			
50 <sup>th</sup> North American Chemical Residue Workshop July 2013 St Pete Beach, Florida	Kevin Armbrust Steve Lehotay	<ul style="list-style-type: none"> <li>Program to be developed winter 2012/3</li> </ul>	
248 <sup>th</sup> ACS National Meeting 13 <sup>th</sup> IUPAC Pesticide Congress San Francisco, CA August 10-14, 2014	Cathleen Hapeman Jay Gan Laura McConnell Ken Racke	<ul style="list-style-type: none"> <li>Follow progress on website <a href="http://www.iupac2014.org">www.iupac2014.org</a></li> <li>Symposia under development</li> </ul>	<ul style="list-style-type: none"> <li>Submit symposia ideas to Topic Team Leaders</li> <li>Volunteers need for committees</li> <li>Sign up for email updates</li> </ul>
250 <sup>th</sup> ACS National Meeting August 16-20, 2015 Boston, Massachusetts	2014 Vice Chair	<ul style="list-style-type: none"> <li>Symposia planning at Blues and Brews on Wednesday, September 11, 2013</li> </ul>	<ul style="list-style-type: none"> <li>Additional volunteers/champions needed</li> </ul>
Pacificchem 2015 December 15-20, 2015	John Johnston	<ul style="list-style-type: none"> <li>Symposia proposals to be submitted by April 1, 2013</li> </ul>	<ul style="list-style-type: none"> <li>Contact John Johnston</li> </ul>

***Thinking about organizing a symposium for a future National Meeting?  
It's really not that difficult. Here's how.***

## 7 Easy Steps for Organizing a Symposium

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

## Division 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)
- Promotion and publicity of the symposium to attract speakers and attendees (Call for Papers, announcement via *PICOGRAM*, website, and AGRO e-newsletter)
- Advice from veteran symposia organizers

**Come Celebrate the 50<sup>th</sup> Anniversary of the  
Florida Pesticide Residue Workshop (FPRW)  
as it changes its name to the  
North American Chemical Residue Workshop (NACRW)  
July 21-24, 2013  
St. Pete Beach, Florida**



The name change is being made to better reflect the broadened scope and international nature of topics covered by its scientific program. Issues of interest include pesticides, veterinary drugs, environmental contaminants, toxins, and other chemicals of concern in food, environmental, and related applications. The workshop has grown 5 years in a row, and we welcome your participation!

**Please find additional information at:**

**[www.nacrw.org](http://www.nacrw.org)**

**Expected Submission Deadlines:**

Oral presentations: April 15

Poster presentations: June 1

**Manuscripts related to the meeting will be considered for publication  
in a special section of the Journal of Agricultural and Food Chemistry**

*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.*

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# Synopsis of AGRO Division at Fall 2012 ACS Meeting & Expo in Philadelphia

by Nancy Ragsdale

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The American Chemical Society (ACS) held their 244th national meeting August 19 - 23, 2012 in Philadelphia, Pennsylvania; the meeting theme was "Materials for Health & Medicine". More than 13,000 chemists and visitors attended the meeting, including approximately 3,000 students and 1,200 exposition exhibitors. The Agrochemicals Division (AGRO) organized 18 technical symposia and a poster session for the Education Awards. In addition AGRO had extensive programming with the Divisions of Agricultural and Food Chemistry (AGFD) and Environmental Chemistry. Abstracts from the AGRO program are available for downloading via the Fall 2012 issue (Vol. 82) of the *PICOGRAM* ([www.agrodiv.org](http://www.agrodiv.org)).

## International Award

Dr. Thomas C. Sparks, Dow AgroSciences, was the 2012 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. Sparks is widely recognized for his research and innovation in spinosyn chemistry that directly led to the discovery of new, more highly effective analogs, which, in turn, led to the next generation spinosyn product, spinetoram. In 2007 an EPA Presidential Green Chemistry Challenge Award recognized the novelty and attributes of spinetoram, and in 2009 Dr. Sparks was named Scientist of the Year by R&D Magazine.

A California native, Sparks received his BA from Fresno State University and a PhD in entomology from the University of California, Riverside under the guidance of Dr. Bruce Hammock. He joined the faculty of the Entomology Department at Louisiana State University as the insect toxicologist, his research focusing on endocrine regulation of insect metamorphosis, insecticide resistance, and insecticide biochemistry-toxicology. He next joined the agrochemical research group at Elanco, which formed a joint venture with The Dow Chemical Company called DowElanco, which is now Dow AgroSciences. Currently Dr. Sparks is a Dow Research Fellow and, in addition to his research related to spinosyn, has led a variety of research efforts resulting in the discovery of numerous other insecticidal chemistries. In addition to his research, he has been the chair of the Insecticide Resistance Action Committee's Mode of Action Working Group, holds a dozen patents/patent applications and has published extensively. In Dr. Sparks' honor a symposium, "New Technology and Approaches Applied to the Discovery of Agrochemicals" was held, and Dr. Sparks gave the lead presentation entitled "What if" approaches to agrochemical discovery".

## Sterling B. Hendricks Memorial Lectureship

The 2012 Sterling B. Hendricks Memorial Lectureship Award winner was Dr. Eric Block, the Carla Rizzo Delray Distinguished Professor of Chemistry at the University at Albany, State University of New York. This award, sponsored by the USDA-Agricultural Research Service 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. Following presentation of the award, Dr. Block, who is a world authority on garlic science, gave a lecture entitled "Fifty years of smelling sulfur: from *Allium* chemistry to olfactory detection of sulfur compounds".

Eric Block received a B.S. in chemistry from Queens College of the City University of New York, where he was elected to Phi Beta Kappa. Both his MS and PhD degrees were earned at Harvard University, where he worked with 1990 Nobel Laureate E.J. Corey. After serving as a faculty member at the University of Missouri-St. Louis, Dr. Block received an appointment at the University of Albany. He has earned numerous honors and awards during his career. These include a John Simon Guggenheim Fellowship, the ACS Award for Advancement of Application of Agricultural and Food Chemistry, the International Council on Main Group Chemistry Award for Excellence in Main Group Chemistry Research, and the Kenneth C. Spencer Award. He is the author of 237 scientific papers, 4 books and holds 8 patents. He has trained more than 60 graduate students and postdoctoral fellows during his 45 years in academia.

## AGRO Award for Innovation in Chemistry of Agriculture

This meeting marked the first time this award, sponsored by BASF Corporation, has been presented. It 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. Steven J. Lehotay was the recipient of this award; his most important accomplishment is the co-development with Dr. Michelangelo Anastassiades of the QuEChERS (quick, easy, cheap, effective, rugged, and safe) method for streamlined sample extraction and clean-up. QuEChERS reduces sample preparation labor, costs, time, space needs, and waste generation 2-10 fold over traditional methods and has been validated in more labs and for more pesticides and foods than any other residue method. QuEChERS products are currently sold by at least 20 different companies. In addition Dr. Lehotay has significant accomplishments, working with partners, in numerous improvements in chemical analytical capabilities.

Dr. Lehotay is a Lead Scientist with USDA-Agricultural Research Service at the Eastern Regional Research Center located near Philadelphia, Pennsylvania. He received both his BS and PhD degrees in Chemistry at the University of Florida. He has authored/co-authored over 110 scientific articles and is the recipient of the 2011 AOAC International Harvey W. Wiley Award. Dr. Lehotay gave a presentation entitled "What is good enough?" in a symposium, "Is Your Analytical Method Good Enough?".

## ACS Kansas City Section 2012 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 hope that it will give added stimulus in

research, education, and industry to further progress in agricultural and food chemistry. Dr. James N. Seiber was recognized as the recipient of this award in the AGRO program at Philadelphia. His research related to the award is in the area of environmental transport and fate of pesticides and other contaminants. A symposium on "Chemical Transport, Fate, and Sustainability" was given honoring Dr. Seiber, who spoke on "Prospective approach to understanding transport and fate of bioactive environmental contaminants".

Dr. Seiber's professional career includes many accomplishments and awards. Some of the positions he has held include: Department Chair of Environmental Toxicology at the University of California (UC), Davis; founding director of the Center for Environmental Sciences and Engineering at the University of Nevada, Reno; Director of the Western Regional Research Center, USDA-Agricultural Research Service; and interim Chair for the Department of Food Science and Technology at UC, Davis. Currently he is an emeritus professor in the Department of Environmental Toxicology at UC, Davis and is the Editor-in-Chief of the *Journal of Agricultural and Food Chemistry*. Dr. Seiber received his PhD in chemistry from Utah State University.

#### AGRO Division Fellow Award

Dr. Jeffrey J. Jenkins, Oregon State University, and Dr. John J. Johnston, USDA-Food Safety Inspection Service (FSIS) were honored as new AGRO Fellows. Dr. Jenkins' research is focused on the impacts of chemical use on individuals, populations and ecosystems. His outreach activities include the development of pesticide risk assessment methodology in addition to tools and materials to communicate risk. He has made many contributions to AGRO including serving as Division Chair. Dr. Jenkins is currently a faculty member of the Department of Environmental and Molecular Toxicology at Oregon State.

Dr. Johnston has been active in chemical research through his positions with Chevron as Metabolism, Environmental Fate, and Residue Chemistry Study Director; FSIS as a Mass Spectrometry Specialist; Chemistry Project Leader at USDA-Animal and Plant Health Inspection Service, National Wildlife Research Center; and Senior Risk Analyst, USDA-FSIS. Currently Dr. Johnston serves as a Scientific Liaison for FSIS, interfacing with government, industry and academic interests. He has been very active in organizing programs for AGRO and has also served as Division Chair.

#### New Investigator Award

Dr. Xin Zhang, Kansas State 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. Zhang gave a presentation entitled "Explore new insecticidal site targeting on chitin synthesis enzymes in *Anopheles gambiae*." Zhang received his PhD in Entomology at Kansas State under the direction of Dr. Kun Yan Zhu. During his PhD research he identified and characterized chitin synthase genes and chitinase gene family from *Anopheles gambiae*. He adapted and optimized a non-radioactive high-throughput assay for chitin synthase activity and developed a chitosan/dsRNA nanoparticle-based RNA interference through mosquito larval feeding. Dr. Zhang is currently a research associate with Dr. Kristin Michel in the Division of Biology, Kansas State.

#### 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 17 students (*insert picture*) received travel awards. Winners of the poster contest along with their affiliations, presentation titles and faculty advisors follow.

- First Place: Fnu Astha, Virginia Tech, "Five-membered ring heterocyclic carbamates and carboxamides - the quest for resistance-breaking, species-selective acetylcholinesterase inhibitors against the malaria mosquito", Dr. Paul R. Carlier.
- Second Place (tie): Aaron Gross, Iowa State University, "Monoterpenoid binding at the house fly (*Musca domestica*) nicotinic acetylcholine receptor", Dr. Joel Coats.
- Second Place (tie): Lijuan Su, University at Buffalo, "Quantification and identification of biodegradation products of sulfamethoxazole in wastewater", Dr. Diana Aga.
- Third Place: Ngoc Pham, Virginia Tech, "Evidence for P-glycoprotein modification of insecticide toxicity in vector mosquitoes", Dr. Troy Anderson.

#### Symposia

In addition to symposia held in conjunction with awards and a poster session for the Education Awards, AGRO held 15 symposia. The following provides a brief summary of these symposia.

Pesticide Environmental Fate Properties - Measurement, Predictions, Limitations and Reliability: Papers presented information on various parameters used in modeling, factors affecting reliability and sampling methodology.

Natural Products for Pest Management: This symposium was dedicated to Dr. Horace G. Cutler, a celebrated natural products chemist who died in June 2011. In addition to a review of the recent 50 years of natural products research, papers were given from many disciplines researching potential pest management solutions that are environmentally friendly.

Protection of Agricultural Productivity, Public Health and the Environment: Both oral and poster presentations addressed a variety of subjects not included in more topic specific symposia.

Maximum Residue Levels (MRLs) of Agricultural Chemicals on Food: Regulators, scientists, representatives of international organizations and those directly impacted discussed the current status of harmonization and impacts on trade.

Pesticides and Fumigant Emissions from Agricultural Systems: This symposium addressed processes affecting pesticide behavior in soil, release to the atmosphere and mathematical models predicting emissions under a variety of conditions.

Integrated Vector and Resistance Management: Presenters discussed the need for novel insecticides and insecticide resistance management strategies for insect vectors of infectious disease.

Environmental Fate, Transport, Modeling/Motoring of Agricultural Chemicals: The focus of this symposium was on use

of models for refining predictions of the impacts of various mitigation and agricultural best management practices.

**Reactive Nitrogen from Agriculture - Emission Consequence and Management:** Speakers made presentations related to release and effects of reactive nitrogen compounds from agriculture.

**Mechanisms of Insecticidal Action/Resistance - New Compounds and Recent Advances:** This symposium addressed topics related to insecticidal modes of action and resistance issues with agricultural pest insects and insects associated with humans' diseases.

**Synthesis and Chemistry of Agrochemicals:** Recent research in synthesis and chemistry was highlighted.

**Perfecting Communication of Chemical Risk:** Speakers addressed the importance of accurate science, specific chemical situations and application approaches in communicating risks. This symposium was available to those not attending the meeting via live webcast. Viewers were able to type in questions to presenters during question and answer periods. For further information on the webcast please contact Dr. Laura McConnell (laura.mcconnell@ars.usda.gov).

**Fate and Exposure of Urban Applied Pesticides in the Context of Human and Ecological Risk Assessments:** The focus was on fate and impacts on humans, the environment and potentially endangered species.

**Human Health and Transgenic Crops:** Speakers addressed various topics related to transgenic plants including influences on human health as well as enhancement of nutritional and nutraceutical crop value.

**Next Generation Biofuels and Bioproducts - Advances and Challenges:** This symposium addressed issues related to new sources and processes for development of biofuels and bioproducts.

**Worker Exposure - Are Your Senses a Proper Evaluation of Hazardous Exposure?:** Speakers gave presentations related to sensory perception, primarily detecting odor, in addition to mitigation methods to reduce volatilization as means to reduce worker exposure.

### Future AGRO Programming

AGRO will meet next at the 246th ACS national Meeting September 8-12, 2013 in Indianapolis, Indiana. Symposia for this meeting and a call for papers will appear in the Spring 2013, Vol. 83, *Picogram* (<http://www.agrodiv.org/picograms/>).

AGRO will organize the 13<sup>th</sup> IUPAC International Congress of Pesticide Chemistry in conjunction with the 248th ACS National Meeting in San Francisco, California, during August 10-14, 2014. Visit the website for details and sign up for email updates at [www.iupac2014.org](http://www.iupac2014.org).

## Future ACS National Meetings & Expositions

### 245th ACS National Meeting & Exposition

April 7-11, 2013  
New Orleans, Louisiana

**Program Theme:** *Chemistry of Energy & Food*

### 246th ACS National Meeting & Exposition

September 8-12, 2013  
Indianapolis, Indiana

**Program Theme:** *Chemistry in Motion*

### 247th ACS National Meeting & Exposition

March 16-20, 2014  
Dallas, Texas

**Program Theme:** *Chemistry of Energy/Advanced Materials for New Opportunities*

### 248th ACS National Meeting & Exposition

August 10-14, 2014  
San Francisco, California

**Program Theme:** *Chemistry and Stewardship of the World*

### 249th ACS National Meeting & Exposition

March 22-26, 2015  
Denver, Colorado

**Program Theme:** *Chemical Resources: Extraction, Refining and Conservation*

### 250th ACS National Meeting & Exposition

August 16-20, 2015  
Boston, Massachusetts

**Program Theme:** *A History of Innovation: From Discovery to Application*

### 251st ACS National Meeting & Exposition

March 13-17, 2016  
San Diego, California

### 252nd ACS National Meeting & Exposition

August 21-25, 2016  
Philadelphia, Pennsylvania

### 253rd ACS National Meeting & Exposition

April 2-6, 2017  
San Francisco, California

### 254th ACS National Meeting & Exposition

August 20-24, 2017  
Washington, DC

### 255th ACS National Meeting & Exposition

March 18-22, 2018  
New Orleans, Louisiana

### 256th ACS National Meeting & Exposition

August 19-23, 2018  
Boston, Massachusetts

### 257th ACS National Meeting & Exposition

March 31-April 4, 2019  
Orlando, Florida

### 258th ACS National Meeting & Exposition

August 25-29, 2019  
San Diego, California

**2013  
AGRO  
Division  
Officers**



*John M. Clark  
Division Chair*



*Stephen O. Duke  
Program Chair*



*Cathleen J. Hapeman  
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 Middlelem	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		



# *Officers and Committees of the AGRO Division*

## **AGRO DIVISION OFFICERS 2013**

### **Division Chair, John M. Clark**

413-545-1052, jclark@vasci.umass.edu

### **Program Chair, Stephen O. Duke**

662-915-1036, stephen.duke@ars.usda.gov

### **Vice Chair, Cathleen J. Hapeman**

301-504-6451, cathleen.hapeman@ars.usda.gov

### **Secretary, Sharon K. Papiernik**

605-693-5201, sharon.papiernik@ars.usda.gov

### **Treasurer, Del A. Koch**

573-777-6003, kochd@abclabs.com

## **EXECUTIVE COMMITTEE MEMBERS**

### **2011 – 2013**

Julie Eble, julie.eble@criticalpathservices.com

Scott Jackson, scott.jackson@basf.com

Pamela Rice, pamelarice@ars.usda.gov

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### **2012 – 2014**

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### **2013 – 2015**

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Wenlin Chen, wenlin.chen@syngenta.com

John Johnston, john.johnston@fsis.usda.gov

Steven Lehotay, steven.lehotay@ars.usda.gov

## **COUNCILORS 2012 – 2014**

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Jeanette Van Emon, vanemon.jeanette@epa.gov

Kevin Armbrust, Alternate

Barry Cross, Alternate

## **AWARDS COMMITTEE**

James Seiber, Chair

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Janice Chambers

John Marshall Clark

Joel Coats

Steve Duke

Bruce Hammock

Ernest Hodgson

Robert Hollingworth

Robert Krieger

Ralph Mumma

Hideo Ohkawa

Sharon Papiernik

Nancy Ragsdale

Will Ridley

David Soderlund

Don Wauchope

Willis Wheeler

Izuru Yamamoto

## **BYLAWS COMMITTEE**

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## **COMMUNICATIONS COMMITTEE**

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Tim Ballard

Julie Eble – Webinar Series Coordinator

Jay Gan – Abstracts Editor

Jeff Jenkins – Public Relations

Laura McConnell – Ads/Website Coordinator

Nancy Ragsdale – Pesticide Outlook Liaison

Sharon Papiernik – Awards Coordinator

Yelena Sapozhnikova – eNewsletter Editor

## **DEVELOPMENT COMMITTEE**

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Del Koch, Co-Chair, 573-443-9003

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Laura McConnell, 301-504-6298

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# ***Officers and Committees of the AGRO Division***

(con't)

## **EARLY CAREER SCIENTIST COMMITTEE**

Diana Aga, Co-Chair  
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Al Barefoot  
Barry Cross  
Scott Jackson  
John Johnston  
Terry Spittler

## **INTERNATIONAL ACTIVITIES COMMITTEE**

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Jay Gan, Co-chair  
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Paul Hendley  
Rai Kookana  
Steven Lehotay  
Weiping Liu  
Laura McConnell  
Jim Seiber  
Keith Solomon  
John Unsworth

## **MEMBERSHIP COMMITTEE**

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## **NOMINATING COMMITTEE**

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Kevin Armbrust, armbrust@mscl.msstate.edu

## **PROGRAMMING COMMITTEE**

Cathleen Hapeman, Chair, cathleen.hapeman@ars.usda.gov  
See pages 52-53 for more information

## **SOCIAL COMMITTEE**

### **Coffee Hour**

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Julie Eble, 610-558-3001  
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jmassey@pss.msstate.edu

### **Social Hour**

Aldos Barefoot, 302-451-5856  
aldos.c.barefoot@usa.dupont.com  
Jeff Jenkins, 541-737-5993  
jeffrey.jenkins@orst.edu

## **STRATEGIC PLANNING COMMITTEE**

Laura McConnell, Chair  
301-504-6298, laura.mcconnell@ars.usda.gov  
Troy Anderson  
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 Lunch and Learn Webinar Series**

As a means to better serve our members and the larger scientific community, AGRO has launched a new “Lunch and Learn” webinar series. All webinars are open to the public, and recordings are freely available at the AGRO website.

This initiative supports Goal 2 of our strategic plan, “AGRO will develop the infrastructure for innovative, long range program planning to meet the needs of members and the scientific community.”

This monthly series is currently being supported by a grant from ACS and our new sponsor ABC Laboratories. The series will continue through May 2013 and then restart in October 2013. Please see [www.agrodiv.org/webinars](http://www.agrodiv.org/webinars) for previously recorded webinars and information for registering for future webinars.

Proposals are currently being sought for future webinars. We are seeking partnerships with other ACS divisions and other outside organizations. Please contact Julie Eble or Laura McConnell if you would like to propose a webinar.

### **Upcoming Webinars**

#### **Pesticides:**

#### **The Global Need and Do Adjuvants Matter?**

February 13, 2013, 12:00PM Eastern Time

#### **Production of Export Crops Depends on the Worldwide Annual Use of Pesticides**

*Leonard P. Gianessi  
CropLife Foundation*

#### **Effect of Adjuvants on Residues in Relation to Routine Residue Trial Variability**

*Philip A. Brindle and Jane Stewart  
BASF Agricultural Solutions*

#### **The Future of Pyrethroids: Environmental Detection, Resistance, and Novel Spatial Repellents**

March 13, 2013, 12:00PM Eastern Time

#### **Analysis of Environmental Samples for Pyrethroid Insecticides Using Multianalyte Methods and Stable Isotope Internal Standards**

*Kevin Clark  
ABC Laboratories*

#### **Identification of a Novel Pyrethroid Receptor Site on a Mosquito Sodium Channel**

*Ke Dong  
Michigan State University*

#### **Making Pyrethroids More Volatile for Spatial Repellency Against Biting Arthropods**

*Kamal Chauhan  
USDA-ARS*

**Join us on April 3, 2013 (EDT) for  
Pesticide Regulation and the Endangered Species Act**

Speakers TBA

#### **For further information contact the organizers:**

Julie Eble, Critical Path Services, 610-558-3001 X100  
[Julie.Eble@criticalpathservices.com](mailto:Julie.Eble@criticalpathservices.com)  
Laura McConnell, USDA-ARS, 301-504-6298  
[laura.mcconnell@ars.usda.gov](mailto:laura.mcconnell@ars.usda.gov)



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# AGRO Executive Committee Phone Conference Meeting

**June 26, 2012**  
**1:00 – 3:00 pm EDT**  
**Chair – Al Barefoot**

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## Participants

Officers: Al Barefoot (Chair), John Clark (Program Chair), Steve Duke (Vice Chair), John Johnston (Treasurer), Sharon Papiernik (Secretary)

Past Chair: Ken Racke

Councilors: Rod Bennett, Jeanette Van Emon

Executive Committee: Julie Eble, Cathleen Hapeman, Laura McConnell, Scott Jackson, Pat Rice, Liliana Schwartz, Jim Seiber

## 1. Philadelphia meeting: all oral presentations and meetings will be at Loews Hotel

- a. Technical programming (John Clark)
  - 41 half-day sessions; 4-5 concurrent rooms; 5 award symposia
  - All venue reservations are in place
  - Coffee Monday-Tuesday morning and afternoon (Paid by AGRO general fund. Social Committee will no longer maintain a coffee fund or identify coffee sponsors.)
  - One-day registrations are still being entered
  - Program is on ACS website
  - Question: Last year, speakers were invited to upload their PowerPoints and those were posted on the web. Speakers have to sign a consent form. Action item: Laura and John will contact symposium organizers and remind them to ask speakers to allow their presentations to be uploaded.
  - Webinar on Wednesday afternoon: Perfecting Communication of Chemical Risk. Will cost \$2600; paid by grant.
- b. Award symposia: 5 planned. Plaques are given at symposia
- c. Combined governance meeting: Sunday night
- d. Social
  - JAFc sponsorship to celebrate their 60<sup>th</sup> anniversary. JAFc will have a display table and will be recognized.
  - IUPAC will have display to publicize; will offer door prizes
  - Recognize award winners, including graduate students
- e. Blues & Brews
- Refreshments are arranged

## 2. Old business

- a. Revision of bylaws re: committee changes
  - **Action item from April teleconference:** Bylaws Committee will submit proposed changes to Executive Committee by 60 days before the fall meeting (June). Includes changes to committee structure, election process, other items.
  - Bennett: Committee has made changes suggested by ACS and AGRO. [Timing of dues payment, communication, balloting, committee structure, etc.] Rod will stay in communication with ACS to accomplish this. Action item:

- Within the next week, Rod will send AGRO members a revised version of the bylaws for their review.
- ii. **Question:** Is Treasurer bonded? Not currently. Should be, according to bylaws. Action item: Finance Committee will check into mechanism and cost of bonding AGRO Treasurer.
  - b. Committee reports: **Action item:** Sharon will request written reports from committee chairs. Reports will be due on August 18 and should include a description of how committee activities relate to the AGRO Strategic Plan. Oral reports will be given at Combined Governance meeting.
  - **Action item from April teleconference:** Finance Committee (Coats) will present budget for following year at the annual meeting. Action item: Finance Committee will circulate a draft budget prior to the Philadelphia meeting and will present draft budget at the Combined Governance meeting.
  - **Action item:** IUPAC organizers will present a draft 2-year budget for IUPAC conference at the Combined Governance meeting.
  - Membership Committee has been silent.  
**Action item:** Al will invite Membership Committee to the Combined Governance meeting.
  - c. Sponsored meetings
  - d. Update on Pan Pacific – Action item from April teleconference: International committee (Gan and Racke) will write Innovative Project Grant for \$5000 to support AGRO activities at the Pan Pacific meeting.
    - Duke: Pan Pacific sessions are coming together with varying success. Has not been good communication regarding finances, etc. Not all invited speakers have received invitation letters yet. They should register first. AGRO will provide travel support to speakers, organizers.
    - IPG was submitted. No word on outcome yet.
  - e. Update on IUPAC planning
    - Second organizing committee meeting held June 11. Will also meet during Philadelphia meeting. Working on 2012 milestones: establish liaison with ACS; name scientific program chair and committee; confirm hotel venue; prepare financial plan and circular.
    - ACS Meetings and Expositions is extremely supportive. They have agreed to allow attendees of IUPAC to have member registration rates to ACS. Seem willing to work together on venue – organizers are hoping to get Marriott Marquis as IUPAC venue. Potential attendees will probably register for IUPAC, where they will get an individual code that they will enter to get member rates for ACS meeting registration.
    - Banner, pens, and pins will be ordered for outreach at ACS and other meetings.
  - f. 2012 election
    - Nominating process produced a good ballot.
    - Voting will occur June 11-July 11. Balloting is early this year because Vice-Chair will be program chair for AGRO and IUPAC in 2014.
      - So far, 21% of electorate has already voted. Typical turnout is 24-26%.
      - Note that the official voting membership list needs to be requested from ACS and ballot sent to them only.
      - EC vacancies may be created by election. When current EC members become officers, their position will need to be replaced. Could request the next-highest-vote-getters from EC election.

### 3. New business

- a. Biopesticides programming – Jim Seiber, Steve Duke
  - **Action item:** Steve and Jim will submit by July 1 an Innovative Project Grant application for 2013 programming. Asking for \$5000 to sponsor symposium on chemical aspects of biopesticides. Intended to open outreach to additional community and to broaden AGRO programming.
- b. AGRO job openings
  - Remind members that some committees have openings.  
**Action item:** Let AI know of members to recruit for the following committees:

- Social, Communications (editor for *PICOGRAM*), Bylaws, Membership Committees.
  - Will also need people to evaluate New Investigator Award nominations.
  - Consider appointing one of the Membership Committee members to be the volunteer coordinator.
- c. Laura: Instituted an AGRO account on Twitter. Let Laura know if you know someone who is well-connected with AGRO happenings and who is Twitter-savvy.

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## *AGRO Division Annual Business and Governance Meeting*

### *American Chemical Society 244<sup>th</sup> National Meeting – Philadelphia, PA*

**Sunday, August 18, 2012**  
**5:00 - 9:30 pm, Loews Hotel, Philadelphia**  
**Chair – Al Barefoot**

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#### Participants

Officers: Al Barefoot (Chair), John Clark (Program Chair), Steve Duke (Vice Chair), John Johnston (Treas.), Sharon Papiernik (Sec.)

Past Chair: Ken Racke

Councilors: Rod Bennett, Jeanette Van Emon, Barry Cross (alt)

Executive Committee: Julie Eble, Cathleen Hapeman, Mike Krolski, Laura McConnell, Liliana Schwartz, Keith Solomon

Members: Diana Aga, Troy Anderson, Tim Ballard, Joel Coats, Aaron Gross, Del Koch, Marja Koivunen, Steve Lehotay, Ann Lemley, Kolumbu Malekani, Jason McDonald, Tom Mueller, Ron Parker, Paul Reibach, Philip Sarff, Scott Senseman, Teresa Wehner, Jerome Wiedmann

1. **Secretary's Report** – Sharon Papiernik listed selected accomplishments of the AGRO Division in 2012, then pointed out some 2012 action items that are still open:
  - Bylaws were revised in response to approved changes proposed by Committee on Committees, and updated to include electronic balloting and AGRO programming at one national ACS meeting per year. Revised bylaws to be circulated for review (60 days) and vote open to all AGRO members and approved via established ACS procedures.
  - Discussion of how to manage AGRO Archives
    - ACS has no means of storing archives for local sections and divisions.
    - Chemical Heritage Foundation will provide 55 linear feet of storage space free of charge. Barefoot is negotiating a contract with the CHF and Barefoot and Papiernik will call for archive items (not to exceed 55 linear feet) once the contract is established.
  - Recommendation was that bylaws committee is responsible for maintenance and communication of the Operations Manual posted on the AGRO website. Want to include that in Operations Manual?
  - Finance Committee will check into mechanism and cost of bonding AGRO Treasurer.
2. **Nominating Committee** – Ken Racke, Ellen Arthur, Kevin Armbrust
  - The AGRO Nominating Committee is highly appreciative of those candidates who agreed to appear on the ballot, and also thank those who nominated others or volunteered for particular offices.

- The AGRO balloting process this year ran from June 11 to July 11, which was about one month earlier than for past several years. As for the past several years, we employed the services of James Claiborne (JClaiborne@vote-now.com) of Vote-Now for the electronic voting. They created a website and provided email instructions and reminders to the AGRO membership. We found James and Vote-Now to provide an excellent quality product and highly responsive service.
- Comments posted from the electorate during the balloting process were almost universally positive. People liked the electronic format, found the ballot easy to navigate, appreciated the posted bio information on candidates, and were pleased with the slate of candidates. One commenter would have liked to see all the elected offices as contested (we tried hard!). Another commenter had some initial ballot difficulties, but was quickly aided by Vote-Now staff.
- Voting participation by AGRO members was similar to past years since the electronic process was adopted, with about one-quarter of the members voting. As an important note in the election process, ACS *upon request* provides a certified "members only" list to be used in elections (the standard listing is not "official").
- In 2012, 292 of 1101 (26.5%) eligible members voted, about the same as 2011, when 304 of 1177 (25.8%) members voted and 2010, when 283 of 1288 (22.0%) members voted.
- Results of the 2012 election have been certified by AGRO Division Secretary Sharon Papiernik and are as follows:
  - **Cathleen Hapeman** has been elected as Vice-Chair, with 1-yr term beginning at the conclusion of the fall ACS national meeting (i.e., Aug-24, 2012).
  - **Del Koch** has been elected as Treasurer, with 1-yr term beginning Jan-1, 2013.
  - **Sharon Papiernik** has been re-elected as Secretary, with 1-yr term beginning Jan-1, 2013.
- **John J. Johnston, Michael Barrett, Troy D. Anderson, Steven Lehotay, and Wenlin Chen** have been elected as the new at-large members of the Executive Committee, with 3-yr terms beginning Jan-1, 2013.
- Past Chair Al Barefoot will form the 2013 Nominating Committee

3. Treasurer's Report – John Johnston presented the following:

	7/31/2008	7/31/2009	6/30/2010	6/30/2011	7/31/2012
Savings Acct.				2,405	507
Checking Acct.	8,893	65,226	5,482	87,102	63,728
<b>Investments</b>					
Spectrum Income (TR Price)	173,566	137,856	135,653.79	136,563	141,098
Prime Reserve (TR Price)	1,310	1,328	1,324	1,324	1,324
Educational Trusts (JP Morgan)	380,902	317,627	306,066	343,670	332,485
ACS Investment Pool	25,936	21,681	0	0	0
<b>Total Investments</b>	<b>581,714</b>	<b>478,492</b>	<b>443,044</b>	<b>481,557</b>	<b>474,907</b>
<b>Total Assets</b>	<b>590,607</b>	<b>543,718</b>	<b>448,526</b>	<b>568,659</b>	<b>539,142</b>

<b>INCOME</b>			
<b>GENERAL PATRON</b>			
	USDA ARS		
	Syngenta		5,000
	Monsanto		4,000
	CropLife America		1,000
	Coffee Fund		2,850
	Pacifchem		3,500
	total	16,350	
<b>ACS DUES AND DIVISIONAL ALLOCATIONS</b>			
	Spring membership allocation		7,132
	Div allocation		17,610
	Fall membership allocation		8,464
	ACS Innovation grant		7,500
	Councilor travel reimbursement		3,049
	Div allocation		4,222
	total	64,327	
<b>COMMUNICATIONS:</b>			
	Picogram Ad Revenue-Spring		2,700
	Picogram Ad Revenue-Fall		2,700
	E-newsletter		450
	total	5,850	
<b>ROYALTIES</b>			
	OUP		3,904
	total	3,904	
<b>RESTRICTED PROGRAMMING SUPPORT</b>			
	Dow Early Investigator		
	Dow Endangered Species Symposium		10,000
	DuPont – International Award		4,000
	Intrinsic Endangered Species Symposium		1,000
	CropLife America Endangered Species Symposium		1,500
	Waterborne Tribal Pesticide Use Symposium		500
	total	17,000	
<b>EDUCATIONAL FUND (3% of Fund value for 2011)</b>			
	Fund value- December 31 = 337,426		10,123
	total	10,123	
<b>INTEREST</b>			
	Spectrum Income Fund - assumes 0.5% yield		
	Fund Value - Dec 31 =140,386		702
	total	702	
<b>MISC.</b>			
	ACS credit for Sterling Hendricks billing		
	other		390
	total	390	
<b>TOTAL INCOME</b>		<b>118,646</b>	

<b>EXPENSES</b>		
<b>COMMUNICATIONS, ETC.</b>		
SPRING PICOGRAM		10,137
INTERNATIONAL MAILING		1,593
WEB HOSTING		1,600
WEBSITE DEVELOPMENT		3,250
E-LIST MAINTAINANCE		288
FALL PICOGRAM		17,866
INTERNATIONAL MAILING		1,875
MISC		210
	total	36,819
<b>OFFICERS &amp; COUNCILORS TRAVEL</b>		
Councilor Travel		4,743
	total	4,743
<b>ELECTION EXPENSES:</b>		
	total	1,492
<b>SPECIAL MEETINGS AND TRAVEL</b>		
STRATEGIC PLANNING MEETING		8,615
5th Pan Pacific, 4th Int Environ, 8th Residue harmonization		547
int'l meeting other (World Chem Congress, Latin Am. Pest Wkshop)		2,098
	total	11,260
<b>NATIONAL MEETING EXPENSES</b>		
EARLY INVESTIGATOR PRIZE AND TRAVEL		
Award plaques		314
GRADUATE STUDENT POSTERS, TRAVEL & PRIZES		16,924
INT. AWARD PRIZE		5,000
INT. AWARD SPEAKER TRAVEL		0
AGRO OFFICER NATL MEETING TRAVEL		4,813
Complimentary registrations		14,345
Speaker Travel		28,600
Other Nat'l meeting expenses (AV, Shipping)		1,422
	total	71,418
Coffee, Social, B and B, Business meeting		
Social		7,698
Business meeting		2,179
Blues and Brews		1,556
Coffee - Technical Sessions		6,399
Sterling Hendricks		2,711
	total	20,543
<b>TOTAL EXPENSES</b>		<b>146,275</b>
<b>BALANCE</b>		<b>-27,629</b>

#### 4. Finance Committee – Joel Coats

- The AGRO Division's financial health is good overall, due to excellent support from our patrons, excellent programming that keeps our revenue from ACS strong, special grants, earnings off of investments, and financial reserves. Over the past couple of years revenue has not kept up with expenses, however, cutting some expenses and enhancing of revenues have the division in a position to have a more balanced budget in 2013. In 2012 we're spending significantly less on coffee in meeting rooms, and recommending that even less be spent on coffee and social in 2013. We're spending 4% of the Education Fund in 2012, but recommending that 3.5% of it be spent in 2013.
- We have recommended cutbacks on certain expenses, especially on social events with food and drinks. The

upward revenue trend is especially strong in the area of patron support, partly due to aggressive recruitment of patrons and the fact that the agrochemical industry overall is doing well. Our loyal sponsors of our awards have continued to support our division well. Also, several AGRO members have also been aggressive in preparing proposals for Innovative Project Grants, with good success; the Journal of Agricultural and Food Chemistry is offering to help support our reception.

- Barefoot led a discussion about AGRO operating in a deficit in recent years, and the projected deficit in 2013. The finance committee recommends reducing spending for speaker travel and registration waivers. Some attendees argued in favor of increasing membership and increasing sponsorship, including seeking sponsors for technical

sessions/symposia, sponsorship of the social, and looking to instrument manufacturers and other industry in addition to those currently sponsoring AGRO programs. There was some discussion about selling access to presentations posted online or requiring AGRO membership for access. A recommendation was forwarded that we appoint a venue chair for each meeting to work with the program chair and other officers. The venue chair would be assigned to investigate local/regional/national sponsorship for each meeting.

- **Action Item:** Scott Jackson, Steve Duke, John Johnston, Del Koch, and other volunteers will solicit sponsorship for 2013 meeting
5. **Awards Committee – Jim Seiber** encouraged attendees to nominate deserving people for AGRO awards. He recognized the following:
    - AGRO Fellow Award: Jeff Jenkins, John Johnston
    - 2012 International Award: Thomas Sparks
    - Innovation Award: Steven Lehotay
    - Sterling Hendricks Award: Eric Block
    - 2013 International Award will go to Rene Feyereisen
    - Barefoot recognized Jeanette Van Emon, 2012 ACS Fellow
    - The full Awards report is published in the *PICOGRAM*.
  6. **Bylaws Committee – Rod Bennett** submitted revised bylaws, which were distributed to the Executive Committee in advance of the meeting.
    - A brief discussion of the changes ensued. Bennett explained that the distinction between SOCIETY (ACS) and Society (AGRO) was boilerplate text from ACS. With electronic balloting, the Tellers Committee has consisted of the chair of the nominating committee. Bennett explained the multi-step process required to enact revised bylaws.
    - **Motion:** Executive Committee accept the revised bylaws as presented. Passed.
  7. **Early Career Scientist Committee – Marya Koivunen** noted that the graduate student abstracts are published in the *PICOGRAM*. All 18 received a travel grant of \$600 plus \$780 student registration. Posters were to be displayed and judged on Monday. Prizes will be \$100 for 3<sup>rd</sup> place, \$200 for 2<sup>nd</sup> place, and \$300 for 1<sup>st</sup> place.
  8. **New Investigator Award – Steve Lehotay** presented information about the New Investigator Award. Talks are in regular symposia. The winner of the New Investigator Award (\$1000 prize supported by Dow) will be announced at Blues and Brews.
  9. **Programming –**
    - Philadelphia Meeting – John Clark organized an excellent program for 2012, including 18 technical symposia, 6 award symposia, and 41 sessions
    - Indianapolis – Steve Duke reported that the program is coming together well, with commitments to organize 15 technical sessions and 2 additional symposia in development now.
    - Co-sponsored meetings
      - 5<sup>th</sup> Pan Pacific
      - 4<sup>th</sup> International Symposium on Pesticide and Environmental Safety
      - Steve Lehotay noted that AGRO is listed as a sponsor of the North American Chemical Residues Workshop (formerly the Florida Pesticide Residues Workshop). He requested that AGRO co-sponsor the Latin American Chemical Residues Workshop and provide a \$100 poster award as we have done in the past.
  10. **ACS Books – Bob Hauserman** updated the group of developments in ACS books, and expressed their appreciation of AGRO's record in producing ACS publications, especially ACS Symposium Series. Hauserman said that the ACS website is getting many hits on books; they are using e-blasts to advertise symposium series, and advertising overseas, especially for e-books. Currently, buyers can only purchase 1 chapter at a time, but ACS is testing an approach to provide an entire book as a download using ePub standard formatting.
    - 2014 San Francisco – (Hapeman program chair) programming discussions initiated
    - 2015 AGRO venue- Boston, August 16-20
  11. **Health and Environmental Sciences Institute (HESI) presentation – Jennifer Young and Cyril Pettit** from HESI discussed the Institute's mission, current program, and opportunities for ACS Divisions to collaborate with HESI: engaging members outside of the national ACS meetings and assembling tripartite (industry, academia, government) teams to partner to advance the science and provide scientific input to educators, regulators, and funding organizations on important research topics.
  12. **IUPAC 2014 – Ken Racke** led discussion of progress in planning the program and sponsorship for IUPAC in 2014. The organizing committee has met several times by teleconference and will meet Monday at noon: all are welcome. Many more volunteers are needed.
    - IUPAC sessions will be held in the Marriott Marquis
    - ACS is very supportive of AGRO sponsorship of the IUPAC Congress. The organizers have met with key ACS people. The Congress will use PACS and attendees will receive the ACS member registration rate.
    - Scientific Program chair is Cathleen Hapeman. Jay Gan has agreed to serve as associate chair. Main topics are essentially those included in recent IUPAC Congresses; program leads, etc. are being developed.
    - The sponsorship and finance committee has had several discussions. A revised budget was presented, based on the 2002 (Basel), 2006 (Kobe), 2010 (Melbourne), and typical

*The group broke for dinner from about 7 to 7:30.*



AGRO meetings. They are projecting 1200 attendees, with income sources: \$316,000 in industry sponsors, \$83,000 in foundation and government sponsors, \$40,000 in IUPAC surplus, \$20,000 in banquet tickets, and \$10,000 in miscellaneous income. Projected expenses are: \$20,000 for facilities, \$10,000 for secretariat and site operations, \$21,000 for planning infrastructure, \$130,000 for catering, \$120,000 for speaker and student support, \$107,000 for communications, \$51,000 for awards, and \$10,000 for miscellaneous expenses. Guidelines for sponsorship opportunities and benefits was distributed, ranging from \$500 to \$100,000. The committee plans to approach potential major sponsors by the end of 2012.

- Advertising is ongoing. The Congress is being publicized at co-sponsored meetings. See [iupac2014.org](http://iupac2014.org).
  - An International Advisory Committee is being formed, with members consisting of AGRO International Affairs Committee, former IUPAC organizers, etc. It is expected that members would publicize the Congress and recruit attendees from their region.
  - Organizers made a general appeal for volunteers to help bring the Congress to successful completion.
- 13. Councilor's Report** – Jeanette Van Emon, Rodney Bennett
- The Council Committee on Divisional Activities (DAC) has formed a working group with the Council Committee on Meetings and Exhibitions (M&E) to formulate policy on ACS Presentations on Demand. The three primary areas to be addressed by the working group include: policies regarding live remote participation; policies regarding the capture and subsequent distribution of content originating from the ACS national meetings; and policies regarding Division access to content that it (or other Divisions) contributed to the ACS Presentations on Demand collection of presentations after the 18 month access period concludes. These policy issues are still under discussion.
  - The Divisional Enhancement Subcommittee of DAC is receiving more Innovative Project Grant proposals than available funds. The Subcommittee has emphasized that this is meant to be seed money for a project, which, if successful, will be replicated using Division funding.
  - Concern has been expressed that only about half of the Divisions are participating in the MPPG. Tentative themes set for spring 2012 (San Diego) are "Computers in Chemistry" and Fall 2012 (Philadelphia) "Chemistry in Education." Posters are also wanted for the MPPG and placards will be displayed at Sci Mix indicating a poster is part of the MPPG. Divisions get good publicity for participating in the MPPG and there is a financial incentive.
  - The online abstract submittal system PACs will not be supported beyond December 2014. ACS staff will provide DAC and M&E quarterly updates on the search for the new system. Hopefully this new system will have better time frames for submission dates. The replacement system should be determined in November, 2012. User training will be conducted 01/2014 – 06/2014. The new system will be open for the Denver (Spring 2015) call for papers.
  - The ACS will roll out a new bulk email system in 2013. ACS is looking for Divisions to volunteer for Beta-testers this fall.
  - DAC received a presentation on incoming ACS President Mirinda Li Wu's priorities which include: global collaborative projects and initiatives; an international employment initiative; globalization symposium and roundtable discussions; collaborations with international societies to enhance the public image of chemistry;

employment opportunities; and advocacy of the central science of chemistry.

- The PacifiChem 2015 will be held December 15-20, 2015 in Honolulu, HI. Proposal submission opens January 2, 2013 and closes April 1, 2013. The date for abstract submissions has not been set yet.
  - The Kavli Lecture program has been very successful. The Kavli Foundation will initiate a new program for scientists less than 40 years of age.
  - The Association of Laboratory Managers (ALMA) is interested in becoming part of the ACS. Representatives from ALMA addressed DAC and are meeting with other Council Committees. There is an interest in embracing other societies within the ACS. Please let me know if you have any ideas on how this can best be accomplished or if you have suggestions for societies to become part of ACS.
- 14. Membership Committee** – Dan Stout was not in attendance, but submitted the following:
- Membership has remained relatively stable over the last year and trends only slightly downward for the previous two year period.
  - Adds/drops are variable but despite some spikes in drops the division continues to successfully recruit new members.
  - AGRO should request ACS National to provide all past rosters be archived and available to division.
  - All communications to dropped members are handled electronically.
- 15. Strategic Planning Committee** – Laura McConnell summarized the Strategic Planning report (published in the Picogram), which includes accomplishments in 2011 and activities in 2012. Discussion ensued regarding reviving the Membership Committee to recruit new members and retain existing members. Several people seemed willing to contact Dan Stout to volunteer to help him.
- 16. Communications Committee** – Cathleen Hapeman led a discussion of Communications Committee activities:
- *PICOGRAM*: Special thanks to Chris Peterson for helping edit abstracts. Printing is now completely digital. Communications should use official names of awards (from Seiber). John Beck may become Associate Editor beginning next year. Ad prices have been increased but will still not defray the cost of printing and mailing.
  - **Action**: The deadline for AGRO Fellow nominations is hereby changed to March 31.
  - AGRO e-newsletter: Yelena Sapozhnikova has been diligently compiling and sending the e-newsletter usually monthly or when special event need extra emphasis. A new program, easier-to-use program is being tested.
  - Public Relations: Jeff Jenkins prepares press releases of the AGRO award winners. May consider using Twitter (we have an account).
  - Website: Laura McConnell is updating the site on a fairly regular basis. Reminder of the opportunity to upload presentations: authors must sign release form available at AGRO desk.
  - Webinar: McConnell noted that the first webinar will occur on Wednesday afternoon (Perfecting Communication of Chemical Risk); several reminders were sent by e-mail through ACS.
- 17. Social Committee** - Julie Eble
- Jeff Jenkins organized the social. The Journal of Agricultural and Food Chemistry (JAFC) is co-sponsoring,

providing \$5000 for the event. JAFc is celebrating its 60<sup>th</sup> anniversary this year. Seiber (editor) noted that many AGRO members serve on the advisory board, publish in JAFc, and provide reviews. [Note→provide JAFc update as an agenda item at future AGRO Combined Governance meetings.]

- This year, letters were not sent out soliciting donors for the “coffee fund.” This will be corrected in the future and will be accomplished through the Development Committee.
- The Graduate Student Luncheon will be held on Monday.
- **Action:** Racke proposed that Dow host the 2013 AGRO social in Indianapolis at the Dow facility. He expects that Dow will contribute some of the expenses of food, etc. at the social. Proposal accepted by acclamation.

#### 18. Development Committee - Laura McConnell, Del Koch

- The Committee designed categories for giving to AGRO. These are listed on the website. They are seeking input from donors on the value of AGRO sponsorship to better tailor opportunities.
- Requests for sponsorship are being streamlined so that organizations are asked only once per year to sponsor AGRO activities. This should simplify giving.
- Discussion that perhaps smaller donations should be amalgamated to sponsor the social or another activity.

#### 19. International Activities Committee – Ken Racke

- Primary focus is early planning for the IUPAC/AGRO 2014 Congress (see IUPAC 2014 item above).
- The Committee is also supporting the 5<sup>th</sup> Pan Pacific Conference on Pesticide Chemistry to occur in Beijing, China during September 2012. Gan submitted a funding proposal to the ACS Committee on International Activities to help support travel costs associated with AGRO attendance and operation of an AGRO promotional booth at the Conference. No word on outcome at this time.

*The next AGRO Combined Governance Meeting will be in Indianapolis: Sept 8, 2013, 5 pm*

*Outgoing Chair (Barefoot) was presented a plaque in appreciation of this service. The gavel was passed to Incoming Chair (Clark).*

*Adjourned at 9:30 pm*

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## COUNCILORS' REPORT FOR THE 2012 FALL NATIONAL MEETING

Jeanette Van Emon & Rodney Bennett

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The ACS fall national meeting attracted 13,320 registrants, including 7,817 regular attendees and 3,177 students. The Council meeting addressed a full agenda. Following are several of the key actions and discussion points of the Council and ACS Board of Directors meetings.

#### ACTIONS OF THE COUNCIL

- The Council received a Petition to Amend National Election Procedures to shorten the campaign period for candidates for President-Elect and to charge the Committee on Nominations and Elections (N&E) with proposing two candidates for President-Elect. Currently, four *nominees* are proposed from which Council selects two *candidates*. Under the petition, Council would no longer vote on a list of nominees. The process of petition candidates would not change. The Petition to Amend National Election Procedures will be on the Council agenda for action at the 2013 spring meeting.
- As part of a regular performance review, the Council voted to continue the Joint Board-Council Committees on Chemists with Disabilities and on Professional Training. Continuation of these two committees also requires Board of Directors concurrence.
- The Council voted to establish a Joint Board-Council Committee on Senior Chemists (age 60 and over) that would utilize the talents of senior ACS members to enrich the entire ACS Membership by sharing with ACS members of all ages a rich variety of personal experiences and expertise gained through years of professional service. These Senior Chemists would recommend policies that address issues of interest to senior chemists; help foster interest and participation in chemistry through outreach to schools and communities; and act as science advisors/ambassadors for the purpose of cultural

exchange at home and abroad. The Board of Directors must now vote on whether to establish the committee.

- ACS President Bassam Shakhshiri presented a special discussion item on “What major efforts should ACS pursue to help alleviate water and other global challenges?” Members of the ACS feel a responsibility as scientists and citizens to help address global challenges (e.g., limited natural resources, malnutrition, disease, climate change, the denial of basic human rights, including the right to benefit from scientific and technological progress) facing society in the 21<sup>st</sup> Century to help sustain Earth and its people. There is a Councilor discussion group on this issue. If you have any input please let either one of us know.
- The Council passed a resolution to honor the 100<sup>th</sup> anniversary of the birth of Glenn T. Seaborg, Chemistry Nobel Laureate and past ACS President.

#### ACTIONS OF THE BOARD OF DIRECTORS

- The Board approved an advance member registration fee of \$370 for national meetings held in 2013.
- The Board voted that an in-depth review of the expectations for the financial goals for National Meetings be performed, and that a financial plan for the long-term viability of the ACS *Presentations on Demand* program (formerly known as Electronic Dissemination of Meeting Content) be developed.
- A nine month study confirmed that CAS and ACS Publications are fulfilling ACS's strategic goals. The study affirmed the robust operating performance of CAS and ACS Publications from both mission and financial viewpoints.

- In order to increase the available time for abstract submission for the ACS National Meetings, the Committee on Meetings and Expositions will be studying the feasibility of eliminating the print version on-site program books with a target of the 2013 fall national meeting in Indianapolis.
- The 25<sup>th</sup> anniversary of National Chemistry Week will be celebrated October 21-27 with the theme, "Nanotechnology – The Smallest BIG Idea in Science!"
- The 10<sup>th</sup> anniversary of Chemists Celebrate Earth Day will be celebrated in 2013. All local sections are encouraged to participate.

#### INFORMATION SOURCES PRESENTED AT THE COUNCIL MEETING

- [www.acs.org/ChemistryAmbassadors](http://www.acs.org/ChemistryAmbassadors) - Information on the Chemistry Ambassadors program
- [www.facebook.com/ChemistryAmbassadors](http://www.facebook.com/ChemistryAmbassadors) - Chemistry Ambassadors group on Facebook
- [www.acs.org/getinvolved](http://www.acs.org/getinvolved) - Details regarding Innovative Project Grants through the Committee on Local Section Activities
- [www.acs.org/climatescience](http://www.acs.org/climatescience) - Information on the ACS Climate Science Toolkit
- [outreach@acs.org](mailto:outreach@acs.org) – Contact email for more information on the Coins for Cleaner Water initiative
- Please let us know if we can be of service to you on any of the above items or if you have any other issues for the Council. We appreciate being AGRO's Councilors!

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

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*\*\*\* 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 Division 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.



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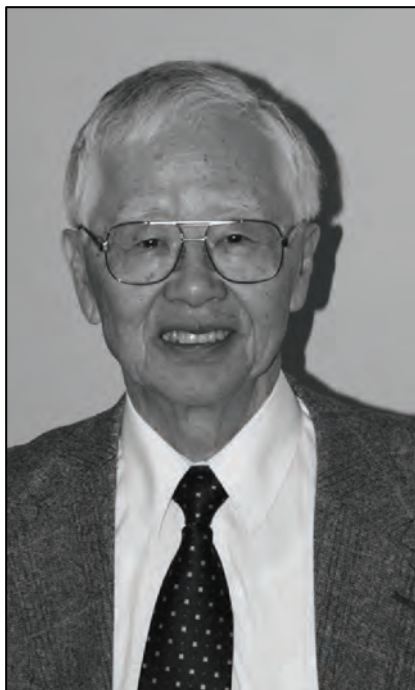
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# Fumio Matsumura: A Grand Master of Insect Toxicology

## 'Our Profession Has Lost a Treasure'

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Fumio Matsumura, 78, a distinguished professor of environmental toxicology and entomology at the University of California, Davis, and internationally known as "one of the grand masters of insect toxicology," died of complications from pneumonia Thursday, Dec. 6, 2012 in a Sacramento hospital following a brief illness.



Dr. Matsumura, a member of the UC Davis faculty since 1987, was founding director of the Center for Environmental Health Sciences, editor-in-chief of the journal, *Pesticide Biochemistry and Physiology*, and wrote the classic textbook, *Toxicology of Insecticides*, first published in 1975 and used by generations of college students throughout the world, including at UC Davis.

"For some 50 years, Fumio has been at the cutting edge of both pesticide and environmental toxicology, and his pioneering research has helped to define both fields," said Ron Tjeerdema, professor and chair of the UC Davis Department of Environmental Toxicology. "Fumio has also been a major contributor to the success of our department, and his legacy will continue for many years to come through the many students and postdoctoral fellows he has mentored."

Born Feb. 5, 1934 in Japan, Professor Matsumura received his bachelor's degree in agricultural biology in 1957 from the University of Tokyo; his master's degree in entomology in 1959 from the University of Alberta; and his doctorate in entomology from the University of Western Ontario in 1961.

He did postdoctoral work at the University of Wageningen, Netherlands, and Cornell University. In 1964 he joined the Department of Entomology faculty at the University of Wisconsin, Madison. In 1977 he was appointed director of the Pesticide Research Center at Michigan State University. He joined the UC Davis faculty in 1987 as associate director of the Toxic

Substances Program and later served as director of the Center for Environmental Health Sciences.

His research involved the environmental toxicology of pesticides and dioxin-type chemicals; toxicology of pollutants; microbial degradation of toxicants; insect toxicology; and extensive studies of biologically active substances, oncogenes, and protein kinases.

Bruce Hammock, distinguished Professor of Entomology and longtime friend and colleague, described him as "so much fun and so stimulating. Each day he made the world a brighter and more interesting place with his enthusiasm over science, teaching, and pleasure of life." Dr. Hammock also noted that Fumio was among the first members of the NIEHS Superfund Basic Research Program on campus which was just getting underway at UC Davis.

"We were really fortunate to be able to attract Fumio from Michigan State," said James Seiber, editor of the *Journal of Agricultural and Food Chemistry*, an emeritus professor of environmental toxicology at UC Davis, former Chair of Environmental Toxicology and longtime colleague of Dr. Matsumura. "He brought spirit, energy, and knowledge that has been essential to our faculty, and students in the pursuit of excellence in environmental health science. What tipped the scales for Fumio in favor of Davis was a five foot snowstorm in the Sierras during one of Fumio's trips to California. Fumio was an avid skier (he was on the slopes as soon as road conditions permitted), fisherman, and hiker, and loved the Sierras."

"Fumio was a pioneer and a giant in the field of toxicology, but also an outstanding educator and the ultimate gentleman," said Joel Coats, the Charles F. Curtiss Distinguished Professor in the Department of Entomology, at Iowa State University, who worked with him on scientific advisory panels. "Our profession has lost a treasure." Among his recent honors, Dr. Matsumura was invited to deliver the 20<sup>th</sup> annual Paul A. Dahm Memorial Lecture in April of 2011 at Iowa State, where Coats introduced him as "one of the grand masters of insect toxicology" and described him as an "outstanding scientist and scholar, and a great mentor, role model and gentleman." "We worked together on scientific writing projects and professional conferences," Coats said. "He was a highly respected colleague of mine, but also a role model for me and numerous others who looked up to him and followed his lead."

Said Michael Parrella, Chair of the Department of Entomology and Nematology at UC Davis, "Fumio Matsumura was one of the foremost insect toxicologists in the world. His work will endure, but we have lost a wonderful colleague, teacher and scholar." Robert Rice, Professor of Environmental Toxicology commented that he "was always amazed by Fumio's intuition, the

way he could simplify a complex problem and find the key concept to explain it". Qi Zhang, also a faculty colleague in Environmental Toxicology, described Fumio as "a mentor and a deeply respected colleague. He generously shared his wisdom into the many issues of academic life. He also warmly reminded me many times the importance of exercises and not sitting for too long. He was a great source of insights, information, and inspiration"

Professor Matsumura recently wrote: "My lifetime goal as an environmental toxicologist is to elucidate the true biological role of the aryl hydrocarbon receptor (AHR) which was once thought of as a mere receptor solely dedicated to mediate the toxicity of dioxin" That goal led to studies into cancer initiation and therapy, the interaction of AHR with Heat-Shock Protein, mechanisms of apoptosis, and other fundamental processes." Professor Matsumura served as director of the NIEHS-funded Center for Environmental Health Sciences program, which he established in 1992 at UC Davis. It involved more than 40 faculty, staff, and students in 13 UC Davis departments. His own research supported by the Center grant included mechanisms of action of tetrachlorodibenzodioxin (TCDD), mechanism of estrogenicity of DDT analogs, fungal metabolism of pentachlorophenol (PCP) in agricultural soils, and an epidemiological approach to the study of the health effects of dioxins among Vietnam War veterans.

His many activities also included serving as director of the IR-4 Leader Laboratory, which facilitates pesticide registrations for minor and specialty crops, and member of the IR-4 national Technical Committee, an activity that began while he directed the Pesticide Research Center at Michigan State University and the national IR-4 program was being initiated. He was a member of the American Chemical Society, Society of Toxicology, and Society for Environmental Toxicology and Chemistry.

Professor Matsumura was an active member of the Graduate Groups in Pharmacology and Toxicology and Agricultural and Environmental Chemistry at UC Davis, and chaired the Department of Environmental Toxicology from 1996-1998. He regularly taught two graduate level courses, on environmental toxicants and ecotoxicology, organized seminars in environmental toxicology and entomology, and mentored dozens of graduate and undergraduate students and postdoctoral fellows. Professor Matsumura also was an enthusiastic

participant in the NIEHS-funded training grant in Environmental Toxicology which supports graduate students in several departments at UC Davis in Agricultural and Environmental Sciences, Medicine, and Veterinary Medicine.

He lectured worldwide, including at international conferences and congresses, and was a member of numerous international scientific committees. He received the Burdick and Jackson International Award for Research from the Division of Agrochemicals, American Chemical Society. He and his students and colleagues authored more than 400 books, book chapters, and scientific journal manuscripts.

Among his awards and honors: World University Service (WUS/UNESCO) Scholar (1957); National Research Council Scholar (1960-61); Distinguished Scientist Award (College of Natural Sciences, Michigan State University Alumni Association, 1983); Burdick and Jackson International Award (American Chemical Society, Agrochemical Division, 1987); Founders Award (Society for Environmental Toxicology and Chemistry, 1988); Scientific Counselor, National Toxicology Program; Eminent Scientist Award (Riken Institute, Japan, 1995); Lifetime Achievement Recognition Award by the Society of Pesticide Science, 1995; Mochizuki Prize for Chemical Safety Research, 1995; USEPA FIFRA Scientific Advisory Panel (Environmental Protection Agency/Federal Insecticide, Fungicide and Rodenticide Act) (1998-2003); and Distinguished Professor Designation by UC Davis, 2003.

Plans were underway to celebrate his 80th birthday at the ACS national meeting in San Francisco in 2014, which will be held jointly with the International Union of Pure and Applied Chemistry (IUPAC)'s Congress of Pesticide Chemistry

Dr. Matsumura is survived by his wife, Teruko, of Davis, and two sons, Ichiro and Miko. The family and UC Davis are establishing the Fumio Matsumura Annual Symposium memorial fund in his honor, and a memorial gathering is being planned for early in 2013 at UC Davis. Information of the memorial fund can be obtained from the College of Agricultural and Environmental Sciences Dean's office (c/o Mark Foncannon), 140 Environmental Horticulture, One Shields Avenue, Davis, CA 95616.





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If you are an AGRO member, you are already enrolled in our email newsletter service. If you are not currently receiving the newsletter, you can sign up on our webpage, [www.agrodiv.org](http://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 at

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Each issue has an opt-out link where members can remove their email address from the list.

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