



# NEWSLETTER

INTERNATIONAL SOCIETY OF CHEMICAL ECOLOGY

Volume 21, Number 1, April 2004

## IN THIS ISSUE

- [Secretary/Editor's Message](#)
- [Message from the President](#)
- [Update on the 2004 Joint Meeting of ISCE and PSNA, Canada July 24-28, 2004](#)
- [ISCE Elections, 2004 Candidates for ISCE Vice-President](#)
- [ISCE Elections, 2004 Candidates for ISCE Councilors](#)
- [Upcoming Meeting Of Interest](#)
- [Member News](#)
- [Positions Available](#)

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Deadline for the next issue is May 25, 2004.

## Secretary/Editor's Message

With the annual meeting barely over 3 months away it is important to remember **May 28**. This is the date for early registration, accommodation requests and submission of abstracts for talks and posters. While early registration means payment of less money for you, it also gives the organizers an estimate of the numbers likely to attend the meeting. This is important for the organizers in planning the amount of time and space set aside for talks and posters. However, perhaps more importantly, it is critical for the organizers in finalizing the scale of the meeting. In recent years, ISCE annual meetings typically range from 150 - 400 participants. Organizing a meeting for 150 people is a completely different proposition from organizing one for 400 plus. The number of rooms, size of rooms, catering for social events and accommodation must all be estimated fairly accurately to reflect the number of attendees. This is especially important since organizers of ISCE annual meetings carry a potential financial responsibility for the meeting. If the number of attendees is overestimated, organizers could be financially embarrassed; if numbers are underestimated, then a meeting could be like the proverbial sardines in a can. As you can imagine, this estimating, and following the registrations as they accrue, can be a stressful time for organizers. Therefore, if you are intending to go to the meeting, I ask you to be sympathetic to the organizers and [register](#) as soon as possible.



It is also time for the election of a new vice-president and councilors for the society. The quality of candidates this year is exceptional, so please view the [website](#) and vote for your preferences. The electronic voting option is the most convenient way for accumulating and counting votes. Remember that the vice-president will become president the following year and can have an important effect on the direction of the society. At

the annual meeting, the council, complete with newly elected members, will discuss society business. If you have any thoughts or ideas on the society and membership, please communicate these to me as soon as possible so that I can put them on the agenda for the meeting. Along with the general business meeting at the annual meeting, this is the best opportunity you have as a member to influence directly the future of the society.

Finally, on the issue of membership, may I request that people [update their membership information](#) on the website. In particular, keeping your email address current would be greatly appreciated. Mass mailings of notices are ALWAYS accompanied by numerous email returns from system administrators. Some of these are due to incorrectly entered email addresses, while others are due to people changing their positions and email addresses. If you are not receiving email notifications of newsletters or membership updates, please reenter your information on the website. Remember that all membership information is collated by [Steve Teale](#). So, if you have any enquiries on this subject, direct your communication to him.

Stephen Foster  
Secretary, ISCE

### Message from the President



The 2004 joint meeting of our International Society of Chemical Ecology and the Phytochemical Society of North America is only a few months away. This will be a great chance for us to get together and exchange information face-to-face about the advances we have made in our chemical ecology research during the past year. The meeting this year also provides an unusual opportunity to meet with our colleagues working in phytochemistry and to glean new insights from their reports as well as generate new friendships and research collaborations from the personal interactions we will have with our fellow researchers from that organization.

So I urge you to make your plans now to attend this meeting especially if you've been trying to decide whether to attend or not and haven't yet sent in your forms. Details on registration, accommodations, paper submissions, can be found in other sections of this newsletter.

I would also like to strongly urge all members to please look around your own labs and your own departments and determine if there are people who should be members of the International Society of Chemical Ecology and are presently not members. If so, it would be great if you would gently encourage these people to become members. It costs only \$35, and it definitely is one of the big bargains in the world as far as belonging to a scientific organization. I recently urged the people in my lab to [join ISCE](#), and it was easy to get them to join. They didn't know it was so cheap.

On a final note, at the meeting in Ottawa I will be convening a committee to examine "success stories" in the world's use of semiochemicals, with the idea of compiling these into a compelling document to be used for generating interest and new funding for "alpha-level" explorations (i.e., isolation and identification) in chemical ecology. This is an area that has typically fallen between the cracks on the federal funding scene and that a previous ISCE committee that met in 2001 at Lake Tahoe had identified as being high-priority for developing much-needed visibility, research funding, and growth in chemical ecology. In the coming months I will be soliciting your ideas for examples of chemical ecology success stories to bring forward to the committee.

For now, take care, and I hope to see you in Ottawa!

Sincerely,  
Tom Baker

[TOP](#)

## Update on the 2004 Joint Meeting of ISCE and PSNA to be held in Ottawa, ON, Canada July 24-28, 2004

### 1. Scientific Program

The focus on "Phytochemistry and Chemical Ecology of Forests" in the main symposium is to provide a unique theme with a North American emphasis. Because of our large forest area, the choice of forests is appropriate to North America. The unified theme also provides the chapter contributions for the "Recent Advances in Phytochemistry" Series. The minisymposia will feature other aspects of chemical ecology and phytochemistry. Contributed papers are welcome in all areas of phytochemistry and chemical ecology.



#### a. Main symposium:

Chemical Ecology and Phytochemistry in Forests and Forest Ecosystems:  
confirmed speakers:

Jorg Bohlmann, Department of Botany, University of British Columbia  
Peter Constabel, Department of Biology, University of Victoria,  
Johnathan Gershenzon Max-Planck-Institute for Chemical Ecology  
Murray Isman, Department of Plant Science, University of British Columbia  
Norman Lewis, Institute of Biological Chemistry Washington State University  
Hanna Mustaparta, Biology, Norwegian University of Science and Technology  
Erika Plettner, Department of Chemistry, Simon Fraser University  
Ken Raffa Department of Entomology, University of Wisconsin  
Claus Tittiger Department of Biochemistry University of Nevada Reno  
Geraldine Wright, Mathematical Biosciences Institute, Ohio State University  
Takashi Yoshida, Faculty of Pharmaceutical Sciences, Okayama University

#### b. Mini symposia:

B. Kimball and D. Nolte: Chemically Mediated Behavior in Wildlife  
C. Keeling: Hymenoptera semiochemicals  
V. De Luca: Arthur Niesh young investigator symposium  
S. MacKinnon: Marine Chemical Ecology  
J. McNeill: Pheromones

#### c. Posters and contributed oral presentations

These are invited in all areas of phytochemistry and chemical ecology. The organizers reserve the right to limit the number of oral presentations due to time constraints.

### 2. The University of Ottawa and City of Ottawa/ Gatineau venue

The University of Ottawa downtown campus provides visitors with access to all the city has to offer. Ottawa is

the capital city of Canada and has many cultural and natural advantages such as: its bilingual and multicultural character, >10 national Museums, Parliament, summer festivals of the arts in an attractive natural setting on the Ottawa river and Rideau River. The sister city of Gatineau has a wilderness park reaching right into the urban area, a vibrant French culture and fine restaurants.

### 3. Social program:

The kickoff for the meeting includes a welcome BBQ on Saturday July 24, a banquet and awards presentation on Tuesday July 27 at Ottawa's landmark Chateau Laurier Hotel next to the Parliament buildings. An Ottawa River cruise is tentatively planned for Tuesday afternoon.

### 4. Online registration is available on the meeting website:

<http://www.isce-psna2004ottawa.ca/>

### Important deadlines:

Registration, Accommodation, Abstracts: **Friday, May 28, 2004**

After May 28, 2004: Late registration fees will be charged.

After May 28, 2004: Hotel bookings will be possible on a space available basis, only

Student Travel Award Applications: 30 April 2004.

### Letters of invitation

If letters of invitation are required please contact the meeting hosts Prof. J.T. Arnason / Prof. B.J.R. Philogène. ([jarnason@science.uottawa.ca](mailto:jarnason@science.uottawa.ca) ; [bphilog@science.uottawa.ca](mailto:bphilog@science.uottawa.ca) ).

There will be a final meeting update in the May-June Newsletter.

[TOP](#)

## ISCE ELECTIONS, 2004 Candidates for ISCE Vice-President

**Dr. Jeffrey R. Aldrich** joined the Beltsville Agricultural Research Center's Insect Physiology Laboratory in 1980 as a Research Entomologist, transferred to the Insect Chemical Ecology Laboratory in 1990, and has been the Research Leader of the laboratory (now known as the Chemicals Affecting Insect Behavior Laboratory) since 1999. Jeff received B.S. and M.S. degrees in biochemistry and entomology from the University of Missouri in 1971 and 1974, respectively, and a Ph.D. in entomology under Dr. Murray Blum at the University of Georgia in 1977. His graduate research involved investigation of the allomones and pheromones of true bugs (Hemiptera: Heteroptera). Following a one-year Postdoctoral Fellowship studying the alarm pheromones of Africanized honeybees with Dr. Blum, he was a Research Associate for two years with Dr. William Bowers, N. Y. State Agricultural Experiment Station, Geneva, researching the mode of action of the then recently discovered anti-juvenile hormone compounds known as precocenes. Jeff is best known for his research on the allomones and pheromones of true bugs, including identifications of the first pheromones for these kinds of insects. His research also includes investigations of the chemical



ecology of heteropteran parasitoids, silk worms, yellowjacket wasps, spiders, the European corn borer, gypsy moth caterpillars, the multicolored Asian lady beetle, the Asian longhorned beetle and, most recently mosquitoes and lacewings. Dr. Aldrich has conducted research as a Visiting Scientist in Brazil on several occasions, Australia (6 months), Italy (3 months), and Japan (6 weeks); and he has hosted numerous international scientists and students in his lab. Jeff has published in the Journal of Chemical Ecology throughout his career (21 papers from 1978-2003; one 2004 paper in review), and he has presented papers at 12 ISCE meetings beginning with the first meeting in 1984 in Austin, Texas. He is currently serving as a Society Councilor and on the Editorial Board, and is organizing the 2005 ISCE meeting to be held in Washington, D.C.



**Dr. Monika Hilker** is Professor of Animal Ecology at the Free University of Berlin, Germany. She studied biology and chemistry at the University of Goettingen from 1977 to 1983. The chemoecology of insect eggs began to draw her attention during her PhD studies at the University of Goettingen. In 1986, she finished her PhD thesis on oviposition deterring pheromones in moths and went to the University of Bayreuth, Germany, into the lab of Konrad Dettner. Here she began her studies on the chemical ecology of Chrysomelidae, especially their eggs. While looking for insect eggs on field excursions, she found more and more egg parasitoids. This was the time, when egg parasitoids ran into her focus and tri- and multitrophic interactions between plants, herbivorous insects, and their antagonists became a major interest. After her habilitation in Zoology at the University of Bayreuth in 1993, she was offered the Chair of Animal Ecology at the Free University of Berlin. The study of plant responses to insect egg deposition has become an important topic in her lab. Her original papers, reviews, book chapters, the editing of a special journal issue and a book show her interests and publication activity.

Her activities for the scientific community have nationally been appreciated by her selection as a member of the senate of the German National Science Foundation in 2003. Internationally, she serves as a member of the editorial board of several journals and regularly reviews manuscripts for many journals, including the Journal of Chemical Ecology. Prof. Hilker frequently attends ISCE meetings, has co-organized ISCE meeting symposia, and has served as ISCE councilor. In 2004, she will host the 12th International Symposium on Insect-Plant Relationships in Berlin.

**Dr. Jocelyn Millar** is currently a Professor in the Department of Entomology, University of California, Riverside, where he has been since 1988. He obtained his BSc in Chemistry in 1979 from Simon Fraser University in British Columbia, Canada and his PhD in Organic Chemistry in 1983, with Dr. Cam Oehlschlager as part of the Chemical Ecology group at Simon Fraser University. He then took a postdoctoral position for a year with Prof. R. M. Silverstein in Syracuse, New York, to work on host attractants for native elm bark beetles. He did a second postdoctoral fellowship for 2 years, studying pheromones of geometrid, noctuid, and arctiid moths, with Dr. Ted Underhill at the National Research Council of Canada's Plant Biotechnology Institute in Saskatoon. After a 2-year stint in industry as the scientific director and manager of a toxicology laboratory, Millar joined the Department of Entomology at UC Riverside in 1988. His research interests include the identification, synthesis, and development of applications for insect pheromones and related semiochemicals. He has been a frequent participant in ISCE meetings since 1985, and served as the ISCE Secretary and Newsletter editor for five years from 1998-2002. Millar currently is an ISCE councilor. He also served for several years on the editorial board for the Journal of Chemical Ecology before becoming an Associate Editor of the Journal in 2003.



[TOP](#)

### ISCE ELECTIONS, 2004 Candidates for ISCE Councilors



**Dr. Gary Blomquist** is Professor of Biochemistry at University of Nevada, Reno (UNR) and is currently chair of the Department of Biochemistry. After finishing his PhD in biochemistry and chemistry at Montana State University, Gary was appointed as an assistant professor in the Department of Chemistry at the University of Southern Mississippi, where he served for four years before moving back out west to his present department at the UNR in 1977. Gary is best known for his work on the biochemistry and endocrine regulation of pheromone production and lipid metabolism in insects, especially flies and bark beetles, and has co-edited two seminal volumes on insect pheromone biochemistry. Gary has received numerous awards for both his research and teaching, including election as Fellow of the American Association for the Advancement of Science in 1998, and serves on many editorial boards and advisory panels. He is an active member of ISCE and hosted the outstanding 2001

ISCE meeting at Lake Tahoe.

**Dr Lin Field** obtained a first class honours degree from the Open University in 1986, whilst working at Rothamsted Research. She then went on to a PhD at Rothamsted, on the molecular genetic basis of insecticide resistance in the aphid, *Myzus persicae*, which was awarded in 1989. After further studies on resistance, gene amplification and control of gene expression in insects, Lin was appointed Head of the Insect Molecular Biology Group in 2000, and extended her studies to genes and proteins involved in the recognition of insect semiochemicals. This work has been done in collaboration with Professors Pickett, Wadhams (Rothamsted) and Pelosi (University of Pisa) and has covered odorant-binding proteins (OBPs) in *Drosophila melanogaster* and *Anopheles gambiae* and chemosensory proteins (CSPs) in aphids. The approaches have been a combination of genomics and conventional molecular techniques and are yielding new insights into molecular recognition, particularly relating to insect-host interactions. Expression of recombinant OBPs and CSPs is now leading to studies on ligand binding. Lin has found the challenge of applying her skills, and supervising others in the new area of Chemical Ecology very rewarding and exciting and believes that molecular approaches have a lot to offer in this field. Lin joined ISCE in 1998 and attended her first ISCE meeting in 1999, subsequently presenting her groups' work at the Hamburg meeting in 2002. She is also a fellow of the Royal Entomological Society of London and is currently one of its vice-presidents. She publishes widely and is the UK Editor for the journal Insect Molecular Biology.



**Dr Bill Hansson** is currently Professor and Division Head of Chemical Ecology at the Swedish University of Agricultural Sciences (SLU). Dr Hansson studied zoology and ecology at Lund University from 1979 - 1982. The following year he started his PhD with the Pheromone Group in the Department of Ecology, Lund University. Following completion of his PhD, entitled "Reproductive isolation by sex pheromones in some moth species - An electrophysiological approach.", in 1988, Dr Hansson spent six months working on pine sawflies in Lund before working for 15 months during 1989-90 as a post doctoral fellow at Arizona Research Laboratories, Division of Neurobiology, University of Arizona, Tucson, USA. After returning from Arizona, Dr Hansson obtained an appointment in the Lund University Pheromone Group, elucidating different neural levels in the insect olfactory system, augmenting their work on peripheral and central nervous areas. He worked at Lund University until 2001 when he was recruited to his current position. Dr Hansson's current research can be divided into three main projects: 1. Structure, Function and Evolution of the Olfactory System with the fruitfly *Drosophila* and the moth *Spodoptera littoralis* as main experimental organisms, 2. Learning and Plasticity in the Olfactory System, and 3. Application of Olfactory Neural Networks in flying Robots. Dr Hansson has received considerable recognition for his research, including, the Takasago Award for excellence in olfactory research (1998), and the Delwart Prize of the Royal

Belgian Academy of sciences for Excellence in Research in Chemical Communication (2000). In 2002 he was elected member of the Royal Physiographic Society in Lund, and President of the European Chemoreception Research Organisation.

**Dr Erika Plettner** works in the Department of Chemistry, Simon Fraser University, Burnaby, B. C., Canada.

Dr Plettner grew up in Mexico and moved to Canada to attend university. She obtained a B. Sc. from Simon Fraser University in 1990, and continued at S. F. U., working with Prof. Keith Slessor on the caste-specific biosynthesis of functionalized fatty acids (such as 9-keto-2E-decenoic acid, queen substance, and 10-hydroxy-2E-decenoic acid, royal jelly acid) in honey bees. After obtaining a Ph. D. in 1995, she worked as an organic chemistry instructor for two semesters and then moved to Toronto to pursue postdoctoral studies with Prof. Bryan Jones. The work in Toronto was focused on modifying subtilisin, a bacterial protease, for use in biocatalytic applications, including ester and amide synthesis. In 1997, she moved to Salt Lake City (Utah) to work with Prof. Glenn Prestwich on gypsy moth pheromone olfaction. Two years later, she returned to S. F. U. as an assistant professor. Her current research is focussed around a general interest in molecular recognition of small molecules by proteins. Current projects are: 1) the modification of cytochrome P450 for use in synthetic applications; 2) the synthesis of conformationally locked chiral pheromone analogs that could function as olfaction inhibitors; 3) structure-activity studies of insect odorant-binding proteins and chemosensory proteins (partly in collaboration with Prof. Murray Isman); 4) pheromone catabolism in moths, in particular oxidative reactions initiated by monooxygenases; 5) biosynthesis of esters in honey bees (in collaboration with Prof. Yves LeConte). She teaches organic chemistry (beginner to intermediate synthesis) and bio-organic chemistry (natural product biosynthesis). She is the current director of the Chemical Ecology Research Group, an organization of chemical ecology researchers in British Columbia ([www.sfu.ca/chemistry/CERG](http://www.sfu.ca/chemistry/CERG)). Dr. Plettner is a regular contributor to ISCE meetings.





**Dr. Johannes Steidle** currently is head of the subdivision Animal Ecology at the Institute of Zoology, University of Hohenheim, Germany. He studied ecology at the University of Bayreuth, Germany, where he received his Diploma in 1989. He had his first contact with chemical ecology during his Diploma-thesis in the lab of Prof. Konrad Dettner, where he conducted his PhD on the chemical defense of rove beetles from 1989-1993. In 1994, he moved to Berlin to join Prof. Monika Hilker setting up a new lab on Chemical Ecology at the Free University of Berlin. His work in Berlin focused on the Chemical Ecology of parasitic wasps and on the biological control of stored product pests. From 1998 to 1999 he worked several months as a visiting scientist at the Stored Grain Research Laboratory of CSIRO, Canberra, Australia, on the control of stored product moth using *Trichogramma* wasps. In 2001 he received his Habilitation in Zoology at the Free University of Berlin and visited the Laboratory of Entomology, Wageningen University, Netherlands, to work on the learning and memory structure of parasitoids. From 2002 to 2003 he worked at the Institute of Stored Products Protection of the Federal Biological Research Centre for Agriculture and Forestry (BBA) in Berlin to develop environmentally friendly methods for the control of stored

product pest insects. In 2003 he was appointed to his current position. At present, his research is mostly on the foraging behaviour of carnivorous insects to work out general rules concerning the behavioral ecology of infochemical use and the character of chemical foraging cues. Apart from this, he works on many other aspects of insect chemical ecology including chemical defense and pheromonal communication, mostly in collaboration with other institutes. He is a frequent attendee at ISCE meetings and served on the Ad Hoc Committee on the Revision of the ISCE Bylaws in 2001. He regularly publishes in and reviews articles for the Journal of Chemical Ecology.

[TOP](#)

### Upcoming Meeting Of Interest

The 12th International Symposium of Insect-Plant Relationships in Berlin from August 7 to 12, 2004.

Please find all information and details necessary for registration at the following address:

<http://www.biologie.fu-berlin.de/SIP12-Berlin/>

[TOP](#)

### Member News

## Bereavement

It was with sadness that we report the death of Dr. Jan Vrkoc of the Institute of Organic Chemistry and Biochemistry, Prague, Czech republic. Dr Vrkoc was 70 years old and was still working fulltime at the time of his death.

## Retirement

Dr David Jones, formerly of the Department of, University of Florida, Gainesville, USA, retired on December 31 2003 and will be returning to England during 2004. Dr Jones is a life member of ISCE, was the 4th President (1987-88) and hosted the annual meeting in Hull, England in 1987. With Jim Nation, he co-edited the Journal of Chemical Ecology for 5 years, and received an 'Award for Outstanding Service' from ISCE in July 2001.

## [TOP](#)

### Positions Available

#### **Two Postdoctoral positions available in Insect Sensory Physiology – Olfaction.**

Two postdoctoral positions are available immediately in Dr. Tom Baker's laboratory at Penn State University, USA. Successful candidates will join the group of researchers currently performing neuroethological investigations in insect olfactory-mediated behavior. These two postdoctoral positions are for two years and will explore two different areas of moth olfaction.

One project will focus on variability in olfactory receptor neuron (ORN) tuning in the European corn borer as it relates to possible evolutionary shifts in pheromone blends. The second project involves ORN responses to blends of plant volatiles and pheromone components. Both projects place the ORN response profiles in the context of observed significant behavioral responses of moths in natural odor plumes.

Applications (which should include an application letter and C.V., plus the names and addresses of two referees) should be mailed as soon as possible to Dr. Tom Baker, Pesticide Research Laboratory, Penn State University, University Park, PA, 16802.

Inquires and applications can also be e-mailed to Dr. Baker at [tcb10@psu.edu](mailto:tcb10@psu.edu)

#### **Technician Position in Chemical Ecology (University of Wisconsin – Madison)**

Description: An Associate Research Specialist position is available to manage and conduct research in chemical ecology. The focus of this large and dynamic research group is plant chemistry as a mediator of ecological interactions. Major research interests include the effects of global atmospheric change (e.g., enriched CO<sub>2</sub> and ozone) on forest ecosystems, and the consequences of gene x environment interactions for trophic associations and ecosystem function. Additional information about the research group can be found at: <http://entomology.wisc.edu/~lindroth>.

Responsibilities: Performance of chemical assays of plant tissues, including spectrophotometric and chromatographic (HPLC, HPTLC) techniques. Overall organization of routine laboratory operations (equipment maintenance, purchasing of supplies, supervision of hourly employees, etc.). Implementation of experiments in laboratory (80%), greenhouse (10%) and field (10%). Data entry and analysis.

Qualifications: Experience with standard chemical/biochemical analytical techniques and well-developed bench-top skills. Strong organizational, interpersonal and communication skills are essential. Commitment to excellence is required. Interest in ecology/environmental science is preferred.

Salary/Appointment: Salary will be commensurate with experience, \$25,700 - 31,000/year for Associate

Research Specialist. Start date is July 1, 2004 (flexible).

Application procedure: Telephone or e-mail inquiries prior to application are encouraged. To apply, send 1) letter describing fit to the position and professional goals, 2) resume, 3) transcripts, and 4) names/phone numbers/e-mail addresses of three references to:

Dr. Rick Lindroth, Dept. of Entomology, 237 Russell Labs, 1630 Linden Drive, Madison, WI 53706  
Phone: 608-263-6277, e-mail: [lindroth@entomology.wisc.edu](mailto:lindroth@entomology.wisc.edu)

[TOP](#)



Stephen Foster, Editor  
Department of Entomology  
North Dakota State University  
Fargo, ND 58105, USA  
[Stephen.foster@ndsu.nodak.edu](mailto:Stephen.foster@ndsu.nodak.edu)

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