



# NEWSLETTER

INTERNATIONAL SOCIETY OF CHEMICAL ECOLOGY

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Deadline for the next issue is September 15, 2004.

## Secretary/Editor's Message

There are barely three weeks left before the annual meeting in Ottawa, Canada. An update on the symposia speakers at the meeting is given below. For more complete and updated information on the meeting refer to: <http://www.isce-psna2004ottawa.ca/>. With the exceptional two-year hiatus this time between annual meetings, Ottawa will be an excellent opportunity for Society members to consider how the society provides a forum for chemical ecologists worldwide to exchange ideas amongst themselves, as well as consider how the Society can improve the facilitation of this through various modes, including annual meetings, this newsletter and website, keeping in mind the limited resources of the Society. To this purpose, I encourage members to contribute to the Society actively by expressing any ideas or constructive criticisms they have to the Executive and Council members. Those of you who will be attending the meeting can do this at the Business Meeting. However, I encourage those members who are unable to attend this year's meeting to email me any suggestions, etc they have and I will table them at the Executive Council meeting in Ottawa.



Finally, my congratulations to Jocelyn Millar for his election to Vice-President, and to Gary Blomquist, Bill Hansson, Erika Plettner, and Johannes Steidle for their election to Councilor.

See you in Ottawa!

Stephen Foster  
Secretary, ISCE

**Update on the 2004 Joint Meeting of ISCE and PSNA to be held in Ottawa, ON, Canada July 24-28, 2004 (see also <http://www.isce-psna2004ottawa.ca/>)**

## List of Symposia and Speakers

### Main Symposium:

Ken Raffa, Department of Entomology, University of Wisconsin, U.S.A, Interactions among conifer terpenoids and bark beetles across multiple levels of scale; an attempt to understand links between population patterns and physiological processes.

Joerg Bohlmann, Department of Botany, UBC, Canada, Biochemistry and Functional Genomics of herbivore induced defences in spruce and poplar

Erika Plettner, Department of Chemistry, Simon Fraser University, Burnaby, B.C., Canada, Pheromone binding proteins: insights into the mechanism of ligand recognition.

Takashi Yoshida, Faculty of Pharmaceutical Sciences, Okayama University, Okayama , Japan. Structural Diversity and biological activities of natural polyphenolics with high molecular weight.

G.A. Wright, Mathematical Biosciences Institute, Ohio State University, Columbus, OH USA. Odor recognition and the features of naturally occurring odors.

C. Peter Constabel, Center for Forest Biology & Biology Department, University of Victoria, Victoria, BC, Canada. Molecular biology and biochemistry of induced insect defense in poplar.

Claus Tittiger, Department of Biochemistry, University of Nevada, Reno, NV USA, Insights into the remarkable metabolism of the bark beetle midgut

Hanna Mustaparta, Department of Biology, Norwegian University of Science and Technology, Norway. How is plant odour information handled by the olfactory system in insects?

Murray B. Isman, Faculty of Agricultural Sciences, University of British Columbia, Vancouver, BC, Canada. Tropical forests as sources of natural insecticides

Norman Lewis, Institute of Biological Chemistry, U. Washington, Seeing the Forest and Not the Trees: A Global Perspective on Lignin and lignan Biosynthesis for Structural Support and Defense Function

Jonathan Gershenzon, Max Planck Institute for Chemical Ecology, Jena, Germany, Molecular regulation of induced chemical defenses in Norway spruce: Tools for testing function.

### Award speakers:

ISCE gold medal: J. McNeil, Department of Biology, UWO, Canada, Putting ecology in chemical ecology

Silverstein-Simeone Award: Richard Vogt , Biology Department, University of South Carolina, Do Odorant



Binding Proteins, Odor Degrading Enzymes and other orphan sensory proteins comprise biochemical networks which influence odor presentation and perception?

**After Dinner and special speakers:**

Neil Towers, UBC: Erotic temples of phytochemistry and Robin Marles NHPD. : Boreal ethnobotany.

**Pheromone Minisymposium**

**(J. McNeil):**

K.F. Haynes, Department of Entomology, University of Kentucky, Lexington, KY, USA. Aggressive chemical mimicry by a bolas spider.

A.J. Mordue Lunz, Dept Zoology, University of Aberdeen, The role of pheromones and kairomones in mate location of the salmon louse.

M. L. Evenden, Biological sciences, University of Alberta, Edmonton, Can we combine pheromone-based attracticide formulations for more than one species? A case study using the Oriental fruit moth and the codling moth (Lepidoptera: Tortricidae).

D. Eliyahu, Department of Entomology, North Carolina State, Pheromone stereochemistry and sexual mimicry: a close look at the sex life of cockroaches.

Y. Hillbur, Dept of Crop Science, SLU, Alnarp, Sweden, Pheromones for management of gall midges.

B. Ferot, INRA, Versailles, France, Reproductive isolation and host plant specialization in two *Ostrinia* phenotypes in France.

M. Ayasse, Department of Experimental Ecology, University of Ulm, Germany, The role of semiochemicals in the pollination of sexually deceptive orchids.

**Hymenopteran semiochemical Minisymposium**

**(C. Keeling and E. Plettner):**

honouring the career work of Keith N. Slessor in chemical ecology, particularly in honey bees, (sponsored by Simon Fraser University and the Canadian Association for Professional Apiculturalists.)

Keith N. Slessor, Department of Chemistry, Simon Fraser University, Burnaby, BC, Canada. Sociochemicals: the complicated pheromone arsenal of honey bees

Tanya Pankiw, Department of Entomology, Faculty of Neuroscience, Texas A&M University, College Station, TX, USA. Pheromone regulation of honey bee foraging ontogeny

Gene E. Robinson, Department of Entomology and Neuroscience Program, University of Illinois at Urbana-Champaign, USA. Pheromone Regulation of Division of Labor in Honey Bee Colonies: From Behavior to Genes

Robert K. Vander Meer, USDA/ARS – CMAVE, Gainesville, FL, USA. Multiple Functions of the Fire Ant, *Solenopsis invicta*, Alarm Pheromone

Jocelyn G. Millar, Department of Entomology, University of California, Riverside CA, USA. Sex and Bondage: Queen Sex Pheromone of the Slave-making Ant *Polyergus breviceps*.

**Marine Chemical Ecology:  
(Shawna MacKinnon)**

Georg Pohnert, Max Planck Institute for Chemical Ecology, Jena, Germany, The rapid bioactivation of secondary metabolites in the wound response of *Caulerpa taxifolia*.

Gunilla Toth, Department of Marine Ecology, University of Goteborg, Stromstad, Sweden Brown algal phlorotannins- secondary compounds of primary importance.

Mark E. Hay, School of Biology, Georgia Institute of Technology, Atlanta GA, U.S.A. Chemical defense of marine animals: effects on color, mobility, overtness, and local and geographic patterns of distribution.

Julia Kubanek, School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta GA, U.S.A. The role of red tide toxins and other metabolites in competitive and predator-prey interactions.

Shawna MacKinnon, Institute for Marine Biosciences, National Research Council of Canada, Halifax, N.S., Canada Studies of the toxigenic dinoflagellate *Alexandrium ostenfeldii* and its production of a novel class of marine toxins known as the spirolides.

**Minisymposium: Chemically Mediated Behavior in Wildlife: Examination and Application (Bruce Kimball and Dale Nolte)**

T.P. Clausen, Department of Chemistry and Biochemistry, University of Alaska, Fairbanks, AK. Has browsing by mammals caused continent-scale variation in the chemical defenses of woody plants?

F.D. Provenza. Department of Forest, Range, and Wildlife Sciences, Utah State University, Logan, UT. Linking herbivore experience, varied diets, and plant biochemical diversity.

T.P. Sullivan, Applied Mammal Research Institute, Summerland, B.C. Canada Weasels, voles, and crop protection: Whither the future?

D.L. Nolte, USDA/APHIS/WS/NWRC, Olympia, WA. Chemical ecology and Managing forest resources

B.A. Kimball, USDA/APHIS/WS/NWRC, Fort Collins, CO. That's Disgusting: Deer Responses to Seedlings Treated with Proteins.

**Art Niesh Young investigator minisymposium:  
( V. deLuca)**

“Out of the Forest and into the diet: Wine Grape Genetic Diversity and secondary metabolism in *Vitis* species”

P. Pollefeys, Université Laval, Sainte-Foy QC, Canada. Molecular genetic diversity of the French–American grapevine hybrids cultivated in North America

Jihong Wang, Department of Biological Sciences, Brock University, St. Catharines, ON, Canada ‘Foxy’ Methylantranilate potential of Concorde grape,

Diane Martin, Faculty of Agricultural Sciences and The Michael Smith Laboratories, University of British Columbia, Canada. Vitis vinifera Terpenoid Synthase Genes and Wine Grape Metabolite Profiling

Jane Coventry, University of Guelph, Guelph ON Canada, Red Red Wine - enhancement of berry colour and quality in Niagara wine grapes

Debra L. Inglis, Department of Biological Sciences, Brock University, St. Catharines, ON, Canada Yeast stress responses during Icewine fermentation and their impact on Icewine quality.

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## ISCE ELECTIONS Results

### Vice-President and President-Elect

Dr. Jocelyn Millar, Professor in the Department of Entomology, University of California, Riverside has been elected as the new ISCE Vice-President and President-elect. Dr Millar's research interests include the identification, synthesis, and development of applications for insect pheromones and related semiochemicals. Dr Millar is well known to ISCE members having served as the ISCE Secretary and Newsletter editor for five years from 1998-2002. He has 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.

### Councilors

ISCE councilors are elected for a term of three years. Councilors are appointed from various geographical and subject areas, and advise the ISCE Executive Committee.

Our new councilors will be:







Dr. Gary Blomquist, Chair of Department of Biochemistry at University of Nevada, Reno Dr Blomquist 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.



Dr Bill Hansson, Head of Chemical Ecology at the Swedish University of Agricultural Sciences (SLU). 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 Erika Plettner, Department of Chemistry, Simon Fraser University  
Burnaby, B. C., Canada. Dr Plettner's research is focused around a general interest in molecular recognition of small molecules by proteins.



Prof. Johannes Steidle, Head of Animal Ecology at the Institute of Zoology, University of Hohenheim, Germany. Prof. Steidle's research is mostly on the foraging behavior of carnivorous insects, chemical defense and pheromonal communication.

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