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President's Message:



The 2012 ISCE meeting in Vilnius, Lithuania was a tremendous success. There were 211 attendees, of whom 46 were students or postdoctorals from 34 countries. The city of Vilnius offered a great selection of restaurants, shopping and historical sites, and the Radisson Blue Hotel was a perfect venue for the meeting. Our host Vincas Bûda and his local colleagues are to be congratulated for organizing a highly successful and collegial meeting and also for giving us an opportunity to get to know a country that few of us had visited.

Acknowledgments

We are grateful to Paulo Zarbin for his service as President this past year. Paulo presided over the Vilnius meeting, but much more also goes on “behind the scenes” throughout the year and Paulo provided leadership on many issues. All of our society’s officers have substantial duties. Secretary Anna-Karin Borg-Karlson oversees the 3 yearly Newsletters, handles much of the society’s correspondence, coordinates the webmaster’s activities, and records the minutes of the Executive Committee and the Annual Meeting. Treasurer Jeremy Allison maintains the database of our membership and payments and tracks our financial activities. These positions take considerable time and effort and our society owes all of our officers a great debt for their volunteer service. We also appreciate Johan Andersson’s service as our webmaster from 2010 to 2012.

The society received three corporate gifts in 2011. Suterra LLC sponsored the Silver Medal Award (\$5000). Trécé Incorporated sponsored Student travel awards (\$2500). Springer Publishing Co. supported the Silverstein-Simeone Award (\$2000). Thanks are due to these corporations and their representatives (Tom Larsen of Suterra, Bill Lingren of Trécé, and Janet Slobodien of Springer Publishing.) Willi Boland arranged support from the Max-Planck Institute for Chemical Ecology in Jena, Germany for student travel to our meeting from developing countries.

Benefits of Membership

Without the organizational support of our society, our annual meeting could not exist. This event is the most visible and important activity of our society. ISCE meetings provide an opportunity to share our most recent findings in Chemical Ecology, to forge lasting friendships and to facilitate new collaborations. Our website is another vehicle for communication. Rob Mitchell, our new webmaster, has revamped our site to allow simplified access to the various links for information. Payment of membership via credit card is now straightforward and secure. The membership database has been equipped with a new search feature that allows you to find society members and their addresses by country or institution, and by full, last or even first name. One of the website's most useful features is a posting of available positions. Two of my most recent post docs contacted me because of listings on this website. They turned out to be great colleagues.

Society Finances

Our society relies on a core of some 400 regular and 70 student members for support. We ask \$35 for regular membership, \$15 for student membership, with reduced fees for those from developing countries. Where do these funds go? Our meetings are financially independent of the society. Those expenditures are covered by registration fees and typically meetings generate a small surplus which is donated to the society. Our society essentially has no operating costs, save a small honorarium for the webmaster. Over the past 3 years our membership fees generated \$27,400 while we granted \$27,720 in awards to students to support their travel to our meetings and \$2,000 to the Latin American Society for Chemical Ecology to support student travel for their meeting this December. Next year we will grant \$15,000 for student travel to Melbourne. The difference in membership income and student grants is borne by income from the society's equities account and donations.

Most of our regular members direct graduate students and therefore we should have far more than 70 student members. I urge you to keep your membership active and to encourage colleagues and students to join our ranks. Do so knowing that your entire membership fee supports student travel.

Looking forward to Melbourne

Finally, I know that many of you are looking ahead to 2013 and our meeting in Melbourne, Australia, to be held August 19-23. This will be the first joint meeting of the International Society of Chemical Ecology and the Asia-Pacific Association of Chemical Ecologists. Committees from both societies are busy planning for one day of major talks and 3 days of symposia. The plenary talks and symposia topics will soon be announced on the meeting and the ISCE websites. Melbourne was recently designated as the World's Most Livable City and its Convention and Exhibition Centre will be a terrific venue for presentations and interactions with

colleagues. Alex Il'ichev will be the meeting host and he will ensure that this meeting is a memorable scientific event. Vice-President Stefan Schulz and I look forward to seeing you in Melbourne.

Ring Cardé
President

Annual ISCE meeting in Vilnius 2012

Dear Colleagues,

We would like to thank those of you who attended the 28th ISCE Annual Meeting for your contribution and attendance. This meeting would not have been a success without your presence. We hope you enjoyed your stay in Vilnius and we look forward to seeing you at our next events in Lithuania.

Photos from the conference are available to view on this website <http://www.isce2012.gf.vu.lt/>, by visiting the “Photo gallery” section.

Prof. Vincas Būda

The scientific program was comprised of seven symposia:

- *Plant-animal interactions*; Dr. Monika Hilker and Dr. Anke Steppurn
- *Chemical ecology meets evolutionary and molecular biology*; Dr. Walter Leal and Dr. Wei Xu
- *Biosynthesis and chemistry of natural products*; Dr. Anna-Karin Borg-Karlson and Dr. Irena Valterova
- *Chemical ecology of microorganisms*; Dr. Stefan Schulz
- *Chemical ecology of vertebrates*; Dr. Raimondas Mozuraitis
- *Climate change, invasive species and chemical ecology*; Dr. John Byers
- *Applied chemical ecology*; Dr. Miklos Toth

These symposia were introduced by three plenary talks:

- “*The Pheromone Phenomenon*,” An overview of pheromones and their chemistry by Wittko Francke
- “*Night and day: moth and butterfly pheromones not so different after all*,” The differences between butterflies and moths from an evolutionary point of view by Christer Löfstedt

- *A new dawn for chemical ecology in pest management: delivering chemical ecological pest management tools via the seed using molecular breeding and genetic manipulation in crop plants,*” The implementation for practical use of molecular biology and alleopathic interactions in crop protection by John Pickett.

These talks were very encouraging for future research in chemical ecology.

For those who did not attend, or those who wish to refresh their memory, please visit the abstract book, which is available on our website under “Meetings.”

<http://www.chemecol.org/programs/2012.pdf>

For those interested in seeing all the excellent photos go to <http://www.isce2012.gf.vu.lt/>. Here are some of the photos:



A view of the variety of building styles in Vilnius



Long distance attendee Professor Ben Burger from South Africa with his wife at the gala dinner



Matthias Erb, Julia Kubanek, and Hans Alborn



Tom Baker, behind the piano, was the long awaited entertainer

Silverstein-Simeone Award Lecture
by Julia Kubanek

We had the pleasure to listen to a very interesting Silverstein-Simeone award lecture by Julia Kubanek. She talked about “War in the plankton: Sublethal and reciprocal impacts of red tide algae on competing Phytoplankton.” This is a research area that challenges analytical chemists in many ways.

Abstract: How individual species come to be dominant members of marine planktonic communities is not deeply understood; however, it is thought that chemistry plays a substantial role. For example, some red tide-forming dinoflagellates produce toxic secondary metabolites that are hypothesized to enhance dinoflagellate fitness by acting as grazer deterrents, allelopathic agents, or antimicrobial defenses. In field and lab experiments we have shown that the red tide dinoflagellate *Karenia brevis* is allelopathic, inhibiting the growth of several co-occurring phytoplankton species, but that *K. brevis* natural products other than well-known brevetoxins are responsible for suppressing most of these species. At least one phytoplankton competitor, *Skeletonema costatum*, retaliates against *K. brevis*, reducing its allelopathic effects and degrading waterborne brevetoxins. Several other phytoplankton species also metabolize brevetoxins, removing these toxins from the water column and mitigating the negative effects on invertebrates. Death is a rare outcome of *K. brevis* allelopathy, with more subtle responses predominating, such as reduced photosynthetic output and increased cell permeability. These changes in cellular metabolism and physiology may be more readily characterized and measured by a systems biology approach than by growth or cell lysis assays. NMR metabolomics has provided preliminary evidence for sub-lethal impacts of exposure to *K. brevis* allelopathy on the metabolism of neighboring phytoplankton. Future work will expand upon these initial results with mass spectrometry-based metabolomics and proteomics methods, as well as experiments with other vulnerable competing phytoplankton species, with the goal of identifying cellular targets and understanding the molecular mechanisms of red tide allelopathy. Our results indicate that chemically-mediated interactions are reciprocal, and that ecosystem-level consequences of red tides (such as fish kills caused by waterborne toxins) may depend upon which other phytoplankton species are present.

Silver Medal Lecture:
Tom Baker as usual presented a fascinating lecture titled:

“Everything’s In Flux: a Neuroethological Journey.”

Abstract: I have been presented with many fascinating opportunities to learn about insect olfaction related to behavior over the several decades I have been allowed to be one of the fortunate, paid explorers in the field of Chemical Ecology. One of the earliest opportunities I had was to puzzle over the relationship between the time-courses and amplitudes of electroantennogram responses to puffs of pheromone component odorants and the resulting upwind flight responses of moths. Trying to figure out how the timing of male moths’ contacts with individual strands of pheromone altered their in-flight maneuverings through the air was another challenge. More recently, an opportunity to try to explain one of the most puzzling and perplexing issues in moth pheromone olfaction presented itself: why, in nearly every species, are

the majority of olfactory receptor neurons (ORNs) tuned to the most abundant pheromone component in a species' sex pheromone blend? A related question concerned ORNs that are co-compartmentalized in the same sensillum: why does the ORN tuned to the most abundant pheromone component in the blend have a larger diameter dendrite than the ORN tuned to the minor component and produce a larger amplitude action potential than the minor component ORN? It had seemingly been counterintuitive that the accepted explanation touting increased sensitivity should be valid, because in that case the greatest number of ORNs should be tuned to the least abundant pheromone components, not the most, because these trace components should be the most difficult to detect. It turns out that it is no accident that time kept emerging as a factor that we paid attention to over several decades of studies. Indeed, timing is everything; the resulting hypothesis we have come up with involves molecular abundance-related flux, not concentration. This idea applies nicely not only to the evolution of peripheral sex pheromone olfactory systems, but also to the peripheral olfactory systems that detect general odorants involved in host-finding.

The twenty-two ISCE travel award winners for 2012 were:

Name	Student category	Country
Wei Xu	Postdoc, Co-leader of Symposium 2	Australia
Tao Li	postdoc	Finland
DanDan Zhang	postdoc	Sweden
Jeremy Chase Crawford	Ph.D.	USA
Hiromi Saijo	Ph.D.	Japan
Mina Shaheed	Ph.D.	Germany
Melanie Unbehend	Ph.D.	Germany
Maryse Vanderplanck	Ph.D.	Belgium
Tobias Otte	Ph.D.	Germany
Teresa Weise	Ph.D.	Germany
Jana Krasulova	Ph.D.	Czech Republic
Amarsanaa Badgaa	Ph.D.	Germany
Christiane Bramer	Ph.D.	Germany
Birgit Blaul	Ph.D.	Germany
Muhammad Azeem	Ph.D.	Sweden
Stephan Kuhbandner	Ph.D.	Germany
Peter Rahfeld	Ph.D.	Germany
Guillaume Caulier	Ph.D.	Belgium
Alan Kergunteuil	Ph.D.	France
Erika Wallin	Ph.D.	Sweden
Ulrike Groenhagen	Ph.D.	Germany
Florian Mann	Ph.D.	Germany

Extra travel awards were provided by Prof. Wilhelm Boland (Jena) for students from developing countries:

Name	Student category	Country	University
Florencia Palottini	Ph.D.	Argentina	Buenos Aires University
Hien Truong Thi Dieu	Ph.D.	Vietnam/Belgium	University of Liège
Livia Ataide	Ph.D.	Brazil	University Federal of Viçosa
Mirian Fernandes Furtado Michereff	postdoc	Brazil	Embrapa Recourse Genetic and Biotechnology

Scientists from developing countries supported by local organizers of the meeting:

Presentation Title	Name	Symposium	Country
Ethyl vanillate confers mating advantage in male Oriental fruit fly	Alvin Hee Kah Wei	Plant animal animal interactions	Malaysia
Understanding the chemical ecology of the push-pull strategy: a case study with the sugarcane borer <i>Eldana saccharina</i> (Lepidoptera: Pyralidae).	Vincent Harraca	Climate change, invasive species and chemical ecology	South Africa
In the search of a sexual contact pheromone in the haematophagous bug <i>Rhodnius prolixus</i> (Heteroptera, Reduviidae)	Alicia Lorenzo-Figueiras	Plant animal animal interactions	Argentina
Learning how to escape from an alarm pheromone in insects	Sebastian Minoli	Plant animal animal interactions	Argentina
Enhanced phenolic acid contents in pest infested castor bean, <i>Ricinus communis</i> plants.	Usha Rani Pathipati	Plant animal animal interactions	India

Joint APACE-ISCE meeting in Melbourne, Australia, 2013

The Joint Apace-ISCE meeting 2013 will be from August 19-23.

The link to the website is <http://www.icec2013.com.au/> Presentation of the symposia by the joint host-organization team will be made in the first newsletter in 2013.

Students are encouraged to apply for travel stipends for the meeting in Melbourne. ISCE will allocate additional money for travel stipends 2013. Information will be found on the ISCE website early next year.

Future Chemical Ecology Meetings

2nd Meeting of ALAEQ:

The 2nd Meeting of the Latin American Association for Chemical Ecology (ALAEQ) will be December 2-5, 2012 in Huerta Grande, Córdoba Province, Argentina. After the success of our first meeting in Uruguay in 2010, we were encouraged to organize this event again, hoping to bring together highly qualified speakers and very enthusiastic Latin-American students and postdocs. Areas of research to be represented will include insect-plant interactions, pest control, pheromone chemistry, vectors of disease, olfactory behavior, neurobiology of olfaction and taste, molecular biology of olfaction. The meeting will include conference talks, symposia, student talks and poster sessions.

A hilly landscape and favorable weather conditions are distinctive of the Córdoba province, in the heart of Argentina. Little towns, historical antiquities and traditional farmhouses are found in a pleasant valley landscape, high plains and gorges. Outdoors activities include mountaineering, climbing, trekking, horseback riding, mountain biking, photography safaris, plant and animal (condor!) watching, paragliding flights and ballooning. Córdoba's rivers and streams, crossing hillsides with crystal-clear waters with plenty of trout, are ideal for fly fishing. Huerta Grande is a small town situated 80 km NW from Córdoba city, a city of ca. 1 million people with an international airport. The meeting will be held in Casa Serrana, a hotel compound that includes hotel rooms, conference rooms, ample gardens and a sports area.

Contact information:

Pablo G. Guerenstein, Ph.D.

Full Professor UNER

Researcher-National Research Council

Entre Rios, Argentina

pabloguerenstein@cicyttp.org.ar.

Student Fellowships for ALAEQ

The ISCE is sponsoring six student fellowships for travel to ALAEQ, reviewed by the Scientific Committee of ALAEQ 2012. Congratulations to the winners:

Paula Altesor, Universidad de la República, Uruguay

Maria Balbuena, Universidad de Buenos Aires, Argentina

Valeria Cal, Universidad de la República, Uruguay

Diogo Montes Vidal, Universidade Federal do Paraná, Brazil

Daniele Rocha, Instituto de Química-UNICAMP, Brazil

Irving May Concha, Instituto Nacional de Salud Publica, Mexico

Irving May Concha could not accept the fellowship, which was instead awarded to **Maria Umpierrez** (Universidad de la República, Uruguay).

The Fellowships will consist of USD \$330 (with ISCE support) plus a 50 % discount in the registration (with ALAEQ 2012 support).

ALAEQ 2012 sincerely thanks ISCE!

Call for Nominations for the Year 2014

Nominations for the ISCE Silver Medal and Silverstein-Simeone Awards

The ISCE Silver Medal Award recognizes career achievement by an outstanding scientist working in the field of chemical ecology. The Silverstein-Simeone Award, established in 1995, to honor Milt Silverstein and John Simeone, is made on the basis of recent or current work of an outstanding nature at the “cutting edge” of chemical ecology. The recipient must deliver a plenary lecture at the annual ISCE meeting and publish a paper on the same topic in the *Journal of Chemical Ecology*. The expenses of the recipient of the Silverstein-Simeone Award to attend the annual meeting are paid by the society through the generous sponsorship of Springer Publishers. Nominators should be ISCE members in good standing. Nominations will be reviewed by the President and Vice President for relevance to the appropriate award, before forwarding them to the full ISCE Executive Committee. Should a nomination for one award be considered more relevant for the other award, the President will contact the nominator(s) regarding reconsideration. Current ISCE officers or councilors are not eligible for the awards because of possible conflict of interest. Note that previous, unsuccessful nominations must be re-nominated to be considered for the awards. It would be helpful to resubmit the nomination packets for these individuals.

The nomination process is the same for both awards and is as follows:

- A nomination letter explaining why the nominee should be recognized for the award, stressing either their current cutting-edge research (for the Silverstein-Simeone award) or their career achievements (for the Silver Medal award).
- Curriculum vitae, including a list of publications pertinent to the research on which the award is based (for the Silverstein-Simeone award), or a full list of publications (for the Silver Medal award). Supporting letters from other colleagues may be included.

Please submit all parts of the packet in electronic format (including supporting letters) along with one paper copy to:

Prof. Ring Cardé ISCE President
Department of Entomology
University of California
Riverside, CA 92521
ring.carde@ucr.edu
Telephone 951-827-4492
Fax 951-827-3681

Deadline for receipt of nominations: 31 January 2013

Nominations for Vice-President and Councilors for 2013

Nominations for the positions of Vice-President and three new councilors are solicited. The Vice-President will assume the position of Society President in the following year.

ISCE councilors are elected for a term of three years. Councilors must commit to attending at least two ISCE executive meetings during this period. Their other principal responsibilities are participation in the selection of the Silver Medal and Silverstein-Simeone Awards, and to provide general guidance and assistance to the Executive Committee. It is expected that all people nominated for the above positions have a strong record of participation in Society activities and meetings. It is highly desirable that the elections have competition for the positions, i.e., that there is more than one candidate for Vice-President and at least 4 candidates for the councilor positions.

Please send names, contact addresses, phone and fax numbers, and e-mail addresses of candidates along with a short description of why you think the candidate(s) would be suitable for office, to:

Prof. Ring Cardé ISCE President
Department of Entomology
University of California
Riverside, CA 92521
ring.carde@ucr.edu
Telephone 951-827-4492
Fax 951-827-3681

Deadline for receipt of nominations: 31 January 2013

Other News

Upcoming meetings:

Information of any upcoming meetings in related areas is published on the website as soon as we receive it from our members.

Positions Available

During the autumn several new positions have been posted on our website, under “new positions.” The site will be updated continually..

Secretary / Editor’s Message

Dear members! The newsletter will reflect your interests. You are cordially invited to submit what you think could interest our members. We are interested in photos and new findings, and ideas. Please also send information about courses and meetings of general interest!

Since 2011 we have offered free access to the “commentaries” that are published in the *Journal of Chemical Ecology*. These commentaries are meant as a base for further discussions of research and research direction in chemical ecology. We are grateful to the editor of JCE, John Romeo, and Springer for the free-access link.

Tribute to Professor Keith Slessor



It is with great sadness that the Department of Chemistry at Simon Fraser University announces the passing of Emeritus Professor Keith Norman Slessor on July 18, 2012.

Keith was born in Comox and spent his youth in Ladysmith, British Columbia. His work in oyster farming and printing while in high school left him with a lasting interest in craft and quality, leading eventually to his serious devotion to various hobbies and his Ph.D. degree in Organic Chemistry from the University of British Columbia. He then went to London and Stockholm to work as a postdoctoral research associate, joining Simon Fraser University in 1966 as one of the founding faculty members of the Chemistry Department.

Keith made fundamental contributions to building the Chemistry Department and SFU at the departmental, faculty, and university levels: from setting up departmental curricula to providing critique on faculty matters, to acting as faculty marshal at countless convocations. At the national level, Keith participated in several NSERC adjudication committees and in the development of new interdisciplinary programs. Keith was always outspoken and believed strongly in his convictions, but also listened constructively. He loved nothing more than a passionate discussion, always interested in the best answer rather than necessarily winning an argument. When given a convincing explanation he would reply: "Fair enough, I hear you."

He gave unselfishly of his time to teaching, mentoring, research and community. It was Keith, with Professor Derek Sutton, who started the legendary "Stinks and Bangs" public shows at SFU. For his tremendous enthusiasm in teaching thousands of undergraduates the basic principles of organic chemistry, he received the University Excellence in Teaching Award (1995). He also developed and taught "Science and Its Impact on Society", a course about science for undergraduates in the social sciences and humanities. In research, he was well known for his collaboration with Professor Mark Winston on the elucidation of the honey bee queen pheromone. Those who worked in their groups remember the exciting discussions and experiments aimed at a deeper understanding of honey bee social behaviour and at the practical application of this understanding.

Keith was interdisciplinary long before it was popular, and his intense appreciation for collaboration and for his collaborators was palpable. The teamwork-focused work on bee pheromones eventually led to numerous awards and honours for Keith and his collaborators, including the Manning Award of Distinction for Innovation in 1997 and the BC Science and Engineering Gold Medal in Natural Sciences in 2003, as well as the marketing of queen bee pheromone-based products that are still used in the beekeeping industry today. Keith's group also was among the first to elucidate the structures of chiral hydrocarbon and thermally/photochemically unstable insect pheromones, present in minute (ng) quantities. In

addition to his work with bees, Keith's contributions to insect chemical ecology and synthesis of chiral moth and beetle pheromones are widely recognized.

Keith had a deep respect and appreciation of the natural world that reached far beyond his research. An avid fly-fisherman, he brought back many rainbow trout that he generously shared with friends, colleagues and the research team. He also liked photography, choral singing, reading, and he was renowned for his fine woodwork. Keith had a deep talent for seeing the beauty and possibility in a piece of wood, and many of us treasure the pieces that emerged from his shop. He collaborated with his daughter Karen on several artistic projects in wood, including the "Two Trees" Project, and also on the design of our departmental logo.

Keith was 73 years old, and is survived by his wife of 52 years, Marie, three children and their spouses, Karen (Dani), Mike (Erin) and Graham (Tanya) and four grandchildren (Kai, Kobe, Nicole and Cameron).

A celebration of Keith's life will be held in September. In lieu of flowers, the family would greatly appreciate donations to the BC Cancer Foundation – Lymphoma Research.

Keith, thanks for everything!

Erika Plettner