



ALI "QUOTES"

Volume 17, Issue 5

THE NEWSLETTER OF THE PRINCETON ACS

September/October 2007

Website <http://www.princeton.edu/~pacs/>

Monthly Dinner Meeting

Thursday, September 20, 2007

Guest speakers will be

**Professor Erik Nilsen,
Virginia Polytechnic Institute & State Univ.**

**"The Chemical Interface Between Plants and
the Biotic Environment with a Focus on
Allelochemicals and Allelopathy"**

Time: 6:00 PM
Lecture: Frick Laboratory, Room 120
Dinner: Prospect House (following lecture)

Abstract:

This presentation is designed to consider generalities of the chemical interface between plants and the environment and then to focus on the chemical interactions among different plant taxa. There are several properties of plants that promote enhancement of chemical diversity. Plants are the base of a complex food web. The sedentary nature of most plants requires well-developed defense mechanisms as well as mechanisms to garner scarce resources and pollinators. Plants are flowing, dynamic systems that have major impacts on the environment. Herbivores have fast generations and large populations compared to those of plants. These and other properties of plants promote a complex and diverse chemical interface between plants and the biotic environment. In the case of insect herbivores, a chemical "arms race" can occur between plants and insect herbivores. The same insect species can be herbivore and pollinator. Plant chemical defenses at one time can become chemical attractants for insects at a later time. Putative chemical defense compounds include terpenes, phenolic acids, cyanogenic glycosides, alkaloids, glucosinilates, and saponins. Several specific cases of chemical interactions between plants and animals or other

plants will be presented. One of the examples will focus on the concept of allelopathy (the chemical interaction among different plant taxa). The chemical interaction between Rhododendron shrubs and tree canopy seedlings will be considered including the associated mycorrhizal intermediary. An evaluation of what is needed to verify that allelopathy is an important interaction among specific plant taxa will be presented and the presentation will conclude with a theoretical consideration of the question; is allelopathy a functional trait of plants or a byproduct of the chemical interface of plants with the environment?

Biography:

Erik Nilsen received his B.S. at the University of Miami, FL and an M.S. at the University of California Santa Barbara (UCSB). He completed his Ph.D. with Walter Muller at UCSB. Collaborative research at UCSB introduced Erik to the field of allelopathy and chemical ecology. After three years as postdoctoral fellow at the University of California Irvine with Phillip Rundel, Erik moved east to Virginia Tech where he is currently professor of Biology. Some of Erik's activities while at Virginia Tech have been research associate at UCLA, sabbatical at Stanford, two terms as program officer at the NSF and Wilder Chair for distinguished botanist at the University of Hawaii. Erik's current research includes studies on evolutionary significances of plant traits, functional significances of leaf structures, mechanisms by which understory evergreen shrubs inhibit canopy tree recruitment, and interactions between invasive and native species. His work has resulted in 2 books on stress physiology and over 90 articles in journals and book chapters.

Reservations:

The meeting will be held in room 120, Frick Laboratory, Princeton University (see www.princeton.edu/~pacs for more information). Seminar is at 6 PM followed immediately by dinner at Prospect House. The seminar is free and open to the public. Reservations are required for dinner, which is \$35 for full members, \$25 for retirees and \$15 for students. All reservations will be billed, for the section pays on the number of reservations, not the number of attendees. Please contact Denise D'Auria at (609) 258-5202 or denised@princeton.edu by Thursday, September 13 to make or cancel reservations.

Joint Meeting of the Princeton ACS and Central Jersey AIChE

Wednesday, October 24, 2007

Guest speaker will be

**David Goldston,
Scholar in Residence, Woodrow Wilson
School, Princeton University**

"Loving Science to Death?: How Politicians Deal with Science in Making Environmental Policy."

In addition

**Ray Garant, Assistant Director, Public Policy, ACS
Office of Legislative and Government Affairs will
speak briefly about the Legislative Action Network**

Time: 6:00 PM
Lecture: Frick Laboratory, Room 120
Dinner: Friend Center Convocation Room
(following lecture)

Abstract:

As politics have become more polarized, disputes about science have become a more common feature of environmental debates. David Goldston will discuss why this has occurred, how it has played out in some recent debates and what might be done about it.

Biography:

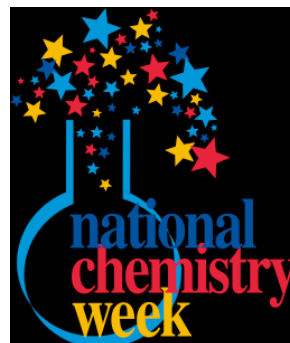
David J. Goldston is scholar in residence for the Program in Science, Technology, and Environmental Policy, at the Woodrow Wilson School at Princeton University. He was formerly chief of staff for the House Committee on Science. As staff director, he oversaw a committee with jurisdiction over most of the federal civilian research and development budget, including programs run by NASA, the National Science Foundation, the Department of Energy, the Department of Commerce and the Environmental Protection Agency.

Prior to becoming staff director in 2001, Goldston was legislative director for Congressman Sherwood Boehlert (R-NY), who became chairman of the Science Committee in January 2001. Goldston came to Capitol Hill in 1983 as Boehlert's press secretary. From 1985 to 1994, he served on the Science Committee as the special assistant on the Subcommittee on Science, Research and

Technology. In 1994 and 1995, Goldston was project director at the Council on Competitiveness, a private sector group with members from industry, labor and academia. Goldston directed work on the report, "Endless Frontier, Limited Resources: U.S. R&D Policy for Competitiveness." Goldston was graduated magna cum laude with a B.A. in American history from Cornell University in 1978. He has completed the course work for a Ph.D. in American history at the University of Pennsylvania.

Reservations:

The meeting will be held in Frick Laboratory, Room 120, Princeton University. Seminar is at 6 PM followed immediately by dinner in the Friend Center Convocation Room. The seminar is free and open to the public. Reservations are required for dinner, which is \$35 for full members, \$25 for retirees and \$15 for students. All reservations will be billed, for the section pays on the number of reservations, not the number of attendees. Please contact Denise D'Auria at (609) 258-5202 or denised@princeton.edu by Wednesday, October 17 to make or cancel reservations.



**NATIONAL
CHEMISTRY
WEEK COMING
UP!**

**Activities Night on
October 26, 2007**

Help Wanted!!

The American Chemical Society will celebrate National Chemistry Week October 21 through 27. **This year's theme is "The Many Faces of Chemistry."** We will hold our traditional Activities Night at Frick Laboratory, Princeton University, on Friday, October 26, 7:00 PM – 9:00 PM. Everyone from 6 to 96 is invited! Children 12 and under must be accompanied by a responsible adult. Admission is free, however reservations are required. Contact Kitty Wagner at kmwagner@princeton.edu or leave a message at (609) 258-2937. (For reservations, include in your message the name of the responsible adult, total number in party, and number and ages of children under 18.) See www.princeton.edu for directions.

In keeping with the theme, we would like to have "hands-on activity stations" that demonstrate the diverse fields and careers in chemistry. ***Would you be interested in organizing an "activity station" targeted to children 6-12 years old that represents your field or your company?***

Making toothpaste, chewable tablets, paints, dyes, or polymers are just a few examples of suitable activities. ***Volunteers are also needed, as usual, to supervise activities.*** If you can help or want to find out more ***please contact Kitty Wagner at kmwagner@Princeton.edu!*** If you know a good hands-on activity that is related to your work, please suggest it.

Also, on Activities Night, and at other times throughout the year, we would like to let people know about the many different things that chemists do, and the many different people who do them. To do this ***we plan to make a display and/or booklet featuring people from our local section*** that we can supply for career days at local schools (target audience will include high school students). ***Could you help by sending in a brief paragraph? Please include:***

- Name: let us know if you prefer not to have your name published
- Education: highest degree, or education level required for the position
- Job Title: e.g. salesperson, analytical chemist, investment analyst, material chemist
- Brief description: what you do, (a few sentences are sufficient)
- Photo: not required but would be appreciated

Please send these biographies to louise.lawter@gmail.com by October 10 if possible. We would really like to hear from you!

Northeastern ACS Section Calls for Nominations for Gustavus John Esselen Award

The Esselen Award for Chemistry in the public interest is one of the most prestigious honors provided by the Northeastern Section of the American Chemical Society. The award annually recognizes a chemist whose scientific and technical work has contributed to the public well-being, and has thereby communicated positive values of the chemical profession. The Awardee should be a living resident of the United States or Canada at the time of nomination, and the significance of this work should have become apparent within the five years preceding the nomination.

The Award was established in 1987 to honor the memory of Gustavus John Esselen, a distinguished member of the Northeastern Section. A brief history of the Award as well as a biography of Esselen can be accessed from www.nesacs.org. The first awardees were F. Sherwood Rowland and Mario J. Molina, who subsequently received the Nobel Prize. As can be seen by the list of past recipients, any field of chemistry is valid as long as the

scientific work has clearly contributed to the public well-being and its value to society has become apparent within the last five years.

The award consists of a medal and a check for \$5,000. Travel expenses incidental to the conferring of this award will be reimbursed.

To nominate a candidate please provide statements from two co-sponsors as well as a brief biography of the candidate, a description of the work which has been recognized as communicating the positive values of the chemistry profession and copies of selected, pertinent articles. Popular news and feature articles should be included as an indication of public interest. Nominations and inquiries should be directed to Mr. Joseph Lima, c/o Karen Piper, 19 Mill Road, Harvard, MA 01451. Nominations should be posted no later than October 15, 2007.

2007 US National Chemistry Olympiad -- Final Report --

By Bruce Burnham, Program Chair

This was an exciting year for the 2007 US National Chemistry Olympiad. We sent another student to Study Camp and had a blind student, Trevor Saunders of Hopewell Valley Central High School, take the National exams at Rider University, including the lab practical!

The Trenton and Princeton sections of the ACS held the 2007 US National Chemistry Olympiad from January through April. From the 260 students representing 13 of the local high schools, 12 of the students who earned the top scores on the local exam were selected to take the National exam at Rider University on Saturday, April 28, 2007. The local exam administered at the participating high schools was made up of 60 multiple-choice questions. The National exam consisted of three parts: Part I: 60 multiple-choice questions, Part II: 8 problem-solving/explanation questions, Part III: 2 laboratory problems, a lab practical exam.

A special recognition goes to Sophia Izmailov of West Windsor-Plainsboro HS South who for the second straight year was selected among the top-20 National Finalists out of 10,000 nationwide participants. The Study Camp was held at the US Air Force Academy in Colorado Springs, CO June 3-17, 2007. The top six students from the Study Camp, one of which was Sophia, then represented the United States in the 39th International Chemistry Olympiad (IChO) held in Moscow, Russia, July 15-24, 2007. Sophia won a bronze medal in this year's competition. This year, the USA team won three silver

medals and one bronze medal, the same medal count as the last two years. 158 medals were awarded from a total of 256 participants representing 66 countries.

The Trenton Section also recognizes Sophia Izmailov of West Windsor-Plainsboro HS South for achieving the highest and perfect score (60/60) on the local exam. Likewise, the Princeton Section recognizes Aaron Deutsch of Princeton High School for achieving the highest score (57/60) on the local exam. The 12 local finalists who took the National exam were recognized at the Trenton Section Awards Banquet held on May 8, 2007 at Antonio's Restaurant in West Trenton.

The following students participated in taking the National exam on April 28:

From the Trenton Section:

Sofia Izmailov and Ying-Ying Tran from West Windsor-Plainsboro HS South sponsored by Karen Galley,
Trevor Saunders and Christina Jaworsky from Hopewell Valley Central High School sponsored by Dr. Lillian Rankel,
Daniel Becerra from Lawrence High School sponsored by Beth Volpe,
Nicholas Bodner and Nicholas Liu from The Lawrenceville School sponsored by Mary Calvert,
Brian Cook from Notre Dame High School sponsored by Lois Omland,
Bayard Gardiner from The Pennington School sponsored by Tom Horsley,
Dena Stanley from Nottingham High School sponsored by Allen Kingman,

From the Princeton Section:

Aaron Deutsch and Tucker Chan from Princeton High School sponsored by Linda Kruegel,
Michael Gidding and Bruce Clarke from The Hun School of Princeton sponsored by Matt Treichel.

All of the students seemed to enjoy and value their experience participating in the Chemistry Olympiad. We hope to have our best high school chemistry students continue to represent our section well in the US National Chemistry Olympiad for many years to come.

The 2006 USNCO High Schools and teachers were:

Trenton Section

Lois Omland: Notre Dame High School
Patrick Gibbons: North Hunterdon High School
Beth Volpe: Lawrence Twp High School
Tom Horsley: The Pennington School
Mary Calvert: Lawrenceville School
Dr. Lillian Rankel: Hopewell Valley Central High School
Karen Galley: West Windsor-Plainsboro H S South
Sarah Stocking: Steinert High School
Allen Kingman: Nottingham High School
Dan Allen: Hunterdon Central Regional High School,

Kenneth Dougherty: Hunterdon Central Regional H S

Princeton Section

Linda Kruegel: Princeton High School
Matt Treichel: The Hun School of Princeton

The 2008 US National Chemistry Olympiad preparations are underway. I will again serve as the Olympiad Coordinator for both the Trenton and Princeton Sections. The program announcement letter will be sent out to the high school chemistry teachers in December. The National Exam will be held at Rider University next April and the 40th International Chemistry Olympiad will be held in Hungary in July 2008.

COUNCIL HIGHLIGHTS from the 234th ACS NATIONAL MEETING

Registration Report

As of August 21, 2007, the ACS fall national meeting had attracted 15,344 registrants. Totals in select categories are as follows: Regular attendees 8,792; Students 3,518; Guests 574; Exhibit Only 784; and Exhibitors 1,676

The Society's Membership

The Committee on Membership Affairs reported that as of July 2007, the ACS total membership is 1,100 ahead of that at the same date last year, and the number of unpaid members is 295 less than that at the same date last year.

Special Discussion Item

A special discussion item was put on the Council agenda. The discussion focused on ACS policy development and advocacy efforts. ACS President Catherine (Katie) T. Hunt framed the discussion by posing three questions: 1) How can ACS encourage more members to participate by bringing their expertise to the development of more targeted policy positions? 2) What can ACS do to increase member involvement in public policy advocacy? 3) How can ACS be a more effective leader in policy activities in the broader science and technology communities? Councilors entered into a robust exchange, offering several useful comments and suggestions. As a follow-up, President Hunt invited councilors to visit her website at www.acspresident.org for additional information.

Other Society Business

The Board received updates from two Society initiatives: the Web Presence Initiative and the ACS Leadership Development System (LDS). The newly re-invented ACS website, scheduled to launch September 30, will feature a unifying global navigation and dramatically improved user experience. The new url is www.acs.org; users who have bookmarked www.chemistry.org will be forwarded

to the new site. The LDS envisions offering a full pipeline of skilled and effective ACS members ready, willing, and able to step into leadership roles in their volunteer and professional lives.

Princeton ACS 2007 Executive Officers and Committee Chairs

Chair:

George Crull
Bristol-Myers Squibb
(609) 252-5805
george.crull@bms.com

Past-Chair:

Istvan Pelczer
Princeton University
(609) 258-2342
ipelczer@princeton.edu

Councilor:

Barbara Lences
Wyeth Research
(732) 274-4678
lencesb@wyeth.com

Alt. Councilor and National Chemistry Week:

Kathryn Wagner
Princeton University
(609) 258-2937
kmwagner@princeton.edu

Webmaster:

Jonathan Chun
Alliance Technologies, LLC
(732) 355-1234
jchun@alliancetechnology.com

Chemagination:

Louise Lawter & Sharon
Sibilia
chemagination@yahoo.com

Outreach:

Bill Barnard
Zev4US@yahoo.com

Government Affairs:

Lynne Greenblatt
Wyeth Research
(732) 274-4549
greenbl1@wyeth.com

Chair-Elect:

Andrew Bocarsly
Princeton University
(609) 258-3888
bocarsly@princeton.edu

Secretary / Treasurer:

Sharon Sibia
(609) 520-1288
sharon.sibia@verizon.net

Councilor:

Lynne Greenblatt
Wyeth Research
(732) 274-4549
greenbl1@wyeth.com

Alt. Councilor:

Sharon Sibia
(609) 520-1288
sharon.sibia@verizon.net

Earth Day:

Schuyler Antane
Wyeth Research
antanes@wyeth.com

Newsletter & Public Relations:

Louise Lawter
louise.lawter@gmail.com

Awards:

Louise Lawter
louise.lawter@gmail.com

Education:

Andrew Bocarsly
Princeton University
(609) 258-3888
bocarsly@princeton.edu



ACS Launches Science News Podcasts

The American Chemical Society (ACS) Office of Communications has launched a podcast that will make cutting-edge scientific discoveries from ACS journals available to a broad public audience at no charge.

The podcast, *Science Elements*, (http://chemistry.org/science_elements.html) describes research reported in ACS's prestigious suite of 35 peer-reviewed scientific journals and Chemical & Engineering News, ACS's weekly news magazine. Those journals, published by the world's largest scientific society, contain about 30,000 scientific reports from scientists around the world each year. The reports include discoveries in medicine, health, nutrition, energy, the environment and other fields that span science's horizons from astronomy to zoology.

Those discoveries improve peoples' lives, and Science Elements will make that information more widely available. The podcast draws on an Office of Communications product, PressPac, which initially was developed to assist science journalists in researching and reporting news.

The podcaster for Science Elements is Steve Showalter, Ph.D., a chemist at the U. S. Department of Energy's Sandia National Laboratories in Albuquerque, New Mexico. Showalter's work at Sandia focuses on the design and development of new batteries. "As an active member of the ACS since 1987, I view these podcasts as part of a broader commitment to improving public understanding of chemistry," Showalter said. He also works toward that goal as a member of the ACS Committee on Public Relations and Communications and as a councilor for the Central NM Section.

ACS Podcasting is an increasingly popular way of accessing news, information, and entertainment content from the Internet. The term was derived from Apple's "iPod," a portable digital audio and video player, and "broadcasting." Podcasts allow users to subscribe to a "feed" and receive new files automatically whenever posted to the Internet. New installments of Science Elements will be posted weekly and available without charge.

⦿⦿⦿⦿ CALENDAR OF EVENTS ⦿⦿⦿⦿

Thursday, September 13: **NJ ACS Mass Spectrometry Discussion Group**, 2007 Distinguished Lecture, DoubleTree Hotel, Somerset, NJ. Speakers Prof. Fred McLafferty the Peter J. W. Debye Professor of Chemistry, Cornell University and Dr. Ian Jardine, vice president of Global R&D, ThermoFisher, "Cool Tools for Real Science". Vendor Show 4:00PM - 8:00PM, lectures 7:15PM - 9:00PM. Register at <http://www.njacs.org/msdg/index.html>. Free admissions.

Friday, September 28: the **29th Annual Princeton ACS Fall Organic Chemistry Symposium**, registration 12:00PM-1:00PM, symposium 1:00PM-8:30PM, Forsgate Country Club, Monroe Township, NJ, speakers are Professor Eric Jacobsen, Harvard University, "Cooperativity and Dual Activation in Asymmetric Catalysis"; Dr. Ann Weber, Merck Research Laboratories, Rahway, "Discovery of JANUVIA TM (Sitagliptin), A Selective Dipeptidyl Peptidase-4 Inhibitor for the Treatment of Type 2 Diabetes"; Professor Hisashi Yamamoto, The University of Chicago, "Asymmetric Catalysis for Organic Synthesis" and Professor K.C. Nicolaou, The Scripps Research Institute, "Molecules that Changed the World"

Friday, October 19: **Princeton ACS Executive Committee meeting**, 11:30AM - 1:30PM, Wyeth Research, interested Princeton ACS members are welcome to attend. Contact Lynne Greenblatt at greenbl@wyeth.com to make a reservation.

Wednesday, October 24: **Joint Princeton ACS and Central Jersey AICHE Meeting**, 6:00PM, Friend Center, Princeton University, speaker will be David Goldston, Scholar in Residence, Woodrow Wilson School, Princeton University

Friday, October 26: **National Chemistry Week Activities Night** sponsored by the Princeton ACS, Frick laboratory, Princeton University, 7:00PM - 9:00PM. (See article above.)

November 7-8: **TRI Short Course:** "The Science behind Hair Claims", Discusses the science and techniques of hair measurements in the context of product development and claims, at TRI/Princeton. Contact: Course Registrar, telephone: (609) 430-4828, website: www.triprinceton.org, e-mail: info@triprinceton.org

Wednesday, November 14: **Princeton ACS Monthly Dinner Meeting and "Education Night"**, 6:00PM, Frick Laboratory, Princeton University. Dr. Kathryn Wagner, Princeton University will speak on the "Chemistry of Magic".



Princeton Section ACS

Department of Chemistry

Princeton University

Princeton, NJ 08544-1009

US POSTAGE

ADDRESS CORRECTION REQUESTED