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# Joseph Betz, NIH Office of Dietary Supplements, is November CSW Dinner Meeting Speaker

CSW will hold its November dinner meeting, honoring its 50-year members, on Thursday, November 19, at Far East Restaurant in Rockville. Dinner information and other specifics are detailed on page 2. The speaker will be Dr. Joseph M. Betz, Office of Dietary Supplements, NIH, who will present a seminar entitled, "Scientific and Regulatory Challenges to the Scientific Study of Botanicals."

Dr. Betz joined the ODS as Director of the Dietary Supplements Methods and Reference Materials Program in 2001. In this role, he oversees efforts to promote development of validated analytical methods and reference materials for dietary supplements. Prior to joining NIH, he was Vice President for Scientific and Technical Affairs at the American Herbal Products Association. Before joining the AHPA, he spent 12 years as a research chemist at FDA's Center for Food Safety and Applied Nutrition.

Dr. Betz is a native of Philadelphia, PA. He earned his Ph.D. in Pharmacognosy (1988) at the Philadelphia College of Pharmacy and Science. His research interests lie in the areas of analytical methods for determination of botanical quality. He has served as AOACI General Referee for Botanical Supplements and on two USP Expert Committees- Botanicals and Nomenclature and Labeling. Dr. Betz has over 50 publications in the natural



products area and continues to work toward ensuring the quality and safety of botanical products. Dr. Betz is the recipient of the American Botanical Council's first Norman R. Farnsworth award for excellence in Botanical Research and the American Herbal Product Association's Herbal Insight Award for contributions to the Botanical Sciences.

**Abstract:** Sales of botanical dietary supplements in the U.S. were approximately four billion dollars last year. Despite their popularity, there remains controversy surrounding their use. Much of the controversy revolves around the fundamental questions of whether or not they are safe and effective.

According to U.S. Food and Drug Administration estimates, when the Dietary Supplement Health and Education Act (DSHEA) became law in 1994, there were about 600 U.S. dietary supplement manufacturers producing approximately 4,000 products. By the year 2000, there were more than 29,000 dietary supplement products on the market with an average of 1,000 new products being added annually. Twelve years after the DSHEA, product quality remains one of the biggest questions confronting consumers, researchers, and regulators.

Knowledge about the composition of natural products is vital to understanding their biological activity. Over the past few years, clinical studies of several popular interventions have been published, with contradictory (continued, page 2)

## **US National Chemistry Olympiad Invites College Mentor Position Applicants**

College educators are invited to apply for a position as mentor for the US National Chemistry Olympiad program. Duties during the three-year term include helping to conduct the national study camp for high school students held at the United States Air Force Academy located in Colorado during mid-June 2011, 2012 and 2013. Generally, in their second and third year, mentors accompany four U.S. student competitors to the International Chemistry Olympiad (IChO). During the competition, the mentors will serve as members of the IChO Jury. The 2012 and 2013 IChO events are scheduled to be held in the U.S. and in Singapore, respectively. Most students at the study camp have completed Advanced Placement Chemistry or the equivalent; therefore instruction at the camp is well beyond the level of high school general chemistry courses. The curriculum also includes considerable laboratory work.

Successful applicants (continued, p. 4)

## The Capital Chemist™



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#### THE CHEMICAL SOCIETY OF WASHINGTON PRESENTS: 1090th Dinner Meeting

Thursday, November 19th Far East Restaurant 5055 Nicholson Lane Rockville, MD 20852 6:00 pm SOCIAL HOUR (Cash Bar) 7:00 pm DINNER COST \$26.00 Members and Guests \$13.00 Students 50-year Members and Spouses FREE

**Banquet Menu:** Appetizers: Spring roll, shrimp toast, steak on a stick. Main dishes: Far East Shrimp, asparagus beef, cashew chicken, Szechuan string beans, vegetable delight, steamed and fried rice. Toffee and pineapple dessert.

Far East Restaurant does not have its own web site, but the following is a Montgomery County business directory listing:

http://www.countysurf.com/md-montgomery-rockville-restaurant-chinese.html

8:00 p.m. Featured Speaker: Joseph M. Betz, Ph.D., Office of Dietary Supplements, NIH. Title: "Scientific and Regulatory Challenges to the Scientific Study of Botanicals"

Make reservations by **Friday 12:00 noon, November 13, 2009,** to the CSW office: csw@acs.org or 202-659-2650. Please designate the names in your party. The public is invited to attend. You may attend the talk only, but reservations are appreciated. **Those who make a reservation but are unable** 

to attend should send a check for the cost of their meal to the CSW office.

**Directions:** From I-270, take Montrose Road exit east; turn right onto 355, then left on Nicholson Lane. From I-495 outer loop, take Exit 34, north on 355, then right onto Nicholson Lane. From I-495 inner loop, take Exit 36, north on Old Georgetown Rd., then right directly onto Nicholson Lane. METRO: White Flint station on the red line. (Restaurant site is marked with an "A", right.)

Abstract (continued from page 1): conclusions



about efficacy. Reviews of a number of botanical studies have demonstrated that many trials do not adequately characterize or describe the products being used in the studies. These deficiencies may be caused by investigators who lack understanding of the regulations governing the introduction of botanical products into the supplement marketplace as well as a lack of knowledge of the basic methodology for characterizing and describing the products. Formal policies that require documentation of the nature and composition of dietary supplements are being implemented by journal editorial boards and research funding agencies, including NIH. This push toward basic and applied analytical chemistry will help researchers, regulators, manufacturers, and ultimately, consumers. This talk will provide a brief overview of supplement regulations, problems encountered by research agencies when reviewing grant applications, and will highlight policies for assisting investigators address these issues.

## Twenty-eight 50-Year Members to be Honored at CSW November Dinner

Dr. Robert John Argauer, Kensington, MD Dr. Charlie J. Barnes, Waldorf, MD Mr. Stephen A. Brenner, Potomac, MD Dr. Mark Civera, Washington, DC Dr. Donald James Cotton, Washington, DC Mr. Anthony F. Dorrzapf, Jr., Herndon, VA Dr. Igor John Eberstein, Greenbelt, MD Mr. Robert E. Farncomb, Accokeek, MD Dr. Russell E. Farris, Clifton, VA Dr. Alexander J. Fatiadi, Burtonsville, MD Dr. Errol Desmond Goddard, Cambridge, MD Dr. Alan C. Levy, Potomac, MD Mr. Paul Lieberman, Silver Spring, MD Dr. Jan W. Mares, Washington, DC

Dr. James V. Mengenhauser, Alexandria, VA Mr. Robert L. Myklebust, Walkersville, MD Mr. Clarence J. Nowack, Ocean Pines, MD Dr. Donald G. Rea, Falls Church, VA Dr. Herbert H. Richtol, Arlington, VA Dr. Fred E. Saalfeld, Springfield, VA Dr. Desmond Sheehan, Alexandria, VA Mr. Jack M. Solomon, McLean, VA Dr. Thomas F. Spande, Bethesda, MD Dr. Celia White Tabor, Bethesda, MD Dr. Warren E. Thompson, Bethesda, MD Dr. David G. Van Ormer, Arlington, VA Dr. Denys J. Voaden, College Park, MD Dr. Garnett E. Wood, Washington, DC

## Navigating the Intellectual Property Landscape, an ACS Webinar

Beginning and growing a business can be an exciting • Time: 2:00-3:00 pm ET yet perplexing time. When the company is based upon • Fee: Free innovation, there is even greater complexity. How does one • Web site to register: protect the intellectual assets when both time and money are https://www2.gotomeeting.com/register/404780747 at a premium? What early stage agreements are critical to protect company knowledge and goodwill? These and other at Miles & Stockbridge P.C., an experienced attorney and executives will be discussed.

half-hour presentation followed by Q&A with speaker intersection of science, business, and law. Her practice is Gianna Arnold, Principal at Miles & Stockbridge P.C. As a directed primarily to applying the policies, procedures and scientist and a law professional, she focuses her legal corresponding agreements needed to protect the intellectual and small/medium business executives learn about the the President of Women In Bio. policies, procedures and corresponding agreements needed to protect the intellectual assets of start-up, early stage, and mid- using Twitter sized companies.

services patentable? What actions must you take to protect #acsimp hashtag in your twitter text. your intellectual property? How to protect and enforce your company's knowledge and goodwill? How to balance the risk created by the ACS for industry chemists and chemical engineers. and cost of IP protection?

#### Webinar Details:

• Date: Thursday, November 19, 2009

About The Presenter: Gianna Arnold is a Principal topics of interest to entrepreneurs, scientists, and business corporate executive with first-hand knowledge and practice in matters such as entity formation, financing, business The ACS Small & Medium Business Webinar Series development, and mergers and acquisitions. With prior will present "Navigating the IP landscape: Legal issues laboratory bench experience and an advanced degree in entrepreneurs and small business owners need to know," a biotechnology, she focuses her legal expertise on the expertise on helping scientist professionals, entrepreneurs, assets of start-up, early stage, and mid-sized companies. She is

ACS Small & Medium Business Webinar now To follow ACS programs for industry members, ask questions to the webinar presenter in advance, What You Will Learn: Are your products and/or or to join group colleagues twittering, please search or include

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#### Chemical Technology Programs Earn ACS Approval

The ACS Chemical Technology Program Approval Service (CTPAS) has granted ACS approval to the Laboratory Science Technology program at two institutions: the National Technical Institute for the Deaf (NTID), one of eight colleges within the Rochester Institute of Technology; and the Chemical Technology program at Ivy Tech Community College, Indianapolis, IN.

The Laboratory Science Technology Program at NTID is the 15th chemistry-based technology program to be approved by ACS and the first approved program designed for deaf and hard-of-hearing students. It is also the first approved program to work with industry and community partners nationwide, rather than with local partners.

The program at Ivy Tech Community college is the 16th chemistrybased technology program to be approved by ACS. Just over 10% of the chemistry-based technology programs in the US have earned ACS approval.

Because chemistry-based technology students must learn a great deal of theory and technique in a relatively short period of time, programs work closely with industry and community partners to tailor the curriculum appropriately. Many technology programs also work with academic partners to give students more educational options. Such partnerships are rapidly becoming the new model for relationships among industry, academia, and the community.

CTPAS was established in 1990 to nurture, review, and grant ACS approval to associate-level chemistry-based technology programs. CTPAS evaluates programs based on such criteria as partnerships and alignment with industry/community, program assessment, and facilities and resources.

For more information on ACS approval or to see a list of approved programs, visit "Chemical Technology Program Approval" at www.acs.org/education, call 202-872-6108, or email ChemTechLinks@acs.org.

## **DC Area Chemistry Seminar Schedules**

Listed below are chemistry-related seminar schedule web sites from area universities, that were up-to-date as of press time. More will be posted as they become updated. Contact the department to find out about general public admission, directions to campus, and parking. *Viewing the PDF? Just click!* Georgetown Chem: http://chemistry.georgetown.edu/news/seminars.html GMU Chem: http://chemistry.gmu.edu/seminar/seminar\_fall2009.html GWU Biochem: http://www.gwumc.edu/biochem/seminars.html GWU Chem: http://www.gwu.edu/~gwchem/seminars.cfm Maryland Biotechnology Institute: http://www.umbi.org/home.php Maryland Chem: http://www.chem.umd.edu/seminars Maryland Chem Eng: http://www.cheb.umd.edu/events/seminars.html Maryland Chemical Physics:

http://www.chemicalphysics.umd.edu/10\_seminars.htm

## DC Area Chemistry Seminars: Editor's Choice

Check web sites for times and locations.

**Maryland Chem Eng:** Dr. William Prinz, NIH, "Moving Sterols and Signals Between Organelles at Membrane Contact Sites," November 17.

Maryland Chem: Professor Howard Katz, Johns Hopkins University, "Electron-carrying, Tunable and Sensory, and Easily Processed Semiconductor Materials and Devices," November 18.

**Georgetown Chem:** Professor Sundeep Rayat, Kansas State University, "Mechanistic insights into the photochemistry of tetrazolethiones: Lightactivated DNA cleaving agents," November 19.

## Chemistry Olympiad Seeks Mentors for Upcoming Competitions

*(continued from page 1)* are expected to have background in one or more of the areas of organic, inorganic, analytical, physical, or biochemistry with classroom experience and should demonstrate involvement with students in special projects or activities. Applicants must be prepared to make a three-year term commitment as outlined above. ACS pays all expenses and travel costs, as well as an honorarium.

Interested individuals may obtain an application form at: www.acs.org/ olympiad or by contacting: Margaret Thatcher, Senior Program Associate, U.S. National Chemistry Olympiad Program American Chemical Society 1155 Sixteenth Street, N.W. Washington, DC 20036 (202) 872-6328 The deadline for completed applications is January 29, 2010. Applicants must also arrange to have

Applicants is failuary 29, 2010. Applicants must also arrange to have three letters of reference forwarded to Cecilia Hernandez by February 13, 2010 at the above address.

For more information, please call Cecilia Hernandez at (202) 872-6169.

### **CSW Calendar**

Deadline for Receipt of CSW Officer Election Ballots: Monday, November 16

December Dinner Meeting Thursday, December 10, 2009 Location TBD

January Dinner Meeting Speaker: Dr. Joseph Francisco ACS President-Elect

## ACS Short Courses in Durham, NC: Patent Fundamentals, Organic Chemistry, Laboratory Safety

In a changing economy, innovation and state-of-the-art skills are needed to get to the next level. Learn what you need to succeed in the lab and in your company with Short Courses from the ACS in Durham, NC, November 30 to December 2. Visit the website **www.proed.acs.org** for details on the fall schedule.

The following courses are open for registration:

Practical Approaches to Patents and Other Forms of Intellectual Property, November 30

Learn the fundamentals of writing patent applications and developing patent filing strategies.

**Essentials of Organic** Chemistry, November 30

This course will renew your knowledge of the basics of organic chemistry by reviewing nomenclature, oxidation reduction, typical reactions of functional groups from a mechanistic perspective, stereochemistry, and medicinal chemistry. Solid-State Organic Chemistry, November 30 - December 1

This course is designed to impart an understanding of the structures and properties of solid organic compounds. An overview of analytical techniques used to characterize solids will be presented, followed by discussions of the nature of various types of solids on a molecular level.

Effective Supervision of Scientists and the Technical Staff, November 30 - December 1

This course will help technical managers improve their skills by teaching effective management techniques, how to motivate staff for more creative output and participation, how to improve problem-solving abilities, and how to create a positive work atmosphere.

Laboratory Safety & Health, November 30 - December 2

Learn best practices to minimize personal injury, health impairment, property loss, fines, and liability in your laboratory.

## **ACS Publications from DC Area Research Groups**

This feature of *The Capital Chemist* is a compilation of selected publications in ACS journals, appearing recently, from area institutions.

Min Jia<sup>†</sup>, Yu Tang<sup>†</sup>, Yiu-Fai Lam<sup>†</sup>, Sarah A. Green and Neil V. Blough<sup>†</sup> (2009) "Prefluorescent Nitroxide Probe for the Highly Sensitive Determination of Peroxyl and Other Radical Oxidants," *Anal. Chem.*, **81**, 8033–8040. (<sup>†</sup> - Department of Chemistry and Biochemistry, University of Maryland)

Bindesh Shrestha and Akos Vertes (2009) "In Situ Metabolic Profiling of Single Cells by Laser Ablation Electrospray Ionization Mass Spectrometry," *Anal. Chem.*, Article ASAP, Publication Date (Web): September 17, 2009. (Department of Chemistry, W. M. Keck Institute for Proteomics Technology and Applications, The George Washington University)

Edward P. O'Brien<sup>‡‡</sup>, Yuko Okamoto, John E. Straub, Bernard R. Brooks<sup>‡</sup> and D. Thirumalai<sup>†</sup> (2009) "Thermodynamic Perspective on the Dock–Lock Growth Mechanism of Amyloid Fibrils," *J. Phys. Chem. B*, Article ASAP, Publication Date (Web): October 8, 2009. († - Biophysics Program, Institute for Physical Science and Technology, Department of Chemistry and Biochemistry, University of Maryland, and ‡ - Laboratory of Computational Biology, National Heart Lung and Blood Institute, NIH)

## Student Chapters Going Green

With the current school year underway, it's a great time to start planning this year's green chemistry activities. ACS Student Chapters can be recognized for their efforts to go green through the Green Chemistry Student Chapter Award. To earn the award, undergraduate student chapters must complete at least three different green chemistry activities over the course of the academic year and include them in their chapter report.

Read more for ideas about green chemistry activities. From the ACS web site www.acs.org, follow the links: Funding & Awards > Awards > Green Chemistry Awards > Green Chemistry Student Chapter Award.

## Special CSW Course: "Engaging and Motivating Volunteers"

On Saturday, November 7, the Chemical Society of Washington will be hosting a 4-hour leadership course from the ACS Leadership Development System called "Engaging and Motivating Volunteers". The course is aimed at giving you practical tools for engaging and motivating volunteers, which you can use both in your professional career as well as in your volunteer activities such as CSW. The workshop is especially targeted toward newly involved members of CSW.

If you're interested in attending, please contact Jennifer Young for details (j\_young@acs.org; 202-872-6173). The class size is limited to 20, but there may still be openings.





A possibly amusing amalgamation of chemistry, wordplay and trivia Suppose your car has a high gas mileage efficiency of 45 MPG, and you have driven it 120,000 miles.

A) Compared to a car that gets 30 MPG, how much gasoline have you saved?

B) Assuming \$2.50 per gallon, how much money have you saved? C) Using the following assumptions: gasoline = 85% carbon, gasoline = 6.2 lbs/gallon, 100%conversion of carbon to CO<sub>2</sub>, how much CO<sub>2</sub> emissions have you reduced? (Answers, page 8)

Member Change of Address should be sent to: ACS, PO Box 3337, Columbus, OH 43210 by phone: 800-333-9511; by e-mail: service@acs.org by web: http://acswebapplications.acs.org/applications/addrupdate/ addrchange.cfm Please change your address if needed! Undelivered copies are a waste of paper and expense.

## Use the CSW Web Site!

Each edition of *The Capital Chemist* is available at the CSW web site, **www.csw-acs.org**, on about the 20th of each month preceding the month of that issue. CSW members can find out about the next month's dinner meeting in advance by viewing *The Capital Chemist* in PDF format online.

The CSW web site includes links to other information on:

• Chemistry education

• Historical Events in Chemistry, compiled by Dr. Leopold May

• The CSW Retired Chemists' Group

• Awards, meetings, activities careers, other CSW notices

• Contact information for CSW officers

The site also contains a link to a sparkling new web site design. Follow the link and send your comments to the webmaster.

www.emdchemicals.com/analytics

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- www.mboservices.net
- http://membership.acs.org/ W/WashDC/career.html

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## New Program Grants Available: ACS Local Sections Could Receive up to \$500 in Starter Grants This Year

The ACS Office of Public Affairs is funding a starter grant program to encourage ACS local sections to form a Government Affairs Committee (GAC) and/or a Public Relations Committee (PRC). A GAC works to develop longterm relationships with elected officials by sharing ACS positions and engaging legislators in science-policy dialogue. A PRC works to improve the public's perception of chemistry by speaking confidently and consistently about the value of chemists and chemistry. Ideally, a committee is comprised of three or four individuals representing academia, industry, and students; however, it may consist of only one or two individuals (see: Job Description-Local Section GAC Chair).

The program grants local sections up to \$250 to form one committee or \$500 to form both types of committees. The application deadline is Nov. 30, 2009.

Funds are distributed once a local section names a committee chair and identifies a potential program activity to be completed in 2010. Activities can include, but are not limited to, the following:

Make a Washington, D.C., congressional visit

Publicize a local section meeting

Make a district congressional visit • Invite a policymaker to a local section public policy symposium

Help is available! Committees do not work alone: the ACS Office of Public Affairs provides materials and helpful suggestions. In addition, the ACS Committee on Chemistry and Public Affairs and the ACS Committee on Public Relations and Communications provide resources and guidance.

To apply for a grant, please submit the following information to Brad Smith

at b smith@acs.org:

Committee type; Committee chair name: Committee chair contact information:Local section: Local section treasurer; Local section treasurer address (for grant funds); Planned program activity (100 words or less).

Learn more about Government Affairs Committees at www.acs.org/gac and Public Relations Committees at www.acs.org/chemistryambassadors.

For more information, please contact Brad Smith at b smith@acs.org.

(12.5 tons) of  $CO_2$ would result in about 25,000 lbs. carbon. This amount of carbon 8060 lbs, of which 6850 lbs is .1300 gallons of gasoline is app.

 $(\mathbf{C})$ (A 83320

Approximately 1300 gallons

Chem-Mystery Answers:

# CSW: Celebrating over a Century of Service to Washington DC Area Chemists Dated Material Publication of The Chemical Society of Washington at Washington, DC Section of The American Chemical Society (USPS 556-400) The Capital Chemist Periodical Postage PAID

Mark Your Calendars for MARM 2010

The 41st ACS Middle Atlantic Regional Meeting (MARM 2010) will be held from Saturday, April 10 to Tuesday, April 13, 2010. Hosted by the Delaware Local Section, the meeting will take place at the historic Hotel du Pont in Wilmington, Delaware. Many exciting and informative symposia and events are being planned.

Little program information has been finalized, but the meeting's web site, www.marmacs.org, has already been set.

For more information, contact Dr. Martha Hollomon, at the email address:

marthahollomon@comcast.net.

Visit CSW on the web at: www.csw-acs.org