

# The American Society of Pharmacognosy

The ASP Newsletter  
Volume 50, Issue 2

## Welcome to Oxford

### ASP 55<sup>th</sup> Annual Meeting

By Dr. Ikhlas Khan and the Organizing Committee



Get excited! The 55<sup>th</sup> Annual Meeting of the American Society of Pharmacognosy (ASP) in conjunction with the Oxford International Conference on the Science of Botanicals (ICSB) is upon us! “Natural Products and their Impact on Humankind,” will be held August 2–6, 2014 at the Oxford Conference Center in the beautiful and historic town of Oxford, Mississippi.

There are rooms available at special reduced rates at four hotels, ranging from \$139 to \$159 per night. (These blocks of rooms are filling fast, so make sure to reserve yours soon to get the reduced rates.) Conference registration, hotel information, and the latest conference updates are available at [www.asp2014.org](http://www.asp2014.org).

We will be kicking off the events with an array of informative workshops on Saturday, August 2, and the next four days will feature a variety of scientific talks and panels, including two poster sessions starting on Sunday, August 3. We have a diverse schedule of speakers from all over the world and from all sectors of the natural products community. Our speakers are leaders in the field from academia, industry, medicine, publishing, regulation, and more.



Oxford Conference Center in historic Oxford, Mississippi.

Our theme, “Natural Products and Their Impact on Humankind,” aims to explore the full impact of natural products on our lives and world. To this end, we will review, discuss, and explore the confluence of current research topics related to health and agriculture. Topic areas will include past achievements, current status, and future prospects in the area of natural products discovery for the betterment of health, agriculture, and the environment.

Our Saturday workshops include “LC/MS Analysis of Botanicals and Dietary Supplements, From Sample Prep to Results,” organized by Drs. Kate Yu and Jerry Zweigenbaum, and “The Essentials

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## 50<sup>th</sup> Anniversary ASP Newsletter

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## EDITOR'S CORNER



**G**reetings from China! As I write this, I am currently traveling, but very much looking forward to seeing you all at our upcoming Annual Meeting, taking place in Oxford, Mississippi, August 2-6, 2014. This summer issue of the *ASP Newsletter* provides one final opportunity to plan for our meeting and your visit to Oxford. Dr. Ikhlas Khan provides us with a final view of the scientific program that includes a wide range of topics in natural products chemistry. The social program shows off the wide variety of culture in this southern university town, from historical music to classic food. For other ideas of what to do in Oxford, we have turned to seven locals for their advice on some of the highlights that may not be as

well known to tourists. Their answers should help those attending the meeting to enjoy Oxford like a native.

The *ASP Newsletter* continues to celebrate its 50<sup>th</sup> Anniversary year. Our "From the Archives" column takes on the subject of the ASP Annual Meetings, and the role of the *Newsletter* in publicizing these events. In this day of instantaneous access to news via the internet, this column transports us to a time when ASP members relied on the quarterly *Newsletter* and so-called snail mail to get information about the Annual Meeting. I was heartened to read a recent *New York Times* article that found electronic newsletters still play an important part in disseminating information on select topics to a common audience ([www.nytimes.com/2014/06/30/business/media/for-email-a-death-greatly-exaggerated.html?module=Search&mabReward=relbias%3Ar%2C%7B%22%22%3A%22RI%3A12%22%7D&r=0](http://www.nytimes.com/2014/06/30/business/media/for-email-a-death-greatly-exaggerated.html?module=Search&mabReward=relbias%3Ar%2C%7B%22%22%3A%22RI%3A12%22%7D&r=0)). I hope that the *ASP Newsletter* still serves this important function.

In this issue, Dr. Doug Kinghorn announces this year's winners of the prestigious Schwarting and Beal Awards for articles appearing in the *Journal of Natural Products*. We congratulate Drs. Yi-Qiang Cheng and Dong-Chan Oh and their co-authors! Dr. Georgia Perdue keeps us abreast on news from our nation's capital, including recent discussions on the state of antibiotics. Dr. David Newman continues to delight us with unusual stories of natural products-based therapeutics, and we meet New Member Dr. Carol Pontzer, Program Director in the Division of Extramural Research at the National Institutes of Health (NIH) National Center for Alternative and Complementary Medicine (NCCAM), as well as Dr. Deb Mosca, CEO of Marine Bio-Technologies Center of Innovation (MBCOI). We hope you also enjoy a glimpse at a recent tribute article on pharmacognosist Dr. Joe Shellard that appeared in *Pharmaceutical Historian*, and the American Botanical Council announces a new collaborative newsletter, "*Botanical Adulterants Monitor*."

In tandem with the *ASP Newsletter* 50<sup>th</sup> Anniversary year, we will be sending out electronic surveys to members asking what new articles you wish to see in the *Newsletter* and what comments or critiques you would like to impart. Please keep an eye out for this survey later this summer as we continue our efforts to be of most relevance to the ASP community.

I look forward to seeing you all in Oxford, Mississippi, and have a wonderful summer.

*Dr. Edward J. Kennelly*

## EMPLOYMENT SERVICE

The Society offers a placement service to aid our members in seeking positions or employees. This service is available only to ASP members and is free to both the applicant and the employer.

For more information see the services website.

[www.pharmacognosy.us/?page\\_id=163](http://www.pharmacognosy.us/?page_id=163)

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**Spring Issue Feb. 15**  
**Summer Issue May 18**  
**Fall Issue Aug. 18**  
**Winter Issue Nov. 17**

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# Welcome to Oxford: ASP 55<sup>th</sup> Annual Meeting

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of both <sup>1</sup>H and <sup>13</sup>C NMR as Applicable to Structural Problems in Natural Products Research,” organized by Dr. David Russell and Mr. Mark O’Neil-Johnson, running concurrently starting at 9 a.m. The afternoon includes “Regulation & Quality Assessment,” organized by Dr. Ikhlas Khan, and “NMR Tips, Tricks and Techniques to Solve Structural Problems- Presented by Bruker BioSpin,” organized by Dr. Kim Colson, running concurrently from 1 p.m.

We will start the day on Sunday, August 3, with a lecture from the Norman R. Farnsworth Research Achievement Award winner. From there, we will continue with a varied schedule of plenary lectures and contributed talks, as well as special lectures from the winners of the Varro Tyler Prize, the Matt Suffness Award, and two poster sessions. We are thrilled with the overwhelming response we received to our call for abstracts, and with such a crop of excellent submissions to choose from, we think you will be just as thrilled with the agenda!

## OUR FULL LINEUP OF LECTURE AND PRESENTED POSTERS WILL INCLUDE THE FOLLOWING TOPICS

Contributions of Natural Products: Success Stories  
Biosynthesis/Biotechnology: Opportunities for Natural Products  
Marine Natural Products  
Agrochemical/Agro biotechnology  
Frontiers of Discovery through Instrumentation  
Analytical Techniques  
Natural Product Synthesis  
Phytochemicals  
Botanicals/Traditional Medicine: The Road to the Clinic  
Natural Products as Therapeutic Agents  
Ecology and the Environment

## GETTING TO OXFORD

The nearest major airport to Oxford is the Memphis International Airport, Memphis, Tennessee. We have a shuttle service running to and from the Conference Center and airport that can be booked through the online portal when you register for the conference. There is also a variety of taxi and rental car services available at the Memphis airport if you prefer to travel on your own.

## SOCIAL EVENTS

On Saturday we will welcome you to Oxford with the opening reception, “Mississippi Blues Night,” hosted in the historic Lyric Theater on the Oxford Square <http://www.thelyricoxford.com/about/>. The reception will include local Southern food, an open bar, and music by a North Mississippi hill country blues band, “The Kenny Brown Band.” Sunday night is “Island Night” on the grounds of the Oxford Conference Center and Hampton Inn properties. Festivities will include a steel drum band, games, island food, and cocktails. Island shirts and casual wear are encouraged, and the pools will be open. Monday, we will entice you with “Indian Night.” Indian food is different from foods from the rest of the world, not only in taste, but also in cooking methods. Throughout India, be it North India or South India, spices are used generously. But you must not forget that every single spice used in Indian dishes features nutritional and/or medicinal properties.

Tuesday is a night of many options. You can choose from one of our three desirable excursions:

1. **“Casino Night”** - Enjoy a night at the nine casinos in Tunica, Mississippi, with a \$25 slot play voucher. (An hour and a half from Oxford.)
2. **“Beale Street”** - The bus drops you off in the heart of downtown Memphis for a night on the town with a free V.I.P. pass to several establishments on Beale Street. This location was rated America’s Most Iconic Street, according to the USA Today national poll, Tennessee’s Top Tourism Attraction, and The Official Home of the Blues. (An hour and a half from Oxford.)
3. **“BBQ and Band”** - Remain at the hotel and conference center grounds for a night of games, BBQ, and music. “The Last Chance Band” of Little Rock, Arkansas, will entertain you while you enjoy our famous Mississippi farm raised catfish fillets and BBQ chicken in addition to playing outdoor, family fun games.

On Wednesday evening, we will transform the conference center to an elegant banquet facility. You will enjoy an exquisite meal and recap the week’s events. Thursday you will have the opportunity to tour St. Jude Research Hospital. In keeping with the promise of St. Jude Children’s Research Hospital to freely share research find-

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Rowan Oak, home of author William Faulkner; Beale Street, Memphis; The National Center for Natural Products Research

## Welcome to Oxford: ASP 55<sup>th</sup> Annual Meeting

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ings with the entire world (instilled by founder Mr. Danny Thomas), St. Jude has an extensive media relations program. This program is designed to share science, research, and medical discoveries, along with patient care treatment advances, with doctors, patients, parents, and the general public. The hospital's fundraising organization, American Lebanese Syrian Associated Charities (ALSAC), also works with the media and the public to share information about the hospital's treatment and research programs, and how the public can help advance this work. Enjoy a tour of Oxford on our Double Decker Bus while learning about our city's history and viewing its charm. Sites include the Downtown Square, the University of Mississippi, the Lucius Quintus Cincinnatus (L.Q.C) Lamar House, Cedar Oaks, and a guided tour of Rowan Oak, home of author William Faulkner.

Enjoy shopping and a meal on the Historic Oxford Square. The Oxford Square is home to a variety of boutiques, bookstores, art galleries, and restaurants. Must-see stops include the South's oldest department store, Neilson's, and nationally renowned independent bookstore, Square Books. Be sure to dine at one of Oxford's many nationally acclaimed restaurants.

Our organizers have planned an exceptional agenda for this joint meeting, including an informative and engaging scientific schedule and a wonderful array of social events and excursions. On behalf of the Advisory, Scientific, and Organizing Committees, we are delighted to invite you to what will be an exciting ASP/ICSB program, and we look forward to giving you a real Southern Welcome to Oxford. ■



Downtown, Oxford Square

## ASP Responds to Proposed Changes in Natural Products Patenting in U.S.

By Dr. Edward Kennelly

**O**n July 21, the Officers and Executive Committee of the American Society of Pharmacognosy sent a four-page letter to the Commissioner for Patents at the United States Patent and Trademark Office (USPTO) in response to proposed major changes regarding patents for natural products. The proposed new guidance, which would make it more difficult if impossible to patent natural products, can be viewed at <http://www.uspto.gov/patents/announce/myriad-mayo.jsp>.

The letter, signed by ASP President Dr. Bradley Moore, presents the perspective

of the critical importance of patenting rights to researchers in natural products, stating unequivocally that the proposed changes would hinder drug development.

The letter concludes, "We therefore respectfully request that the USPTO Guidance be revised to give weight to the very substantial inventive contributions of natural product scientists in the isolation, molecular characterization, and pharmacological characterization of novel chemical entities derived from natural organisms. We assert that the association of a novel bioactivity with a previously unknown discrete chemical entity derived

from a natural source should be sufficient evidence of the 'hand-of-man' to allow composition of matter claims based on its chemical structure and the associated biological activity. We believe that such an interpretation will be consistent with the Supreme Court decision by limiting the broad claims associated with patents on genes as in Myriad while still allowing for discrete composition of matter claims on bioactive natural product chemicals."

The ASP Executive Committee's letter in its entirety can be viewed at [http://www.pharmacognosy.us/wordpress/wp-content/uploads/ASP\\_Myriad-letter-final.pdf](http://www.pharmacognosy.us/wordpress/wp-content/uploads/ASP_Myriad-letter-final.pdf).

### INVITED SPEAKERS PRESENTING AT THE 2014 ASP-ICSB ANNUAL MEETING

- Dr. Yoshinori Asakawa, Tokushima Bunri University, Tokushima, Japan  
Dr. Emily Balskus, Harvard University, Cambridge, Massachusetts  
Dr. Rudolf Bauer, University of Graz, Graz, Austria  
Dr. May R. Berenbaum, University of Illinois at Urbana-Champaign, Champaign, Illinois  
Dr. Lars Bohlin, University of Uppsala, Uppsala, Sweden  
Dr. Sean F. Brady, Rockefeller University, New York, New York  
Dr. William T. Cefalu, Pennington Biomedical Research Center, Baton Rouge, Louisiana  
Dr. Joe Chappell, University of Kentucky, Lexington, Kentucky  
Dr. Floyd Ski Chilton, Wake Forest School of Medicine, Winston-Salem, North Carolina  
Dr. Jon Clardy, Harvard Medical School, Harvard University, Boston, Massachusetts  
Dr. Joel R. Coats, Iowa State University, Ames, Iowa  
Dr. Kim Colson, Bruker BioSpin, Billerica, Massachusetts  
Dr. Geoffrey Cordell, University of Illinois at Chicago, Chicago, Illinois  
Dr. Ana Lucia Cordova, Marrone Bio Innovations, Davis, California  
Dr. Gordon Cragg, Special Volunteer at NIH, Bethesda, Maryland  
Dr. Stephen Duke, USDA, University, Mississippi  
Dr. Mary Ann Foglio, CPQBA-Unicamp, Brazil  
Dr. Roberto Gil, Carnegie Mellon University, Pittsburgh, Pennsylvania  
Dr. De-an Guo, Shanghai Institute of Materia Medica, Shanghai, China  
Dr. Bill Gurley, University of Arkansas for Medical Sciences, Little Rock, Arkansas  
Dr. Mark Hay, Georgia Institute of Technology, Atlanta, Georgia  
Dr. William Helferich, University of Illinois Urbana-Champaign, Champaign, Illinois  
Dr. D. Craig Hopp, Program Officer, NCCAM/NIH, Bethesda, Maryland  
Dr. Jinwoong Kim, Seoul National University, South Korea  
Dr. Dennis Lubahn, University of Missouri, Columbia, Missouri  
Dr. Gary Martin, Merck, Summit, New Jersey  
Dr. James McChesney, Ironstone Separations, Inc., Oxford, Mississippi  
Dr. Bradley S. Moore, Scripps Institution of Oceanography, University of California San Diego, La Jolla, California  
Dr. Nicholas Oberlies, University of North Carolina at Greensboro, Greensboro, North Carolina  
Mr. Mark O'Neil-Johnson, Sequoia Sciences, St. Louis, Missouri  
Dr. John Owen, Dow AgroSciences, Indianapolis, Indiana  
Dr. David S. Pasco, University of Mississippi, Oxford, Mississippi  
Dr. Valerie Paul, Smithsonian Marine Station, Fort Pierce, Florida  
Dr. Joseph R. Pawlik, University of North Carolina Wilmington, Wilmington, North Carolina  
Dr. Lourival Possani, National Autonomous University of Mexico, Mexico City, Mexico  
Dr. Ron Quinn, Griffith University, Australia  
Dr. Ilya Raskin, Rutgers University, New Brunswick, New Jersey  
Dr. William Reynolds, University of Toronto, Toronto, Canada  
Dr. Luis Manuel Peña Rodríguez, Centro de Investigación Científica de Yucatán, Yucatán, Mexico  
Dr. John Romeo, Journal of Chemical Ecology, University of South Florida, Tampa, Florida  
Dr. David Russell, Agilent Technologies, Santa Clara, California  
Dr. Eric W. Schmidt, University of Utah, Salt Lake City, Utah  
Dr. Otto Sticher, ETH-Zurich, Zurich, Switzerland  
Dr. Hermann Stuppner, University of Innsbruck, Innsbruck, Austria  
Dr. Yi Tang, University of California Los Angeles, Los Angeles, California  
Dr. Richard Van-Breeman, University of Illinois College of Medicine, Chicago, Illinois  
Dr. Alvaro Viljoen, Tshwane University of Technology, South Africa  
Dr. Kate Yu, Waters Corporation, Milford, Massachusetts  
Dr. Weidong Zhang, Shanghai Mainland Pharmaceutical Co., Ltd, Shanghai, China  
Dr. Jerry Zweigenbaum, Agilent Technologies, Santa Clara, California

**Our theme, “Natural Products and Their Impact on Humankind,”  
aims to explore the full impact of natural products on our lives and world.**

## Visiting Oxford, Mississippi: Local Recommendations

### **Dr. Zhihao Zhang, Postdoctoral Research Associate:**

What is the ideal night out in Oxford, Mississippi?

The Historic Oxford Square (<http://live.oxfordms.com/about-oxford-mississippi/downtown-oxford-square/>).

What should travelers to Oxford pack in August? T-shirts and shorts.

If you could only eat one meal in Oxford, what would it be? The Noodle Bowl Asian Bistro restaurant (<http://www.noodle-bowlms.com/>).



### **Ms. Rebecca Annette Ford, Senior Research and Development Biologist:**

What should travelers to Oxford pack in August? The coolest clothes they own.

If you could only eat one meal in Oxford, what would it be? Ole Venice Pizza Company (<http://www.oldvenice.com/>).

What is a hidden gem in the area that only a local would know? Lusa Pastry Café (<http://www.lusapastrycafe.com/>).

What should travelers avoid? Parking on the square or on the Ole Miss campus.



### **Dr. Junaid ur Rehman, Postdoctoral Research Associate:**

What is the ideal night out in Oxford, Mississippi? Downtown.

What should travelers to Oxford pack in August? Swim shorts and a light jacket in case of abnormal weather.

If you could only eat one meal in Oxford, what would it be? Catfish in Old Taylor Grocery. Don't miss it! (<http://www.taylorgrocery.com/>).

What is a hidden gem in the area that only a local would know? The International Guest House.

What should travelers avoid? Do not get caught in love with Ole Miss and Oxford, Mississippi.

### **Dr. Bharathi Avula, Senior Research Scientist:**

What is the ideal night out in Oxford, Mississippi? A movie.

What should travelers to Oxford pack in August? Light clothing.

If you could only eat one meal in Oxford, what would it be? McAlister's Deli (<http://www.mcalistersdeli.com/>).

What should travelers avoid? Walking alone during the night.



### **Ms. Julie Mikell, Principal Research and Development Chemist:**

What is the ideal night out in Oxford, Mississippi? Having a drink out on the patio at Boure (<http://citygroceryonline.com/restaurant.php?boure>).

What should travelers to Oxford pack in August? Very light clothing, sunscreen, and a water bottle.

If you could only eat one meal in Oxford, what would it be? Newk's Favorite Salad or a hamburger at Boure (<http://citygroceryonline.com/restaurant.php?boure>).

What is a hidden gem in the area that only a local would know? Snow Biz Treat Shoppe on University Avenue (<http://visitoxfordms.com/place/sno-biz/>).

What should travelers avoid? The Square and Jackson Avenue at noon.

### **Ms. Jennifer Taylor, Program Coordinator:**

What is the ideal night out in Oxford, Mississippi? Dinner at one of the restaurants on the square, followed by a movie at one of the two theaters in town.

What should travelers to Oxford pack in August? Summer attire such as shorts, tank tops, bathing suite, hats, sunscreen.

If you could only eat one meal in Oxford, what would it be? Proud Larry's Shrimp Fettuccine (<http://www.proudlarrys.com/menu/>).

What is a hidden gem in the area that only a local would know? Ajax Diner ([http://ajaxdiner.net/Ajax\\_Diner/Welcome.html](http://ajaxdiner.net/Ajax_Diner/Welcome.html)).

What should travelers avoid? Staying outside in the heat and sun without hydration or sunblock.



### **Dr. Jon Parcher, Research Professor Emeritus of Chemistry and Biochemistry**

(Dr. Parcher has lived in Oxford for 45 years):

What is the ideal night out in Oxford, Mississippi?

Oxford is a small, university town in northern Mississippi. Classes at the University do not begin until three weeks after the Conference. When the students are gone, the town becomes a typical, quiet small (30,000 people) town. However, because of the University population of 20,000, the town is geared toward entertaining young people. Individual's ideas of an "ideal night out" will differ; however, there is no lack of night time entertainment in Oxford.



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# Botanical Adulterants Monitor Begins

By Dr. Amy Keller

In June, the initial issue of a new e-newsletter, the *Botanical Adulterants Monitor*, was released. The newsletter will focus on the work from the ABC-AHP-NCNPR Botanical Adulterants Program, a consortium of the American Botanical Council (ABC), the American Herbal Pharmacopoeia (AHP), and the National Center for Natural Products Research (NCNPR), housed at the University of Mississippi, Oxford, Mississippi. The newsletter will address adulteration of herbs, quality assurance problems of botanical products, related news from regulatory bodies, and reviews of pertinent publications, among other topics.

ASP member and Founder and Director of the ABC-AHP-NCNPR Botanical Adulterants Program, Mr. Mark Blumenthal, said, "The purpose of our Program is primarily educational. There are numerous publications on new analytical methods, recent regulatory actions, and a wide variety of workshops, seminars, webinars, and other educational resources that re-



late to botanical ingredient identity, authenticity, and ways that botanical materials and their extracts are accidentally or intentionally adulterated. Such adulteration results in cheapening the end product and reducing the likelihood that consumers will receive the benefits that they are seeking and expecting. *The Botanical Adulterants Monitor* newsletter is a valuable way for people in the botanical community to be informed about new developments in areas related to ensuring the authenticity of botanical materials used in herbal products."

The ABC-AHP-NCNPR Botanical Adulterants Program mission is education, scientific research, and quality support of dietary botanicals and plant-

related products. The consortium has already published five articles about adulteration. For more information, please visit the Program's website: <http://abc.herbalgram.org/site/PageServer?pagename=Adulterants>. ■

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The initial issue of the newsletter may be accessed at this website: [http://abc.herbalgram.org/site/PageServer?pagename=Botanical\\_Adulterants\\_Monitor](http://abc.herbalgram.org/site/PageServer?pagename=Botanical_Adulterants_Monitor).

Also, those interested may visit the ABC website ([www.herbalgram.org](http://www.herbalgram.org)) and register to receive the *Botanical Adulterants Monitor*.

## Visiting Oxford, Mississippi: Local Recommendations

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What should travelers to Oxford pack? Oxford is in the beautiful northeastern part of the state and not in the delta. The August weather will be uncomfortable, but we actually do have air conditioning.

If you could only eat one meal in Oxford, what would it be?

There are many first-class restaurants in Oxford and the cuisine is quite diverse. Southern dining is common and excellent. Because of the tourist aspects of the town, there are also very famous chefs operating restaurants most commonly on the famous town square. Lunches will be served at the Conference Center, so an evening meal will probably be the best way to enjoy your visit to Oxford.

What is a hidden gem in the area that only a local would know? William Faulkner's home, Cedar Oaks Mansion, Ole Miss, and the London-style double decker buses are the most popular tourist attractions.

What should travelers avoid? The crime rate is nonexistent, so there is little real danger for visitors. The weather will be hot, so strenuous outdoor exercise will probably be uncomfortable. Oxford is a small town, but it is used to the invasion of 50,000-60,000 people for Southeastern Conference (SEC) football games and festivals. So a scientific conference of 400-500 persons will probably not overburden the natives. ■

# Journal of Natural Products Announces Schwarting and Beal Awards

By Drs. Amy Keller and A. Douglas Kinghorn

The *Journal of Natural Products* announced the winners of the 2013 Arthur E. Schwarting Award and the 2013 Jack L. Beal Award. The Schwarting Award went to “Genome-Guided Discovery of Thailanstatins A, B, and C as Pre-mRNA Splicing Inhibitors and Antiproliferative Agents from *Burkholderia thailandensis* MSMB43,” by Xiangyang Liu, Sreya Biswas, Michael G. Berg, Christopher M. Antapli, Feng Xie, Qi Wang, Man-Chang Tang, Gong-Li Tang, Lixin Zhang, Gideon Dreyfuss, and Yi-Qiang Cheng. The Beal Award winner was “Sungsanpin, a Lasso Peptide from a Deep-Sea Streptomyccete,” by Soohyun Um, Young-Joo Kim, Hyuknam Kwon, He Wen, Seong-Hwan Kim, Hak Cheol Kwon, Sunghyok Park, Jongheon Shin, and Dong-Chan Oh.

Dr. Cheng, corresponding author of the Schwarting award publication and Professor of Pharmaceutical Sciences at University of North Texas Health Science Center, Fort Worth, Texas, told the *Newsletter*, “I thank the ASP Award Committee for recognizing our work; I also thank several of my students and collaborators whose hard work and collaboration made this happen. Our work validated that a small research group with limited resources can still do decent natural product discoveries as long as one takes the right approach and gathers the right students and collaborators.”

Dr. Oh, corresponding author for the Beal Award publication and Assistant Professor at the Natural Products Research Institute, College of Pharmacy, Seoul National University, Seoul, Korea, related, “The award is really an honor as a natural products chemist. We went out to the sea around Sungsanpo, Jeju Island, Republic of Korea, and collected deep-sea sediment samples. From a streptomycete strain isolated from a deep-sea sample, we discovered a new lasso peptide, elucidated its structure including the three-dimensional feature, and evaluated its biological activity. I really appreciate the co-authors, especially Dr. Soohyun Um, Dr. Hak Cheol Kwon, and Dr. Sunghyok Park, for

*Burkholderia thailandensis* MSMB43 growing on either LB agar or LB medium with 50 µg/ml apramycin.

DR. XIANGYANG LIU



(left): Streptomycete bacterial strain.  
(right): 3D structure of the lasso peptide.

PLATE: DR. SOOHYUN UM  
3D STRUCTURE: DR. SUNGHYOK PARK

their significant contributions. We also thank ASP for this honorable award.”

In 2001, the Foundation Board of the American Society of Pharmacognosy (ASP) began a new initiative as a result of the Arthur E. Schwarting and Jack L. Beal Awards for best papers in *J. Nat. Prod.* In this manner, two former distinguished Editors of the journal are fondly remembered. The Schwarting Award is open to all papers published in the journal within a given year (either in print or electronically). In turn, the Beal Award is awarded to younger investigators [i.e., persons within 12 years of receiving their PhD degree or within 10 years of gaining their first professional appointment (e.g., Assistant Professor or an equivalent position in industry or government)].

A two-tier process was used to determine the winners of the best papers published in *J. Nat. Prod.* in 2013, with Editors Daneel Ferreira, A. Douglas Kinghorn, Cedric J. Pearce, Richard G. Powell, and Philip J. Proteau having nominated two papers each for the Schwarting Award and one each for the Beal Award. ASP President Bradley S. Moore then appointed an ad hoc committee [Dr. John Beutler (United States National Cancer Institute-Frederick, Frederick, Maryland), Chair, Dr. Shmuel Carmeli (University of Tel Aviv, Israel), and Dr. Mark Hamann (University of Mississippi, Oxford, Mississippi)] to make the final selections.

The corresponding authors of these papers will be invited to attend the banquet at the ASP 55<sup>th</sup> Annual Meeting, to be held in Oxford, Mississippi, August 2-6, 2014. They will receive a check and a plaque in honor of this achievement. The above-mentioned papers may be accessed freely from the home page of *J. Nat. Prod.* (<http://pubs.acs.org/JNP>). Congratulations to Drs. Cheng, Oh, and their co-authors! ■

# MBCOI: Facilitating Applications of Marine Natural Product Research

By Dr. Amy Keller

**M**arine Bio-Technologies Center of Innovation (MBCOI), based in Wilmington, North Carolina, is a non-profit organization with the main goal of facilitating collaborations promoting the commercialization of marine science discoveries. Chief Executive Officer, Dr. Deb Mosca, has a varied scientific and corporate background. According to Dr. Mosca, “By combining a regional focus with a global perspective, MBCOI is striving to become the nexus for information, collaboration, and commercialization of marine biotechnologies among our stakeholders, both domestically and internationally.”

To accomplish this, MBCOI collates information on contemporary marine research by faculty members and intellectual property, with the goal of selecting commercial and business opportunities, as well as worldwide service. MBCOI focuses on translation research, and has a goal to facilitate the translation process.

Dr. Mosca told the *Newsletter*, “Key to our success is the establishment of formal and informal agreements with stakeholders and institutions to enhance the commercialization of marine biotechnologies through education, market research, and business development activities.” MBCOI has a central focus on natural products from marine sources. Also fundamental to the work of MBCOI is to streamline natural marine product knowledge as well as integrating food safety, toxicology, water quality, and various “omics” analyses. Recently, MBCOI has helped found BioMarine International Clusters Association (BICA), with the goal of broadening its collaborative reach beyond its North Carolina



Dr. Deb Mosca

DR. DEB MOSCA

base. MBCOI plans to have a presence at BIO 2014, BioMarine 2014 in Portugal, and BioMarine 2015 in Wilmington, North Carolina.

ASP President Dr. Brad Moore describes MBCOI as, “focused on advancing and promoting products and processes developed from marine organisms. Marine biotechnology or “blue biotech” is an actively evolving field of research with enormous potential to contributing to a future bio-based economy. ASP members with interests in biotechnology may thus benefit from interacting with the network provided by the MBCOI team who is looking to connect key stakeholders from around the world.”

When asked what she would like ASP members to know, Dr. Mosca told the *Newsletter*, “More than 50% of today’s pharmaceutical agents have been discovered or derived from terrestrial mi-

croorganisms. In contrast, the chemical diversity from marine microbes has not been as thoroughly investigated due to the large expense and expertise required to collect samples and isolate pure cultures. MBCOI believes that the oceans are, in essence, large untapped sources of novel chemistries. Of great concern is the recent PTO ruling [United States Patent and Trademark Office, see below] that will severely hamper the ability to patent a natural product; without such protection, it will be hard to get industry to invest the more than \$1 billion needed to develop these chemistries. ASP members can help by writing to their legislators and biotech networks to amend the ruling, or natural products may become less desirable for drug development applications.” ■

**“By combining a regional focus with a global perspective, MBCOI is striving to become the nexus for information, collaboration, and commercialization of marine biotechnologies among our stakeholders, both domestically and internationally.”**

*Editor’s note: Please read the article on this ruling by Charlotte Harrison, Nature Biotechnology. 2014,32,403–404. <http://www.nature.com/nbt/journal/v32/n5/full/nbt0514-403a.html>*

## Shellard Honored by Former Students

By Dr. Amy Keller

**D**r. Edward Joseph “Joe” Shellard, formally the Assistant Head of the Pharmacy Department, Chelsea College, London, United Kingdom, passed away on June 10, 2010, at the age of 96. Dr. Shellard had an extensive and varied pharmacognosy career, and was recently honored in the journal *Pharmaceutical Historian* (*Pharm Hist (Lond)* 2014:44(1)) with a two part article entitled, “Edward Joseph Shellard, a phenomenal pharmacognosist,” penned by his former doctoral students, Dr. J. David Phillipson, Emeritus Professor at University College London and Dr. Peter J. Houghton, Professor of Pharmacognosy at Kings College London, both located in London, United Kingdom.

Dr. Shellard was born in 1913 in Gloucestershire, United Kingdom, and graduated from the School of Pharmacy, London, in 1936. He lectured at the College of Technology, Bristol, and in the Department of Pharmacy, Chelsea College, London, both in the United Kingdom. Dr. Shellard’s main research focus was the study of alkaloids from *Mitragyna* spp. (Rubiaceae), and he was an early proponent of thin layer (TLC) and gas liquid chromatography (GLC). In addition to two textbooks, *Practical Plant Chemistry for Pharmacy Students* and *Exercises in the Evaluation of Drugs and Surgical Dressings*, Dr. Shellard also authored close to 100 research papers and review articles on *Mitragyna* alkaloids and wrote *A History of British Pharmacognosy, 1842-1980*, published in the *Pharmaceutical Journal*.

The tribute two-part article details the academic journey of Dr. Shellard, including teaching and lecturing, conference presentations, and travel, and describes the myriad contributions Dr. Shellard made to pharmacognosy. ■



Dr. Shellard helps to celebrate Dr. Wallis’ 85<sup>th</sup> birthday in 1961 with the Pharmacognosy staff at Chelsea College Department of Pharmacy. From left to right are Dr. Shellard, Mr. Douglas Harrod, Dr. Wallis, Ms. Marlion Poulter, Dr. Georgina Jolliffe, Dr. Phillipson and Dr. Margaret Lees.

### “Edward Joseph Shellard, a phenomenal pharmacognosist”



The British Pharmaceutical Conference in 1962. From left, Dr. T.E. Wallis, author of a standard textbook on Pharmacognosy and PhD examiner of Dr. Shellard, Dr. Shellard, and Dr. Phillipson.

# Behind the Scenes in Pharmacognosy

Recently, the *Journal of Natural Products* published an article from the laboratory of ASP members Drs. Dale Nagle and Yu-Dong Zhou at the National Center for Natural Products Research, School of Pharmacy, University of Mississippi (UM), Oxford, Mississippi. The article, "Toxins in Botanical Dietary Supplements: Blue Cohosh Components Disrupt Cellular Respiration and Mitochondrial Membrane Potential," details innovative work detecting the impact of blue cohosh on mitochondrial function. We appreciate Dr. Nagle taking the time to describe his laboratory's work in more detail. Please read the online article at *J. Nat. Prod.*, 2014, 77, 111-117. doi:10.1021/np400758t.

By Dr. Amy Keller

## **How did you choose your original set of plants for the ability to interfere with cellular respiration? Is there a certain type of toxicity you looked for prior to screening?**

The major focus of our current research is the discovery of molecular-targeted antitumor and antimetastatic natural products that inhibit organ-specific secondary tumors. Screening plant extracts for activities that suppress hypoxia-induced gene expression led to the discovery that certain plant metabolites exhibit potential antitumor activity, and these extracts contain compounds that disrupt mitochondria-mediated cellular signaling. Therefore, we began to examine plants used as herbal medicines for the ability to potentially produce organ toxicity by acting as mitochondrial disruptors. In cell-based assays, blue cohosh (*Caulophyllum thalictroides*) extract caused a rapid burst in respiratory rate, followed by a dramatic decrease in cellular oxygen consumption. These results and previous reports of blue cohosh-associated idiosyncratic organ toxicities lead our team to characterize the mitochondria toxic constituents of blue cohosh.

## **Who in your laboratory carried out the research?**

Our mitochondria-induced herbal toxicity project is a collaborative research effort between our group, Dr. Zulfiqar Ali and Dr. Ikhlas A. Khan, both at the National Center for Natural Products Research at the School of Pharmacy, UM, Oxford, Mississippi, and Dr. Mika B. Jekabsons,



Dr. Dale G. Nagle (left) and Dr. Yu-Dong Zhou (right).

MS. TAYLOR BRYAN

Department of Biology, UM. My former PhD student, Dr. Sandipan Datta, and Dr. Zhou's technician, Ms. Fakhri Mahdi, conducted the mitochondrial respiration and cell viability studies.

## **Would you provide a brief explanation of the work and results in your own words?**

Mitochondrial poisons can produce reactive oxygen species (ROS)-mediated liver and cardiac toxicological events. In most cases, mitochondrial manganese-

superoxide dismutase (MnSOD) and other protective antioxidant systems are believed to preclude the occurrence of toxicological events in preclinical models and initial small-scale clinical studies. However, rare idiosyncratic toxicological events begin to appear when large populations use mitochondria-toxic agents. Drug-induced mitochondrial dysfunction has forced the withdrawal of major pharmaceuticals like troglitazone and is responsible for about half of the hepatotoxicity and cardiotoxicity-associated events. *continued on page 12*

## Behind the Scenes in Pharmacognosy

continued from page 11

ated Food and Drug Administration (FDA) black box warnings on approved drugs. It is for this reason that we began working with Dr. Khan and his group in the UM National Center for Natural Products Research to examine a panel of over three hundred extracts from plants used in traditional Chinese, Ayurvedic, and Western Herbal Medicine for their ability to disrupt cellular respiration. In the United States, some midwives use blue cohosh to induce labor. However, the use of blue cohosh has been associated with organ injury, myocardial infarction, and other complications. Extracts of blue cohosh and purified cauloside-type saponins were found to impair mitochondrial function by disrupting membrane integrity.

**You successfully characterize the mitochondrial toxicity of blue cohosh. How widespread do you think this toxicity is in natural products? Do you expect this to preclude the usage of many botanicals?**

To our surprise, initial evaluation of extracts from plants used in herbal medicine indicated that as many as 5% of a representative botanical sample set contained compounds that either inhibited mitochondrial electron transport, acted as protonophores that uncouple mitochondrial proton gradients, or directly disrupted cytoplasmic and mitochondrial membranes. We believe that once identified, these mitochondrial disruptors will provide a mechanistic basis for future toxicological studies and yield toxicological markers for botanical dietary supplement analysis and quality control.

**What is a favorite nonscientific activity of your lab?**

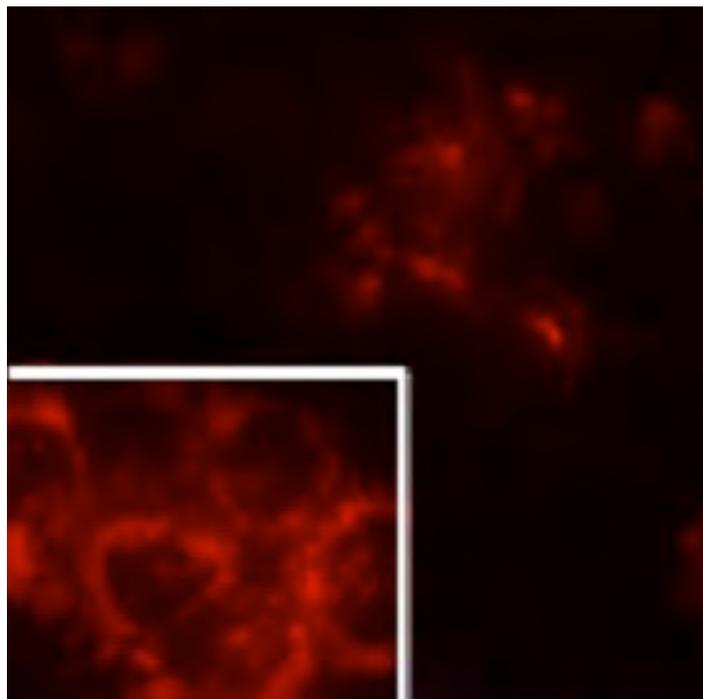
Our long-term collaborative research program is a combination of my natural products drug discovery efforts and Dr. Yu-Dong Zhou's molecular and cell biology research. As a 'research couple,' our most important and time-consuming nonscientific activity is raising our two children, Alexandra and Nicholas.

**What is your lab's motto or slogan?**

If we have a lab motto, it would be something like "In both research and life, never be afraid to try strange things, follow unexpected results, or go towards completely new directions."

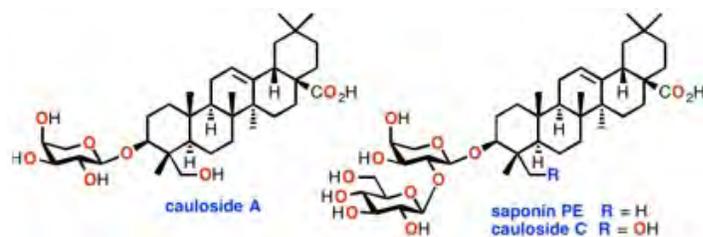
**What is your greatest extravagance in the lab?**

Because we work and raise our children together, the greatest extravagance for Yu-Dong and I is our love of travel and the involvement of our children in our science-related adventures. Both children have grown up around conferences, including American Society of Pharmacognosy Annual Meetings. Ever since they were small, they have been exposed to natural product re-



Mitochondrial membrane potential disruption in T47D breast tumor cells by saponin PE. Cells were loaded with TMRM+ dye to visualize membrane potential and exposed to saponin PE. Image before saponin PE addition is shown as an insert inside the panel.

search and have made friends with the children of other scientists. Many of our colleagues often come up and tell us that they have witnessed how quickly the children are growing. While it sometimes represents a tremendous personal expense, both Yu-Dong and I believe that including our children in our work-related travel provides them with an invaluable opportunity to see the world, experience other cultures, and better appreciate professional and academic life (and life in general). ■



Compound: Mitochondria toxic cauloside-type saponins from blue cohosh.

# Hot Topics in Pharmacognosy: Antidiabetic Drugs from a Surprising Source

By Dr. David Newman

There have been some relatively recent examples of toxins as sources of drugs and leads for pain control, such as the cone-snail toxin ziconotide (approved in late 2004 and launched in 2005), and the very well-known puffer fish (Fugu) toxin tetrodotoxin, probably from an endogenous microbe, currently in phase III trials for severe pain; another example is the non-opioid analgesic peptidic toxin, reported by the King laboratory at the University of Queensland in late 2013, from the venom of the Chinese red-headed centipede.<sup>1,2</sup>

However, even though it appears to be counterintuitive that a toxin that causes pain and death would be a good agent against some forms of pain, what about toxins from animals that may have a much more benign effect, even though they come from toxic venoms/saliva?

In the last 30 years, physicians dealing with diabetes have been interested in two particular aspects of the gut in mammals. The first was the “incretin effect” (the amplification of insulin secretion by hormones from the gut), and the second was the “occurrence of glucagon-producing L-cells in the gut.” It turned out that “gut-glucagon” was not the same peptide as glucagon when the peptides were finally sequenced, but the major peptide was glicentin (69 amino acids), containing the full sequence of glucagon as residues 33-61 and a truncated form (33-69 amino acids) known as oxyntomodulin.

Further work demonstrated that the existence of multiple “glucagon-like peptides,” including the peptide now known as GLP-1.<sup>3</sup> Direct administration of GLP-1 normalized blood glucose levels in type 2 diabetic patients. However, the peptide was very rapidly broken down by the enzyme DPP-IV (dipeptidyl peptidase IV), with a half-life of less than 2 minutes in plasma. Then, a peptide was

found known as “exendin-4” that turned out to be a full agonist of the GLP-1 receptor, was resistant to the effects of DPP-IV and was cleared by the kidneys via glomerular filtration.<sup>4</sup>

## Where did this peptide come from and how was it found?

In the 1970s, the work of the Italian pharmacologists, Erspamer and Melchiorri, who investigated the bioactive peptides in the skin secretions of amphibians,<sup>5</sup> led to the work by Tatemoto and Mutt;<sup>6</sup> they realized that many biologically active peptides had C-terminal amides and developed an assay for such substitutions. Subtly turning this around, Raufman and Eng<sup>7</sup> noted that the N-terminal histidine was of prime importance in peptides that “worked” in the secretin-glucagon locus and developed a method to identify such peptides in the venomous saliva of two species of Gila monsters (*Heloderma suspectum*). They identified exendin-4 from the saliva of these animals and were looking for a mammalian analogue when they noted that GLP-1 had similar biological activities and was an apparent competitor for binding to acini (functional components of the pancreas).<sup>8</sup> Later work confirmed that exendin-4 was a high potency agonist, and the truncated version with a C-terminal amide was an antagonist of acini, thus demonstrating that a subtle change in the structure of the peptide gave diametrically opposite results.

The rest is effectively history as the same molecule (now made synthetically), was approved as Byetta™ in 2005 and is in current clinical use. Recently, the story was brought up to date by Furman,<sup>9</sup> and modifications of the basic structure to give extended duration of action were recently reported by Levy et al.<sup>10</sup>

Thus, venom from one of the two venomous lizards in North America has led to a new treatment for type 2 diabetes, not a source that one would normally consider as antidiabetic therapy. A few famous sayings come to mind: “One never knows what is going to be of import in basic biochemical studies,” and “fortune favors the prepared mind.” ■

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# Meet a New ASP Member

In our summer issue of the Newsletter, we meet new ASP Member Dr. Carol Pontzer, Program Director in the Division of Extramural Research at the National Institutes of Health (NIH) National Center for Alternative and Complementary Medicine (NCCAM). She takes the time to share with us her research interests in immunology and echinacea. Dr. Pontzer also welcomes questions about the research portfolio in her purview, and encourages interested ASP members to contact her at [pontzerc@mail.nih.gov](mailto:pontzerc@mail.nih.gov).

By Dr. Dan Kulakowski

## How did you hear about the ASP?

I met Dr. Ikhlas Khan, Assistant Director of the National Center for Natural Products Research and Professor of Pharmacognosy at the University of Mississippi School of Pharmacy, Oxford, Mississippi, quite a while ago, and he had mentioned ASP to me. Also, a colleague of mine, Dr. D. Craig Hopp, Program Director at the National Center for Complementary and Alternative Medicine (NCCAM), has been active in ASP for many years.

## Why did you join ASP?

As a program director at NCCAM, I have a portfolio of grants, almost all of which examine some aspect of natural products. Many areas of interest to ASP researchers overlap with NCCAM's mission. I oversee some grants that focus on discovery of novel natural products with unique mechanisms of action. Other grants examine interaction of natural products with cellular receptors and induction of signal transcription pathways that have the potential to maintain health or alter disease pathways. It probably makes sense that I have finally joined ASP.

## Do you belong to any other scientific societies?

Both my training and research career were as an immunologist. Therefore, I have been a member of both the American Association of Immunologists and the American Society for Microbiology for over 25 years. Lest you think these are not relevant to ASP, consider that many botanicals affect both inflammation and the resolution of inflammation! In addition, it is becoming increasingly recognized that the microbiome is involved in the production of natural product metabolites.

## What are your current research interests in pharmacognosy?

I am intrigued by innovative technologies and methods to discover new natural products. I think that plant genomics will enable targeted expression and isolation of many potentially therapeutically useful molecules. I am also convinced that pharmacogenomics will be crucial to understanding responses to natural products. Just as an individual's response to a drug differs based on their genome, variability in the effects of natural products in different people is to be expected.

## What is your scientific background?

My publications are all in the area of structure/function studies of immune molecules. I produced synthetic peptide inhibitors and mimetics of large proteins such as type I interferons and Staphylococcal enterotoxins. Later, I shifted to using genetic mutations to alter protein structure with the intent of enhancing the risk/benefit ratio of immune modulators.



Dr. Pontzer

NATIONAL INSTITUTES OF HEALTH

## What would you like to achieve through your membership?

I really appreciate the opportunity to introduce myself to the ASP members because one of my main goals is to make investigators aware of NCCAM and the interest that NCCAM has in pharmacognosy research. All of the NCCAM program directors can answer any questions you may have about our current programmatic interests and funding opportunity announcements. In addition, we each have our own special interest areas. For me, that would be primarily the interaction between natural products and genes (genomics and epigenetics). Other topics you may want to talk to me about would be anti-inflammatory natural products or use of natural products for health maintenance or resilience.

## What do you like doing in your spare time?

This question is easy! I am happiest when playing with my 3-year old granddaughter and holding my new grandson.

## What are you currently reading?

I have three books on my bedside table. The first is *In Defense of Women* by H. L. Mencken. I was raised in Baltimore, so Mr. Mencken is a staple of my library. Anyone who has read Mr. Mencken's books will appreciate the irony in the title. Appreciation of the foibles of both sexes does help me get along better with my husband. The second book is the final saga in Mr. Alan Bradley's *Flavia De Luce* mysteries; interestingly, all these books revolve around chemistry. Lastly, I am re-reading Mr. C.S. Lewis's *The Screwtape Letters*. It is enough to keep one on the straight and narrow.

## What is your favorite plant, fungus, animal, or microbe (for research or general interest) and why?

My favorite animal is our goldendoodle Chester. Other than that, I would have to pick echinacea (*Echinacea* spp.). This is mostly because I have learned so much about both the ups and downs of natural product research from echinacea studies. When I first joined NCCAM, I got a somewhat traumatic and valuable lesson in the importance of using the right plant, species, plant part, extraction method, dosing, indication, and other experimental considerations. The detailed characterization of echinacea alkylamides that is coming out now is fascinating, as is the potential for interaction between different components. Also, I think the contribution of endophytes to immune stimulation by echinacea breaks new ground in understanding the activity of botanicals. ■

# New Members of ASP 2014



## Welcome to ASP!

ASP would like to welcome new members. The Society's main objectives are to provide the opportunity for association among the workers in pharmacognosy and related sciences, to provide opportunities for presentation of research achievements, and to promote the publication of meritorious research. New members include 21 domestic full members, 9 international members, and 17 associate members. We look forward to meeting you and learning more about you and your work.

### ACTIVE MEMBERS

Dr. Kameswara Rao Badri  
Savannah, Georgia

Dr. Michael J. Bradaric  
Lockport, Illinois

Mr. Thomas Brendler  
Collingswood, New Jersey

Dr. James A. Cardelli  
Shreveport, Louisiana

Dr. Amaya Castro  
Salamanca, Spain

Dr. Yi Dai  
Guangzhou, China

Dr. Frank S. D'Amelio  
Hauppauge, New York

Dr. Norma Kay Dunlap  
Franklin, Tennessee

Dr. Michael P. Endsley  
Chicago, Illinois

Ms. Edyta M. Grzelak  
Chicago, Illinois

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Daegu, South Korea

Dr. Mareshige Kojoma  
Hokkaido, Japan

Dr. Guillermo Montoya Pelaez  
Cali, Colombia

Dr. Benjamin Philmus  
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Dr. Becky Williams  
Vernal, Utah

Dr. Shibiao Wu  
Bronx, New York

Dr. Jimmy Yuk  
Billerica, Massachusetts

Dr. Gerhard N. Zehentbauer  
Sandy Hook, Connecticut

Dr. Jian Zhao  
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Ms. Yicheng Yang  
Lansing, Michigan

# Conference Calendar

The *Newsletter* is pleased to announce the following upcoming conferences and meetings. The events portrayed here reflect what listings and notices the *Newsletter* has specifically received. For a more extensive calendar, please visit the ASP website at [www.phcog.org](http://www.phcog.org). If you have a conference or event you would like mentioned, please send us relevant information, including any graphics or appropriate fliers, at [asp.newsletter@lehman.cuny.edu](mailto:asp.newsletter@lehman.cuny.edu).

## **ASP 55<sup>th</sup> Annual Meeting**

**August 2-6, 2014**

**Oxford, Mississippi**

<http://www.pharmacognosy.us/calendar-of-events/future-asp-meetings/>

## **American Chemical Society 284<sup>th</sup> National Meeting & Exposition**

**August 10-14, 2014**

**San Francisco, California**

<http://www.acs.org/content/acs/en/meetings/fall-2014.html>

## **Gordon Research Conference: Medicinal Chemistry**

**August 3-8, 2014**

**New London, New Hampshire**

<http://www.grc.org/programs.aspx?year=2014&program=medchem>

## **2<sup>nd</sup> International Conference and Exhibition on Pharmacognosy, Phytochemistry and Natural Products**

**August 25-27, 2014**

**Beijing, China**

<http://pharmaceuticalconferences.com/pharmacognosy-phytochemistry-natural-products-2014/cfa.php>

## **Phytochemical Society of North America 53<sup>rd</sup> Annual Meeting**

**August 9-13, 2014**

**Raleigh, North Carolina**

<http://www.psna-online.org/2014meeting.html>

## **14<sup>th</sup> International Congress of Ethnopharmacology**

**September 23-26, 2014**

**Puerto Varas, Chile**

<http://14ise-slf.utralca.cl/>





## Brief News From Washington

By Dr. Georgia Perdue

- **The World Health Organization (WHO) sounded the alarm big time on antibiotic resistance.** Most news outlets said the “superbugs are coming.” **In its report released the end of April, WHO says “[U]nless we take significant actions to improve efforts to prevent infections and also change how we produce, prescribe and use antibiotics, the world will lose more and more of these global public health goods and the implications will be devastating.”** One of the many reasons given for this problem is the “misuse and overuse” of antibiotics.
- At the April 4 meeting, the **President’s Council of Advisers for Science and Technology (PCAST), Dr. Eric Lander, PCAST co-chair, discussed some of the ideas that will be incorporated in their forthcoming report on antibiotic resistance.** He noted it would be “hard for people to imagine ... a world ... without antibiotics, ... which ...since the 1940s,... changed the world dramatically.” “There are a lot of microbes that develop muta-
- sive clinical trials.” He believes narrower trials should be considered, new economic models in development may be necessary; new diagnostics might be needed to determine if the infection is viral and genomic sequencing of bacteria may be important.
- **On May 9, PCAST met again.** After Dr. Lander’s brief update on antibiotic resistance, **PCAST member Dr. Daniel Schrag, Harvard University Professor of Geology and Director of Harvard University Center for the Environment, suggested** that since most antibiotics are synthetics, **it might be time to reallocate efforts to study soils, microbes and plants [as a source of compounds].** “Far fewer scientists are doing natural products research.” Dr. Lander answered derisively, “it means sailing the seas and going to the jungles....**natural products are complicated and take lots of work and resources.**”
- On June 2, **Dr. Anthony Fauci, Director, National Institute of Allergy and Infectious Diseases (NIAID),**

**“Far fewer scientists are doing natural products research.” Dr. Lander answered derisively, “it means sailing the seas and going to the jungles.... natural products are complicated and take lots of work and resources.”**

tions and therefore resistance. We need to develop antibiotics ... and ...steward them properly to stretch their life.” He emphasized the importance of developing more new antibiotics, [exploring] how resistance develops and how it can be fought. **There are “two million patients with antibiotic resistance, resulting in 220,000 deaths per year.”** Dr. Lander lamented that the **“rate of discovery and approval of new antibiotics has fallen dramatically, to [one-third as many].”** His reasoning includes lack of stewardship programs and incentives for discovery, because “... the new antibiotic pipeline is broken [due to] the high cost of drug development and mas-

told his Advisory Council that NIAID is “ahead of the curve” regarding antimicrobial resistance. **There will be a workshop in July including members of the Food and Drug Administration (FDA), NIAID, and Centers for Disease Control (CDC) to address the development of new agents.** Dr. Fauci also mentioned the **Chikungunya virus, [transmitted by mosquitoes]** which has been found in Africa, South Africa, Italy, the Caribbean and Florida. A Phase I trial of a vaccine, completed last year by NIAID, has found it safe. Dr. Fauci noted there are 336 Middle East Respiratory Syndrome Coro-

*continued on page 18*

## Brief News From Washington

continued from page 17

navirus (MERS-CoV) cases so far. “We will not be surprised if more cases are imported here. The CDC, FDA, academia and industry are working on this. We are where we should be on [it]. NIAID is responding rapidly to new and emerging disease threats, including Ebola. Sometimes we need to turn around on a dime for all [these diseases] which [is difficult] with our restrictive budget.”

- **Funding Alert:** In mid-May the National Institutes of Health (NIH) announced the availability of **Administrative Supplements for Research on Dietary Supplements PAR-14-201**. Earliest submission date: **September 15, 2014. Application Due Dates: October 15, 2014; January 15, 2015; April 15, 2015.**
- On May 16, the **National Center for Complementary and Alternative Medicine (NCCAM) invited public comment on their proposed name change to National Center for Research on Complementary and Integrative Health (NCRCI)**. The deadline was June 6, and no reasons were given for the name change. NCCAM has come a long way since retiring Senator Tom Harkin (D-IA) foisted an office of Complementary and Alternative Medicine (CAM) onto a very reluctant NIH. Its infancy was very rocky and controversial. Stay tuned.
- On May 16, a **new bipartisan Congressional effort, 21<sup>st</sup> Century Cures**, was launched, led by Congressman Fred Upton, (R-MI), Chairman of the House Energy and Commerce Committee and Congresswoman Diana DeGette (D-CO), ranking member of the House Oversight Subcommittee. **Its goal is to “accelerate the cycle of discovery, development, and delivering of promising new treatments and cures....”** Input was sought from patients and their advocates who were given a list of 14 questions; the answers were due June 13. The logo states, “There are over 7,000 known diseases. We have treatments for only 500 of them. We have work to do.” Stay tuned.
- In mid-May, the **FDA announced it will create a “new West Coast Regulatory Science Center” at the University of California San Francisco School of Pharmacy, San Francisco, California, and Stanford University, Stanford, California, to conduct collaborative research and have education and scientific exchange programs.** The FDA hopes quantitative pharmacology will help spur drug development.
- **The National Institute for General Medical Sciences (NIGMS) Advisory Council met on May 23. NIGMS Director, Dr. Jon R. Lorsch said the Institute wants to “bolster [and] recalibrate [its] portfolio, in its support for investigator initiated research.”** Thus, it will sunset some initiatives including protein structure, transition pharmacogenomics research, and reduce P41, P50, and U54 Center awards. He also noted that **“the reproducibility in cell culture studies is a problem which [we] must get under control without undue burden to researchers.”** In his report, Council member Dr. Richard Lalonde, Vice President and Global Head of Clinical Pharmacology at Pfizer, said only 33% of compounds succeed in Phase II studies, which is very expensive. “We need a better understanding of human biology and systems biology. The potential solution is systems pharmacology. We need clinically oriented pharmacologists, biologists, and modelers.”
- **April 25 was the World Health Organization (WHO) World Malaria Day** with the theme **“Invest in the Future. Defeat Malaria.”** NIAID continues to support the **10 International Centers of Excellence for Malaria Research in 20 countries** which also have the capability for clinical trials of “novel anti-malarial interventions.” **NIAID is supporting 21 antimalarial treatment candidates in various stages of preclinical and clinical testing.**
- A preparation of **a traditional Chinese medicine** for the treatment of joint pain and inflammation, **“thunder god vine,” *Tripterygium wilfordii*,\*** used in **combination with methotrexate, appears to be effective in the treatment of rheumatoid arthritis.** People are cautioned not to use this plant on its own because it is toxic. The trial is being conducted at the Peking Union Medical College Hospital, Beijing, China. This “news” has been widely reported in the media. Stay tuned. \*(Dr. Robert E. Perdue, Jr., collected the plant almost 30 years ago for the National Cancer Institute (NCI). A derivative of tripterygium is in Phase I clinical trials as an anti-cancer drug).
- In April, the **FDA approved Merck’s new sublingual drug Ragwitek for ragweed allergies, a pollen extract from *Ambrosia artemisiifolia*, only for ages 18-65.**
- The legal war between Salix Pharmaceuticals, Ltd., and Napo Pharmaceuticals ended in favor of Salix. The dustup was over who owned the drug Crofelemer for treating diarrhea isolated from the sap (sangre de grado) from the tree *Croton lechleri*.
- It seems that ***Camptothecin* drugs** keep on giving. **Irinotecan liposome combined with 5-FU and leucovorin, NAO-LI-1, showed efficacy in a Phase III trials in patients with metastatic pancreatic cancer.** Merrimack Pharmaceuticals plans to submit a New Drug Application (NDA) to the FDA later this year. ■

**A preparation of a traditional Chinese medicine for the treatment of joint pain and inflammation, “thunder god vine,” *Tripterygium wilfordii*, used in combination with methotrexate, appears to be effective in the treatment of rheumatoid arthritis.**

# From the Archives: ASP Newsletter and the Annual Meeting A Joint History

By Ms. Devhra BennettJones

The ASP Annual Meeting persists as the pinnacle event of the Society each year, and this year's meeting marks 50 years of its promotion in the quarterly *ASP Newsletter*. Although ASP members can remain informed by the ASP website, e-mail registration reminders, and the *Journal of Natural Products*, in our age of easy information access, we often undervalue these conveniences that keep us abreast of the latest ASP news. Fifty years ago, the newly inaugurated *ASP Newsletter* served as a primary announcement and communication system about ASP events, especially the Annual Meeting.

In 1964, the very first issue of the *ASP Newsletter* highlighted the Annual Meeting on the front page:

Annual Meeting. The 1964 annual meeting of the American Society of Pharmacognosy will be held June 22-25 at the University of Pittsburgh. Norman Farnsworth, University of Pittsburgh, Chairman of the Scientific Program Committee for the meeting, has announced that the following speakers have accepted invitations to present papers in the symposium entitled "Recent Advances in the Chemistry and Biological Activity of Vinca and Related Indole Alkaloids": Robert F. Raffauf (SKF) – "Chemotaxonomic Considerations of the Apocynaceae"; William I. Taylor (CIBA) – "The Biogenesis of Indole Alkaloids – The Growth

of an Idea"; William Hargrove (Lilly) – "The Chemistry of Some Monomeric Vinca Alkaloids"; Norbert Neuss (Lilly) – "The Structures for Vincalokoblastine and Leurocristine"; George Buchi (M.I.T.) – "The Chemistry of Voacanga Dimers"; Jerry Weisbach (SKF) – "A Review of 2-acyl Indole Alkaloids"; A.K. Rose (Stevens Institute) – "Certain Physical Aspects of Lochnericine"; M. Shamma (Penn. State) – "Chemistry of Certain Indole Alkaloids"; Gordon Mallett (Lilly) – "Microbiological Conversion of Catharanthus Alkaloids"; Gordon H. Svoboda (Lilly) – "New Alkaloids from *Catharanthus roseus*"; and U. Renner (Geigy-Basel) – "Alkaloids of *Schizogygia coffaeoides*." The Scientific Program Committee met in Philadelphia February 7 to continue planning the program. A more detailed program will be in the next issue of the *Newsletter*. The Program Committee is composed of W.I. Taylor (CIBA), B. Douglas (SKF), J. Weisbach (SKF), R. Raffauf (SKF) and Norman Farnsworth (Pittsburgh).

Although it was in its infancy, the young *ASP Newsletter* immediately seized a vital role in informing the membership about the scientific content of the Annual Meeting. The next issue emphasized the Annual Meeting by placing the announcement as the first feature, stressing the conference topics and the international scope of participants. It also reveals much about the state of data delivery in 1964, relying upon what many refer to as "snail mail" today:

Annual Meeting. The Fifth Annual Meeting of the American Society of Pharmacognosy will be held June 22-25 at the University of Pittsburgh. Norman Farnsworth of Pittsburgh reports that full details on housing, meals, meeting rooms and entertainment will be mailed to all members in the near future and may reach the members before this *Newsletter*. An extensive symposium on Vinca and related alkaloids is planned for Monday, Tuesday, and Wednesday. Invited participants include researchers from Czechoslovakia, Switzerland, France, and Canada as well as the United States. Original papers will be presented Tuesday night and most of Thursday. The banquet is scheduled for Wednesday night and the business meeting for Thursday afternoon.

The records of the Annual Meetings and the archived *Newsletters* themselves serve the ASP members as a snapshot of their Society's history. They speak volumes about what was considered important Society topics and academic subjects at the time. The value and status of the *Newsletter* is documented in each Annual

*continued on page 20*

The first two *Newsletters* from 1964.



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## From the Archives: ASP Newsletter and the Annual Meeting A Joint History

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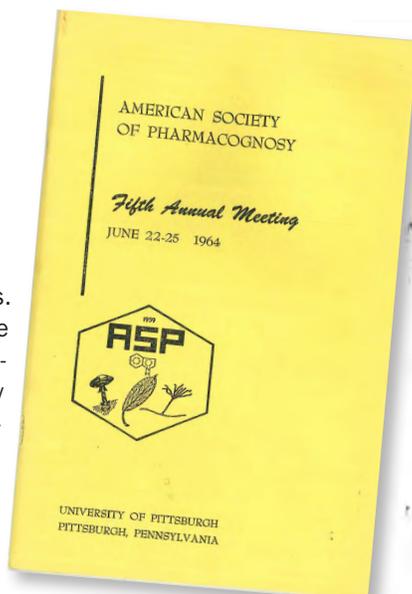
Meeting Business Meeting Minutes. The following excerpts demonstrate the challenges of the *Newsletter* publications and how the ASP came to rely on it as a method to disseminate important and timely news.

The 1963 Business Meeting Minutes revealed the necessity of an *ASP Newsletter*. In his address to the Business Meeting, Dr. Jack Beal stated, "...The Chairman of the Publicity Committee incorrectly understood that this news and events section would appear in each issue of *Lloydia*. Editor Schwarting promptly informed me that he had requested only one such section a year. It is still difficult for me to reconcile my thinking as to a news section once a year. News every twelve months is hardly news..."

The 1964 Business Meeting Minutes acknowledged the excellence of Dr. Melvin Gibson's inaugural *ASP Newsletter* Editorship. President Gordon Svoboda remarked, "Special attention should be given to Dr. Mel Gibson for his personal initiation, design and publication of the *ASP Newsletter*. As Dr. Gibson has noted, however, the success is dependent on news supplied by ASP members."

The 1965 Business Meeting Minutes illustrated how the ASP was beginning to depend on the *Newsletter* as a reliable means of communicating with the membership. President Melvin Gibson said, "I'm pleased with the response to the *Newsletter* this past year. I think it can be an effective means of communication on a news level among the members. I welcome your comments and criticisms of it. I anticipate this will remain a permanent project of the Society as long as it receives your cooperation in supplying material for it. The Executive Committee so decided in its Monday meeting."

The Business Meeting Minutes in 1966, 1967, and 1968 continued to reflect the *Newsletter's* value to the ASP leaders and members. The 1969 Business Meeting Minutes marked a milestone in *Newsletter* history. President Elmore H. Taylor expressed, "The *Newsletter* continues to be an informative link between the activities of the members and has provided much valuable information to the membership. The Society is greatly indebted to the dedication of Melvin Gibson who has created and nurtured this publication



THE AMERICAN SOCIETY OF PHARMACOGNOSY  
Minutes of the Business Meeting  
June 25, 1964  
University of Pittsburgh  
Pittsburgh, Pennsylvania

The Meeting was gavelled to order by President Svoboda at 3:15 P.M. The meeting was turned over to Vice-President Gibson who introduced Dr. Svoboda for his address.

The highest honor afforded me to date has been that of serving as President of the American Society of Pharmacognosy during this past year. In addition to this honor, a good deal of work, both expected and unexpected, has accompanied this position. Thanks to the excellent cooperation of your Executive Committee and of the membership at large problems which arose were solved with a minimum of difficulty. Plans have been formulated at our Executive Committee meetings to allow for an even smoother functioning organization.

Special thanks must go to Dr. Norman R. Farnsworth and his Scientific Program Committee for coordinating such top scientific talent into our Symposium on the Chemistry and Biological Activity of Satharanthus, Vinca and Related Indole Alkaloids. In all probability, never before has such an array of distinguished experts in their respective fields in the area of natural plant products gathered to discuss their work both formally and informally.

Special thanks must also be given to Dean Joseph A. Bianoulli and Dr. Ralph W. Blomster for their efforts coordinating the local efforts. If they have overlooked any single detail, it has as yet to come to my attention.

As an accomplishment of the past year's efforts, I might cite the fact that the selection committee for the American Foundation for Pharmaceutical Education's Edwin Leigh Havens Award is now wholly comprised of A.S.P. members. The committee was charged with the task of drawing up a new set of rules, and this has been accomplished, and these rules have been distributed during this meeting.

Furthermore, *Lloydia* continues to grow in scientific stature, and a number of significant research contributions have been reported therein. As indicated by Editor Schwarting, the December, 1964, issue will contain the Symposium papers, and it should be a classic volume. The quality of the papers which appear in *Lloydia* continues to improve, and this is due in part to his careful selection of referees and to their dedication to duty. (Personal example cited.)

-over-

(left above)  
Program cover from the 5<sup>th</sup> ASP Annual Meeting in Pittsburgh, Pennsylvania.  
(right above)  
Minutes from the business meeting, 5<sup>th</sup> ASP Annual Meeting.

which we all look forward to receiving. The society is suffering a great loss in Dr. Gibson's resignation as editor of the *Newsletter*. The responsibility of its future publication has been assumed by Dr. Ralph Blomster." The ASP leaders affirmed their gratitude to Dr. Gibson through an official resolution. "WHEREAS: Dr. M.R. Gibson has contributed so generously of his time and talent in the capacity of Editor of the A.S.P. *Newsletter* from its inception to the time of his recent resignation, be it resolved that the members express their sincere appreciation both at this meeting and by letter."

Dr. Gibson's communication legacy lives on today in the quarterly publication. Now, the *Newsletter* continues to serve ASP members by promoting and reporting the ASP Annual Meeting, as well as timely topics of interest to natural product researchers. ■

...the young *ASP Newsletter* immediately seized a vital role in informing the membership about the scientific content of the Annual Meeting.

Guido F. Pauli, Ph.D., Treasurer  
The American Society of Pharmacognosy  
3149 Dundee Road, #260,  
Northbrook, Illinois 60062



## ASP Membership

### Full Membership

Full membership is open to any scientist interested in the study of natural products.

Current membership dues and Journal of Natural Products subscription rates can be found at [www.pharmacognosy.us](http://www.pharmacognosy.us).

### Associate Membership

Associate membership is open to students of pharmacognosy and allied fields only. These members are not accorded voting privileges.

Current membership dues and Journal of Natural Products subscription rates can be found at [www.pharmacognosy.us](http://www.pharmacognosy.us).

### Emeritus Membership

Emeritus membership is open to retired members of the Society who maintained membership in the Society for at least five years.

Current membership dues and Journal of Natural Products subscription rates can be found at [www.pharmacognosy.us](http://www.pharmacognosy.us).

### Honorary Membership

Honorary members are selected by the Executive Committee of the American Society of Pharmacognosy on the basis of meritorious service to pharmacognosy.

#### Present Honorary Members are:

Dr. David P. Carew, University of Iowa · Dr. John M. Cassidy, Oregon State University

Dr. Geoffrey A. Cordell, University of Illinois at Chicago

Dr. Gordon C. Cragg, National Institutes of Health · Dr. Harry H.S. Fong, University of Illinois at Chicago

Dr. William Keller, Nature's Sunshine Products, Inc. · Dr. A. Douglas Kinghorn, Ohio State University

Dr. Robert J. Krueger, Ferris State University · Dr. Roy Okuda, San Jose State University

Dr. James E. Robbers, Purdue University · Dr. Yuzuru Shimizu, University of Rhode Island

Dr. David J. Slatkin, Chicago State University · Dr. E. John Staba, University of Minnesota

Dr. Otto Sticher, Swiss Federal Institute of Technology

Dr. Hildebert Wagner, University of Munich · Dr. Mansukh Wani, Research Triangle Institute

Additional information about membership may be obtained by writing to the Treasurer of the Society:

Guido F. Pauli, Ph.D., Treasurer, The American Society of Pharmacognosy,  
3149 Dundee Road, #260, Northbrook, Illinois 60062. Email: [gfp4asp@gmail.com](mailto:gfp4asp@gmail.com)