



# THE AMERICAN SOCIETY OF PHARMACOGNOSY

THE ASP NEWSLETTER VOLUME 46 ISSUE 1

## The 51<sup>st</sup> Annual Meeting of ASP

by Dr. Todd Daviau

This year's meeting of the American Society of Pharmacognosy will be held jointly with the Phytochemical Society of North America (PSNA). The membership of the two societies will meet together at the Tradewinds Island Grand Resort on St. Petersburg Beach, Florida, from July 10-14, 2010. This will be a large meeting with 500-600 anticipated participants.

A program committee consisting of leaders from the industrial and academic communities has been assembled and a first-rate scientific program consisting of eight general symposia has been put together covering Natural Products in Agriculture, Biodiversity, Drug Discovery - Problematic Diseases, Issues in Botanicals, Natural Products, Ecological Roles, and Tritrophic Interactions, Bioassays and Targets, Metabolism and Metabolomics, Metabolic Engineering and Biotechnology.

Aside from a stimulating scientific program, Florida offers near-perfect weather in July, with sea breezes and Gulf temperatures hovering around 86° F. Local family attractions include Busch Gardens

*continued on page 3*



Tradewinds Island Grand Resort

### IN THIS ISSUE

#### Spring 2010

##### Features

51 <sup>st</sup> ASP Annual Meeting	1
Brief News from Washington	1

##### Announcements

Symposium Honors Dr. Farnsworth	5
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##### Departments

Editors Corner	2
Contributor's Information	2
Conference Calendar	6
New Members of ASP	7
Meet a New ASP Member	8
Behind the Scenes in Pharmacognosy	9
From the Archives	10
Membership Information	11

### Brief News from Washington

by Dr. Georgia Perdue

*Editor's Note: In this installment of Dr. Perdue's regular column, she reports on information pertinent to grants and how changes in our national budget affect our research community.*

- On January 25, the new NIH shortened grant application forms went into effect as part of the "Enhancing Peer Review Initiative." There also will be only one resubmission and a new scoring system. Dr. Toni Scarpa, Director, Center for Scientific Review (CSR) wants the reviews to be completed within three months. Dr. Scarpa told the National Institute of Allergy and Infectious Diseases (NIAID) Advisory Council that CSR is using virtual face to face reviews for the electronic reviews which in time will be done at three sites around the country. An Internet-based discussion meeting, which "works incredibly well," is also used. At least 80% of the participants "like it very much," said Dr. Scarpa. CSR has also been using an editorial board review for complex science. Another innovation is the use of a college of reviewers, like an editorial board for journals, made up of 50% full professors with the remainder made up of associate professors and a few assistant professors. CSR considers this the future. To make it easy for reviewers from the West Coast there will be at least one meeting a year in California and CSR has developed a register of volunteer reviewers. Dr. Scarpa believes that Dr. Elias Zerhouni's legacy for enhancing peer review is almost complete.
- The FY 2010 appropriations are for the Food and Drug Administration, \$2.4 billion, a 15% increase over 2009; National Institutes of Health, \$31 billion, a 2.3% increase; NIAID,

*continued on page 4*

## Editor's Corner



In this issue of the *ASP Newsletter*, we are pleased to provide information regarding the 51<sup>st</sup> Annual Meeting in Tampa, Florida. Dr. Todd Daviau provides information about the great scientific and social program that he and the other organizers have assembled. Hotels are going fast, so don't forget to register early to receive the reduced rate.

Dr. Georgia Perdue continues her regular column "Brief News from Washington". With the considerable changes at NIH and other agencies in the past year, Dr. Perdue has done a terrific job of keeping us updated on how these can impact pharmacognosy research. As ASP Layout Editor James Lyles noted, we may need to change the name of Dr. Perdue's column since the news is really no longer "brief" but an extensive look at funding agencies. Thanks for all your efforts Georgia!

Although we call ourselves the "American Society of Pharmacognosy", we are really an international organization, with members in numerous countries throughout the world. I was saddened by the news of the two major quakes recently in Haiti and Chile. When I checked the ASP Membership Directory, I found one member listed from Haiti, and three from Chile. I have e-mailed each of these members, and I have only heard back from one, Dr. Leon Goity in Santiago.

Dr. Goity reports that she and her family and loved ones are okay, but the quakes have preoccupied people considerably. She said these have been difficult days, and certainly the greatest tragedy that Chile has experienced in recent times. I have invited her to write about this experience, and its impact on pharmacognosy research in Chile, and she hopes to do this for a future *ASP Newsletter*. If there are other ASP members from Chile or Haiti, or if you have first-hand experience in these countries, we would like to hear your stories about how these tragedies have impacted pharmacognosy.

Turning to happier news, we report the 80<sup>th</sup> birthday of ASP Founding Member, Dr. Norman Farnsworth. As this *Newsletter* goes to bed, I am getting ready to head to Chicago for the Farnsworth Symposium on March 23<sup>rd</sup>. This will be a great event for pharmacognosy research, with many speakers discussing the importance of botanicals, especially in the United States. I hope many ASP members will be able to attend. Anna Heran, in her "From the Archives" pays homage to Dr. Farnsworth by digging up a photograph from the early days where he is looking especially young and fit.

Our other regular columns continue with Dr. Diane Swaffer interviewing new member Dr. Amani Awaad from Saudi Arabia. The *Newsletter's* new ace reporter and City University of New York doctoral student, Dan Kulakowski, interviews Dr. Marcy Balunas on her research on the fierce-sounding compound, dragonsamide E. Welcome on board Dan, and congratulations to Marcy on her new position at University of Connecticut.

## 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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# The 51<sup>st</sup> Annual Meeting of ASP

continued from page 1

Tampa, Disney World Orlando, the Salvador Dali Museum in St. Petersburg, and countless others museums, not to mention miles of white sand beaches. Social activities including an opening night reception, a Caribbean-themed beach party, a mixer for young investigators of the PSNA and ASP, and the closing evening banquet are being planned.

Participants will fly to Tampa and then take a short shuttle across the bay to the Tradewinds Resort ([www.justletgo.com](http://www.justletgo.com)). For more detailed travel information, please consult [www.asp2010.com](http://www.asp2010.com).

We look forward to your participation in this meeting!

## **Symposia #1 - Natural Products in Agriculture**

- Dr. Pam Marrone, Marrone Bio-Innovations; "The Potential of Natural Products in Agriculture"
- Dr. Sharon L. Doty, University of Washington, "Endophytes for Sustainable Bioenergy Crop Production"

## **Symposia #2 - Biodiversity**

- Dr. Susan McCormick, USDA/ ARS; "Trichothecene Triangle - Toxins, Genes and Plant-Microbe Interactions"
- Dr. Jurgen Rohr, University of Kentucky, College of Pharmacy; "Generation of Biodiversity of Microbial Natural Products Through Combinatorial Biosynthesis"

## **Symposia #3 - Drug Discovery - Problematic Diseases**

- Dr. Dennis Kyle, University of South Florida, College of Public Health; title forthcoming
- Dr. Gunda Georg, University of Minnesota, Masonic Cancer Center; "Natural Products as Promising Therapeutics for Pancreatic Cancer Treatment"
- Dr. Scott G. Franzblau; University of Illinois at Chicago, Department of Medicinal Chemistry and Pharmacognosy Director, Institute for Tuberculosis Research; "Natural Product-Based Drug Discovery for Tuberculosis"

## **Symposia #4 - Issues in Botanicals**

- Dr. Diane Birt, Iowa State University, College of Human Sciences/Agriculture and Life Sciences; "Using diversity in *Echinacea*, *Hypericum* and *Prunella* to Understand and Enhance Potential Health Benefits"
- Dr. De-an Guo, Shanghai Institute of Materia Medica, Chinese Academy of Sciences; "Recent Research Progress in Traditional Chinese Medicine"

## **Symposia #5 - Natural Products: Ecological Roles and Tritrophic Interactions**

- Dr. Juergen Gross, Julius Kuhn Institute; "Drugs for Bugs: The Potential of Infochemicals Mediating Insect-Plant-Microbe Interactions for (Phyto)medical Purposes"

## **Symposia #6 - Bioassays and Targets**

- Dr. Susan Mooberry, UT Health Science Center, Pharmacology; "Mitosis, the Great Divide: The Value of Cell-Based Screens to Identify Tubulin-Disrupting Antimitotics"
- Dr. Hendrik Luesch, University of Florida, Chemistry; "Global and Targeted Approaches to Determine Bioactivities and Mechanisms of Action"

## **Symposia #7 - Metabolism and Metabolomics**

- Dr. Anne Osborne, John Innis Center, UK; "Operon-Like Gene Clusters for Adaptive Evolution in Plants"
- Dr. Eve Wurtele, Iowa State University; "Searching the Transcriptomic and Metabolomic Space to Decipher Metabolism and its Regulation: Focus on Complex Polyketides in Medicinal Plants"

## **Symposia #8 - Metabolic Engineering and Biotechnology**

- Dr. Wendy Kelly, Georgia Tech University, Chemistry; "Thiostrepton: a Model System for Thiopeptide Antibiotic Biosynthesis"
- Dr. Eric Schmidt, University of Utah, Molecular Biology; "Supply and Genetic Modification of 'Symbiotic' Natural Products"

## **Approaching Deadlines**

**April 1, 2010:** Last day for Abstract Submission.

**June 20, 2010:** Last day for early registrations.

**July 10, 2010:** Onsite registration opens, late registration fee in effect.

**Please Note:** July is a very busy tourist season in the Tampa area and the Tradewinds Resort is a favorite destination for many due to its many family oriented amenities. Please plan accordingly and book your room early as we have only been allotted a fair number of rooms.

## Brief News from Washington

*continued from page 1*

\$4.8 billion; National Cancer Institute, \$5.1 billion; National Center of Complementary and Alternative Medicine, \$128.8 million. National Science Foundation received \$6.9 billion, a \$436 million increase.

- Dr. Anthony Fauci, Director, NIAID, told his Advisory Council that he expects more R01 applications in the late 2010 when the unsuccessful NIH Challenge Grant applications are resubmitted. This will cause the success rates to drop. Since the budget is in flux, the payline of eight is at its unprecedented lowest level; it could be readjusted by spring. NIAID funded 936 grants with American Recovery and Reinvestment Act (ARRA) funds. Dr. Fauci pointed out that the unintended consequences are that NIH received 20,000 applications for the Challenge Grants and could only fund 229 grants. It is “highly likely” that the unfunded grants will be resubmitted as R01s; NIAID will probably receive more than 1,000 applications which “will cause a severe strain to our payline in 2011,” said Dr. Fauci, who also expects the success rate to be as low as 16 or 17% in 2011 and the pay line as low as seventh to eighth percentile.
- Highlights of the **President’s budget for 2011**: NIH, \$32 billion, a \$1 billion increase: NCI, \$5.2 billion, NIAID, \$4.9 billion, and NCCAM, \$132 million. NSF, \$7.2 billion and FDA, \$2.5 billion combined with \$4 billion user fees. Stay tuned for final figures as Congress votes on the appropriations bills in several months.
- At his first NIH Advisory Committee to the Director’s (ACD) meeting last December, **NIH Director Dr. Francis Collins** announced the creation of a Chief of Staff position in his office. He also noted that neither the Senate nor the House like targeting special emphases in appropriations bills as has been done for autism and cancer. These targets may be in jeopardy. “Congress wants science to drive the agenda.”
- Changes in **NIHs financial conflict of interest regulations** are coming. The definition of conflict of interest is a sticking point. After the public comment period, the final rule will be published in the summer or fall. Dr. Collins considers “this matter of high importance. If we want the public to trust what we do, we have to get our house in order.... But this [should] not discourage efforts between the public and private sectors .... We are on the right track to bring back an ethical integrity.” Several ACD members agreed that this is “incredibly important.”
- An effusive Dr. Collins, who likes to ride a motorcycle, noted at the ACD meeting that his **first 115 days** “have been wild; it feels like drinking from a fire hose while riding a roller coaster at the same time. There are so many things coming at me every day .... We have very exciting moments.... We are scientists in pursuit of fundamental knowledge ... and applying that knowledge to extend a healthy life and reduce the burdens of illness and disabilities. NIH is the steward of medical and behavioral sciences ....When it was announced that the former director of the genomic institute would be the new NIH director... there was worry ... that there would be top down big science. I want to reassure you that I believe the foundation of NIH...is the ideas from individual investigators...their creativity and energy....Investigator-initiated research is the foundation of biomedical advances.”
- **Dr. Collins outlined to ACD in some detail his five-part vision for NIH. First, apply high-throughput technologies to fundamental biology**, e.g., nanotechnology, small molecule screening, new imaging modalities, emphasis on comprehensive approaches, computational biology. The cancer genome atlas will “totally change the landscape of our understanding of cancer.” Other areas include autism, microbiome, a project already underway, “learning about all the microbes that live on and in us.” The **second opportunity is translational science**, --“taking all the discoveries from all the diseases that are pouring out of laboratories and building a bridge from that research effort into drug development or therapeutics of other sorts. The stage is set for NIH to play an expanded role in translational research and empower academic researchers to develop lead compounds... to the point where they become attractive for the public sector-- a real opportunity for public private partnerships.... Small molecules are certainly an area in which NIH has invested ... Many could go into clinical research. His **third vision** is to put science to work on **preventive and personalized medicine**....Encouraging a greater focus on **global health** is **fourth**. “I would like to see NIH increase its investments on global health. We have the opportunity for **small molecule screening**... and we need to approach neglected tropical diseases such as schistosomiasis.” And, **finally, reinvigorating and empowering the biomedical research community**. “We should spend a large chunk of our portfolio on the new Pioneer Award, Innovator Awards and Transformative R01s... which already occupy one-third of the Common Fund.” A quandary for the new director is having the right number of graduate students and postdocs. Quoting James Russell Lowell, “Low aim is a crime,” Dr. Collins emphasized, “we don’t intend to aim low at NIH.”

*continued on page 5*

## Brief News from Washington

continued from page 4

- NIH's National Center for Research Resources (NCRR) hosted the **Clinical and Translational Science Award (CTSA) Industry Forum: Promoting Efficient and Effective Collaborations among Academia, Government and Industry** in mid-February. In addressing the Forum, Dr. Francis Collins said that there is a "chasm" between basic research and FDA-approved drugs. The goal should be to bridge this "valley of death." He noted that with the AARA funds a pilot program was started to address the funding gap between promising research and development of new drugs. Dr. Collins said enthusiastically that with high-throughput screening **oxidiazoles were discovered as new drug leads for schistosomiasis, "for which there has not been a new drug in 50 years."** The disease kills up to 280,000 annually. He believes that old drugs abandoned by drug companies should be looked at for other uses. "There may be useful compounds out there which could be utilized. That inventory could save hundreds of millions of dollars." Someone from industry noted that "there are barriers [to the idea] and incentives are needed to do this." Dr. Collins suggested tax incentives. Another industry attendee suggested that abandoned compounds near the end of their patent life could be used if some exclusivity were provided for the small molecules. For more information on CTSA, which was formed in 2006, see [www.ncrr.nih.gov/ctsa](http://www.ncrr.nih.gov/ctsa).
- **A Phase III clinical trial with selenium** for non-small cell lung cancer (NSCLC) was stopped by NCI because the compound was found to be ineffective. Investigators at the Eastern Cooperative Oncology Group hoped selenium might prevent the development of second primary lung cancer in patients who had had primary early stage NSCLC tumors removed.
- Some of the highlights of remarks made at the National Center for Complementary and Alternative Medicine, (NCCAM) **10<sup>th</sup> Anniversary Research Symposium: Exploring the Science of Complementary and Alternative Medicine** by Dr. Josephine Briggs, Director, included **the Center's mission, the legacy of NCCAM's first director, the late Dr. Stephen Straus**, "*To explore Complementary and Alternative healing practices using rigorous scientific method; develop the evidence base for safety and efficacy of CAM approaches... we are not defenders... nor debunkers, we are scrupulously neutral.*" Dr. Briggs pointed out that NCCAM's \$125 million budget is the largest investment in the world in these patterns of health care practices. She emphasized that integration into mainstream medicine is central to the Center's mission. **Approximately 40% of Americans use some form of CAM** with greater use among people with a higher education. And, \$34 billion/year spent on CAM practices is mostly out of pocket. People turning to CAM products use them mostly as a complementary adjunct to mainstream medicine. **Natural products have taken the lead in CAM products used**, led by fish oil. Studies have shown: *Echinacea*, once the leading dietary supplement had no impact on prevention or duration of colds and has fallen from the top ten products sold; *Ginkgo biloba* did not slow cognitive decline; St. John's wort "did not alter the course of major depression." Glucosamine for arthritis/pain *might* have some benefit. Dr. Briggs said that **natural products make up a large part of the Center's portfolio** and emphasized that NCCAM is a leader in assuring their quality. She pointed out that some Ayurvedic products contain lead, mercury, and arsenic. FDA has subsequently issued cautions about these products.
- FDA has placed **Fruit-Sweetness<sup>TM</sup>** or PureLo<sup>R</sup> on its Generally Recognized as Safe (GRAS) list. The sweetener is made from **concentrated monk fruit, *Momordica grosvenorii***, (Chinese luo han guo). The New Zealand company, BioVittoria Ltd., reports that the sweetness is due to **mogrosin**, a glycoside, which it claims is 300 times sweeter than sugar.

## Botanical Symposium, Dr. Farnsworth's 80<sup>th</sup> Birthday

by Ms. Amy Keller

The University of Illinois's (UIC) College of Pharmacy, Chicago, Illinois, will host a one-day symposium entitled, "Developments in Botanical Dietary Supplements Research from 1994 to Today," on Tuesday, March 23, 2010, at the Holiday Inn Chicago at Mart Plaza in Chicago, Illinois. This event is also planned to coincide with a seminal event, Dr. Norman R. Farnsworth's 80<sup>th</sup> birthday!

Symposium presentations will cover subjects ranging from Regulation and Funding, including an overview of the DSHEA, to Product Quality and Integrity, Bioactivity, Generating Clinical Evidence, and ending with a round table discussion of future trends. The symposium also includes a poster session and a birthday celebratory dinner in honor of Dr. Farnsworth.

Those interested in registering for this symposium should contact Ms. Deb Fox in the UIC College of Pharmacy Advancement Office at (312) 996-0160 or [dfox4@uic.edu](mailto:dfox4@uic.edu). Please also visit [www.uic.edu/pharmacy/about\\_the\\_college/news\\_and\\_events/events/botanicalsymposium2010.php](http://www.uic.edu/pharmacy/about_the_college/news_and_events/events/botanicalsymposium2010.php).



Dr. Norman Farnsworth

# 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).

## Developments in Botanical Dietary Supplement Research from 1994 to Today

Holiday Inn Chicago Mart Plaza, Chicago, Illinois  
March 23, 2010

[www.uic.edu/pharmacy/about\\_the\\_college/news\\_and\\_events/events/botanicalsymposium2010.php](http://www.uic.edu/pharmacy/about_the_college/news_and_events/events/botanicalsymposium2010.php)

## Banff Conference on Plant Metabolism 2010

Banff Centre, Banff, Alberta, Canada  
June 24-28, 2010

[www.ucalgary.ca/plantmetabolism2010](http://www.ucalgary.ca/plantmetabolism2010)

## 6<sup>th</sup> Conference on Medicinal and Aromatic Plants of Southeast European Countries

Antalya, Turkey  
April 18-22, 2010

[www.6thcmapseec.org](http://www.6thcmapseec.org)

## 51<sup>st</sup> Annual Meeting of American Society of Pharmacognosy

Trade Winds Island Resort, St. Petersburg Beach, Florida  
July 10-14, 2010

[www.phcog.org/FutureASP.html](http://www.phcog.org/FutureASP.html)

## Society of Economic Botany 51<sup>st</sup> Annual Meeting

Xalapa, Veracruz, Mexico  
June 6 - 10, 2010

<https://payments.botany.org/seb2010/login.php?next=registration>

## 11<sup>th</sup> Congress of the International Society for Ethnopharmacology

Albacete, Spain  
September 20-25, 2010

[www.ise2010.org](http://www.ise2010.org)

# New Members of ASP 2010

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 14 domestic full members, 5 international full members, and 15 associate members. We look forward to meeting you and learning more about you and your work.

## Full Members

Dr. Ali Azarpira  
Madison, Wisconsin

John Bauer  
Atlanta, Georgia

Dr. Julien Cases  
Avignon, France

Dr. Birgit M. Dietz  
University of Illinois at Illinois  
Chicago, Illinois

Dr. Daniela Boneva Divlianska  
Burnham Institute for Medical Research  
Orlando, Florida

Dr. Maria Halabalaki  
Athens, Greece

Dr. Vidhan Jaiswal  
Hauppauge, New York

Dr. Zhonghua Jia  
Givaudan Flavor Corp  
Cincinnati, Ohio

Mr. Spero Kessar  
DLC Laboratories, Inc.  
Rancho Palos Verdes, California

Ms. Gar Yee Koh  
Louisiana State University  
Baton Rouge, Louisiana

Professor Nimal Savitri Kumar  
Kandy, Sri Lanka

Dr. Brian Thacher Murphy  
La Jolla, California

Dr. Joseph Anthony Pierotti  
Altria  
Richmond, Virginia

Dr. Monica T. Pupo  
Ribeirao Preto, Brazil

Mr. Kaleem Ur Rehman  
Karachi, Pakistan

Dr. Yuhao Ren  
Walker Cancer Research Institute  
Tallahassee, Florida

Dr. ChoKyun Rha  
Cambridge, Massachusetts

Dr. Leonel E. Rojo  
New Brunswick, New Jersey

Ms. Anne Ryckbost  
Lloyd Library and Museum  
Cincinnati, Ohio

## Associate Members

Dr. Salmin Khalid Alshalmani  
Nottingham, United Kingdom

Mr. Aditya Arya  
Kuala Lumpur, Malaysia

Ms. Diana M. Cheng  
University of Illinois, Urbana Champaign  
Urbana, Illinois

Dr. Kotamballi N. Chidambara Murthy  
Texas A&M University  
College Station, Texas

Ms. Irma F. Dominguez  
Puebla, Mexico

Ms. Vandana Gulati  
Swinburne University of Technology  
Parkville, Australia

Dr. Tracie D. Locklear  
Raleigh, North Carolina

Ms. Andrea Lubbe  
Leiden University  
Leiden, Netherlands

Mr. Patricio Rojas  
New Brunswick, New Jersey

Cynthia Sager  
Philadelphia, Pennsylvania

Dr. Tuba Serbetci  
Istanbul, Turkey

Justyna Sikorska  
Oregon State University  
Corvallis, Oregon

Mr. Christopher C. Thronburg  
Oregon State University  
Albany, Oregon

Mr. Ashootosh Tripathi  
Singapore, Singapore

Robert Waldman  
Irvine, California



# Meet a New ASP Member

by Dr. Diane S. Swaffar

ASP continues to welcome several new members to the Society during this new year. We are pleased to feature one of our newest members, Dr. Amani Awaad. She is a Professor of Pharmacognosy in the Faculty of Sciences, King Saud University (KSU) in Riyadh, Saudi Arabia. We are grateful to Dr. Awaad for giving us the opportunity to get more acquainted with her.

## How did you hear about the ASP?

I first learned of the society when I was searching the internet looking for some researcher in pharmacognosy to share knowledge and information with. I actually found the ASP website when I Googled "pharmacognosy".

## Why did you join ASP?

I would like to meet other pharmacognosists in the United States for joint collaboration work or to exchange knowledge and scientific information. I would also like to meet other people who are interested in natural products in my area of specialization.

## Do you belong to any other scientific societies?

Yes, I am a member of the American Chemical, Royal Chemical, and Saudi Chemical Societies. As a licensed pharmacist, I also belong to the Saudi Pharmaceutical Society and the Egyptian Pharmaceutical Society.

## What is your educational/scientific background?

I have a pharmacist license and obtained my B.S. and M.S. degrees in pharmaceutical sciences from the College of Pharmacy at KSU. I then obtained a Ph.D. in pharmacognosy from the College of Pharmacy at Cairo University, Cairo, Egypt. I did postdoctoral work in pharmacognosy at the School of Pharmacy and Biomedical Sciences, Portsmouth University, United Kingdom, and at the School of Life and Biological Sciences at Bradford University, United Kingdom. I have been employed as a researcher at the Aromatic and Medicinal Plants Department at the Desert Research Center in Cairo, Egypt, and was the Head of Natural Products Unit there prior to my current position at KSU. I have been Professor of Pharmacognosy at KSU since 2006. I am in the Chemistry Department, where I teach natural products and organic chemistry to undergraduate and graduate students.



*Casimiroa edulis* (Rutaceae), a plant Dr. Awaad works on.

## What are your current research interests in pharmacognosy?

I am interested in all fields of applied pharmacognosy and in any natural products that have biological activities including pharmacological or antimicrobial activities. I am especially interested in the isolation, identification, and determination of the biological activity of naturally occurring compounds from plants and fungi.

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

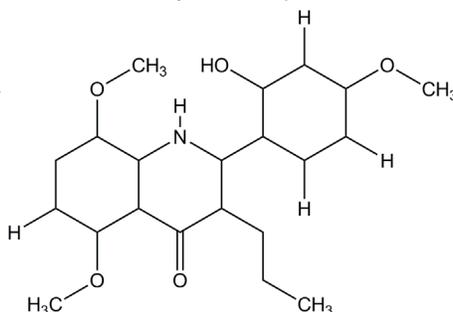
In my spare time I like to read old books and I like to do community service in teaching people about the advantages and disadvantages of natural products, especially those people who are using folk medicine. I do this through giving public lectures and writing articles in newspapers.

## What are you currently reading?

I am currently reading old books like "Metamorphosis" by Franz Kafka and "The Aeneid" by Virgil.

## What is your favorite movie?

I like any science fiction movies.



Dr. Awaad works with 2-(2'-hydroxy-4'-methoxyphenyl)-5,8-dimethoxy-3-propyl-1H-quinoline-4-one.

# Behind the Scenes in Pharmacognosy

## A Dragon's Tale!

by Mr. Dan Kulakowski

In the winter of 2010, the article entitled "Dragonamide E, a modified linear lipopeptide from *Lyngbya majuscula* with antileishmanial activity" by Marcy Balunas, Roger Linington, Kevin Tidgewell, Amanda Fenner, Luis-David Urena, Dennis Kyle, and Bill Gerwick was published in the 73<sup>rd</sup> volume of the *Journal of Natural Products*. The *Newsletter* interviewed ASP Member and first author Dr. Marcy Balunas, who took time out of her busy schedule to tell us more about her lab and this new marine natural product. Dr. Balunas is starting her new position as Assistant Professor of Medicinal Chemistry at the University of Connecticut. We wish her the best of luck!

### How did you become interested in natural products?

It stemmed from a search in how to combine my interests in chemistry, drug discovery, ecology, and ethnobotany. Following ethnobotanical work in Brazil and a M.S. in plant ecology, my Ph.D. focused on the natural products chemistry and biological activity of terrestrial plants with activity against the aromatase enzyme, important for breast cancer chemoprevention and chemotherapy. I began my postdoctoral research in a semi-independent position in Panama, with the Panama International Cooperative Biodiversity Group (ICBG), studying marine natural products chemistry for tropical and neglected disease drug discovery, and this position has really captured all of my interests in the varied aspects of natural products drug discovery!



Ms. Kim Diver

The Balunas Lab in Panama! (left to right: Amanda Fenner, Brittany Graf, Manuel Grosso, Marcy Balunas, Jessica Schwartz, Cecilio Atencio)

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

The majority of the research was carried out in my semi-independent laboratory in Panama. I am actually a postdoctoral fellow with Dr. Bill Gerwick at Scripps Institution of Oceanography in San Diego, California, but for the past three years I have been in Panama, running a lab of my own with students, funding, and planning. Dragonamide E was initially isolated by Dr. Roger Linington, the postdoctoral fellow in Panama prior to my arrival, now an assistant professor at the University of California Santa Cruz, Santa Cruz, California. I initially isolated herbamide B, which was then reisolated by my student, Ms. Amanda Fenner, from the University of Iowa, Iowa City, Iowa. I elucidated the structures and determined their full stereochemistry. Dr. Kevin Tidgewell, a postdoctoral fellow with Dr. Bill Gerwick, assisted on some of the stereochemical work.

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

This manuscript describes the isolation and structure elucidation of dragonamide E, a new cyanobacterial metabolite with a novel fatty acid moiety, whose structure has implications with regards to the configuration of other metabolites. Furthermore, another of the isolates, the known compound herbamide B, is described fully for the first time, including full absolute configuration. Both compounds have demonstrated *in vitro* activity against the tropical parasite *Leishmaniasis donovani*. Biosynthetic differences among marine compounds with a terminal free amide are also discussed.

### What impact does this research have on natural products science?

Tropical parasitic and infectious diseases, such as leishmaniasis, pose enormous global health threats, but are largely neglected in commercial drug discovery programs. However, my research program, as part of the Panama ICBG, has focused on identifying novel treatments for malaria, Chagas' disease, and leishmaniasis. The compounds identified in this research might be appropriate for further *in vivo* evaluations, including herbamide B which was isolated as a major metabolite.

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

We have played in the SENACYT/INDICASAT (Secretaria Nacional de Ciencia, Tecnologia e Innovacio/Instituto de Investigaciones Cientificas y Servicios de Alta Tecnologia) volleyball league for the past two years as the "Bioprospectos" - we've placed second each year but we have some nice trophies!

**Editor's Note:** Interested readers will want to peruse the Scripps Institution of Oceanography's Exploration e-magazine article describing Drs. Gerwick and Balunas' work in detail in the July/August 2009 issue. Please visit [http://explorations.ucsd.edu/Features/2009/Discovering\\_Diversity/](http://explorations.ucsd.edu/Features/2009/Discovering_Diversity/). Background photo of Mangrove roots in the Bastimentos Island National Park in Bocas del Toro, Panama, by Ms. Kim Diver.

## From the Archives

### A Seminal Milestone

by Ms. Anna Heran, Lloyd Library Archivist

As Dr. Norman R. Farnsworth's 80<sup>th</sup> year on this planet is fast approaching, it was my great pleasure to feature him for this issue's "From the Archives."

Dr. Farnsworth, a founding member of ASP, was the organization's first Vice President and was then at the University of Pittsburgh, Pittsburgh, Pennsylvania. He also served as Chairman of the Committee on Publications, and as such was instrumental in forming the partnership between ASP and the Lloyd Library that allowed for the joint publication of *Lloydia*, now the *Journal of Natural Products*.

At the 1960 meeting in Boulder, Colorado, Dr. Farnsworth gave a presentation to attendees on the "Proposed Journal of Pharmacognosy." Members voted in support of the move to partner with Lloyd, and to increase dues to \$8 per year, as well, as it now would include a subscription to *Lloydia*. And, not forgetting his scientific duties, Dr. Farnsworth also gave a lecture on "A Phytochemical Study of *Vinca major* L. (Apocynaceae).

In the process of preparing for the vote on *Lloydia*, Dr. Farnsworth and his fellow committee members, Drs. Egil Ramstad and Arthur Schwarting, were thorough in their collection of data. They solicited and received numerous letters



The caption on the photo reads: **Pause for refresher** - Members attending the third annual meeting of the ASP being held at the West Virginia University Medical Center take a time-out for a breather. Attending are Dr. Finn Sandberg of Stockholm, Sweden, guest speaker; Dr. Arthur Schwarting, University of Connecticut; Dr. Maynard Quimby, Massachusetts College; Dr. Norman Farnsworth, University of Pittsburgh, President of the Society; Dr. Varro Tyler Jr., University of Washington; and Dr. Lee C. Schramm, University of Minnesota.

(Dominion-News Photos.)

of support for both the creation of ASP and its partnership with Lloyd, creating a natural vehicle for pharmacognosy publishing. He provided copies of the letters, along with a full report on the benefits of this deal at the 1960 meeting.

As the archivist at the Lloyd Library, I am happily acquainted with Dr. Farnsworth. He is a gregarious, tell-it-like-it-is kind of man. When I look at his correspondence from many years ago, I see his enthusiasm for his profession, a certain humbleness, realism, along with a dash of humor, and a commitment to excellence in his field.

Dr. Farnsworth willingly relates several amusing anecdotes related to the negotiations with the Lloyd and the celebratory festivities which followed the successful conclusion of the deal. Decorum dictates not revealing those here, however if you have not heard Dr. Farnsworth's stories, I would encourage you to ask him!

In a 1961 letter to Dr. Lynn Brady, he writes about what he can volunteer for the upcoming meeting and says, "I hope that the members respond with gusto and that the papers that will be presented are of the caliber that we all hope for. You can count on me for one paper...and although I do not consider myself an expert in any particular area at the present time, I will do my best to help out."

When ASP took over editing of *Lloydia*, Dr. Farnsworth served on the Editorial Advisory Board along with several others, while Dr. Schwarting became its editor. At around this same time, Dr. Farnsworth was also serving on the Membership Committee. He worked diligently to expand the membership in the Society, once again showing his commitment to the fledgling organization. He encouraged all members, in the annual renewal letter, to pass the information around to students, and any other professionals or interested parties, so that they might join.

By 1962, Dr. Farnsworth had become President of ASP, he has continued since that time to provide leadership and guidance to the organization and its members.

David J. Slatkin, Ph.D, Treasurer  
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## 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. Arnold R. Brossi, National Institutes of Health • Dr. David P. Carew, University of Iowa
- Dr. John M. Cassidy, Oregon State University • Dr. Geoffrey A. Cordell, Natural Products, Inc.
- Dr. Gordon C. Cragg, National Institutes of Health • Dr. Norman R. Farnsworth, University of Illinois at Chicago
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- 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:  
David J. Slatkin, Ph.D, Treasurer, The American Society of Pharmacognosy,  
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