



THE AMERICAN SOCIETY OF PHARMACOGNOSY

The ASP Newsletter Volume 48, Issue 3

ICNPR POSTS RECORD TURNOUT

by Dr. Guy Carter

The 8th International Congress on Natural Products Research (ICNPR2012), held at the Grand Hyatt hotel in New York City, was a huge success with over 1,300 registered participants from 66 countries, making this the largest gathering of natural products researchers ever in North America.

Before the formal opening of the conference on Saturday, July 28th, three outstanding scientific workshops took place that covered the diverse subjects of NMR structure determination, isolation, and characterization of Actinomycetes and fungi from the environment and determination of absolute configuration by circular dichroism. The NMR Workshop was given by Dr. Mark O'Neil-Johnson of Sequoia Sciences and Dr. Sandra Groscurth, Mr. Brian Killday, and Dr. Christian Fischer from Bruker Instruments. The Microbiology session was led by Dr. Valerie Bernan of Carter-Bernan Consulting and Dr. Jeffrey Janso from Pfizer. The CD course was given by Dr. Nina Berova of Columbia University and Dr. Ana G. Petrovic of New York Institute of Technology. Each of the presenters in these information-rich sessions brought unique insights to their subjects, which provided a stimulating learning experience.

The Opening Reception of the ICNPR was held on Saturday July 28th in the spec-



tacular Manhattan Ballroom in the Grand Hyatt, where attendees had the opportunity to greet colleagues in an informal atmosphere with live music provided by a 5 piece jazz band. Welcoming remarks were

given by representatives from the sponsoring societies: Drs. Elisabeth Seguin (AF-ERP), Wolfgang Blaschek (GA), Lars Bohlin (PSE), and Barbara Timmermann for ASP and SIF, as Dr. Anna Rita Bilia was delayed on arrival from Italy.

The formal scientific program began on Sunday morning, July 29th, with a tribute to one of our founding fathers, Dr. Norman R. Farnsworth, followed by an address by this year's Farnsworth Award winner ASP member Dr. Chris Ireland, of the University of Utah, Salt Lake City. Sunday's program included a plenary Symposium on the Promise of Biodiversity, chaired by New York Botanical Garden (NYBG) Vice President Jim

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Incoming ASP President Addresses Members

By ASP President David Newman



As the new ASP President for 2012-2013, it is my privilege to address the membership and to give an idea of what priorities there may be for this and hopefully future years. Looking back over the last year under the direction of Dr. Barbara Timmermann and the members of the ASP committees (which are many and legion), the year culminated in the superb meeting held in New York City, New York. This was one of the quadrennial meetings of the ASP and fellow European societies under the title "International Congress on Natural Products Research" or ICNPR. It ended up with over 1,300 registrants, making it as far as can be determined, the largest scientific meeting solely on natural products held in the United States to date.

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EDITOR'S CORNER



It is hard to believe that almost two months have passed since we hosted the largest gathering of natural products researchers ever to be held in the United States. As one of the organizers, it was truly thrilling to have so many people with a common interest in natural products together in New York City this summer to discuss their latest results. In this issue, the *Newsletter* covers the International Congress on Natural Products Research 2012 (ICNPR2012) in depth.

Scientific Chair, Dr. Guy Carter, provides a summary of the many scientific highlights that occurred in this four-day Congress, essentially packed with events from 8:00 am to at least 7:00 pm most days. The invited speakers, award lectures, other

speakers, and poster presenters totaled well over 1,000. As Dr. Carter notes in his article, it was especially rewarding to see the number of younger members interested in the future of natural products from around the world.

Younger Member Dr. Kurt Reynertson describes the memorable Younger Members event at La Fonda restaurant. This session was a great time for Younger Members from all of the participating societies to gather and hear about career opportunities in natural products. A special word of thanks is given to Pepsico for sponsoring this memorable event. As an organizer of the Congress, the important role of younger members to me was especially apparent for our volunteer force. In an article I crafted for this issue, I reflect on my own early days as an ASP member and also quote from ASP Member and Past President, Dr. Alice Clark, about her early experiences with ASP. These early encounters can be life-changing.

Other ICNPR2012 articles include Dr. Amy Keller's interviews with two of the ASP highest award recipients, Dr. Chris Ireland (Norman Farnsworth Research Achievement Award) and Mr. Roy Upton (Tyler Award); these awards demonstrate the significant impact on human health and scientific inquiry that careers focused on natural products can have. At ICNPR2012, the *Journal of Natural Products* celebrated its 75th Anniversary in style! In addition to the introduction by Editor-in-Chief Dr. Douglas Kinghorn, three speakers who have contributed many important articles to the journal and served on the editorial staff gave presentations: Drs. Rachel Mata, William Gerwick, and Robert Pettit. Attendees received a poster commemorating the 75th Anniversary, provided by the American Chemical Society.

In addition, we received sad news that ASP member, Dr. Gerald Sullivan, passed away. He was an active member of the Society, and we have written a remembrance in this issue. Our deepest condolences go out to his family and friends. Our regular columns continue, including Dr. Georgia Perdue's News from Washington, and Dr. Keller goes behind the scenes to learn about saquayamycins isolated by Dr. Jurgen Rohr and his colleagues. We are so proud to share these columns and our ICNPR2012 coverage with you. Have a productive and peaceful autumn season.

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

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ICNPR: “Global Change, Natural Products, and Human Health” a Grand Success



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Miller and speakers Dr. Scott Strobel (Yale) and Dr. John Hooper (Queensland Museum), followed by the first of three afternoon poster sessions.

Sunday evening featured perhaps the most memorable non-scientific event of the conference – an excursion to the NYBG aboard a dedicated Metro-North train leaving from Grand Central Terminal. The fun began as our orange T-Shirt-clad, engineer-hatted volunteers shep-

herded 800-plus participants from the poster session in the Ballrooms through the hotel lobby into Grand Central, all the way to Track 16. Once at the NYBG, the party continued for three hours under a giant tent filled with live music of a 5 piece Brazilian band, amazing food, and libations. Remarkably, not even one wayward pharmacognocist was lost in the Bronx, a real tribute to the capabilities of the local organizing team and NYBG.

At the heart of ICNPR2012 was a broad spectrum of exceptional scientists providing clear insights into their particular realm of natural products research. From molecular investigations using “omics” technologies through to clinical trials of natural product drugs

and the actual practice of herbal medicine, a brilliant array of topics was presented. For most of the Congress there was little down-time, as the program was essentially continuous from 8:00 a.m. until 7:00 p.m.; however, we have evidence that some attendees managed to find some time for extracurricular activities. (Please also see our article on the Young Members Committee Event.)

An estimated crowd of 300 can claim to have seen the work of a master magician as our esteemed colleague and ASP member Dr. Koji Nakanishi performed his combination sleight-of-hand and stand-up comedy routine on Monday night. As always, Dr. Nakanishi was in

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The 8th International Congress on Natural Products Research...was a huge success with over 1,300 registered participants from 66 countries, making this the largest gathering of natural products researchers ever in North America.

ICNPR: "Global Change, Natural Products, and Human Health" a Grand Success



New York Botanical Gardens set the stage for our gathering.

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rare form and only the children in the audience were able to figure out the tricks.

Tuesday morning featured a plenary symposium dedicated to the publication of the 75th volume of the *Journal of Natural Products*, which was sponsored by our co-publishers, The American Chemical Society. *JNP* Editor in Chief, Dr. Douglas Kinghorn, chaired this session, which included insight-filled presentations by ASP members Drs. Bill Gerwick (University of California, San Diego), Rachel Mata (Universidad Nacional Autónoma de México) and Bob Pettit (Arizona State University). We are grateful to the ACS for sponsoring this event as well as for the support and collaboration involved in making the *Journal* a success.

At the Closing Banquet on Wednesday evening, outgoing ASP President Barbara Timmermann delivered the final remarks in recognition of the contributions of the numerous members of the Scientific and Local Organizing Committees, as well as the dignitaries present from all of the participating Societies. Newly inaugurated ASP President David Newman concluded the formal program with his personal remarks. Owing to the sensitivities of our international audience, Presidential roasting was postponed until next year's ASP Meeting in St. Louis, Missouri.

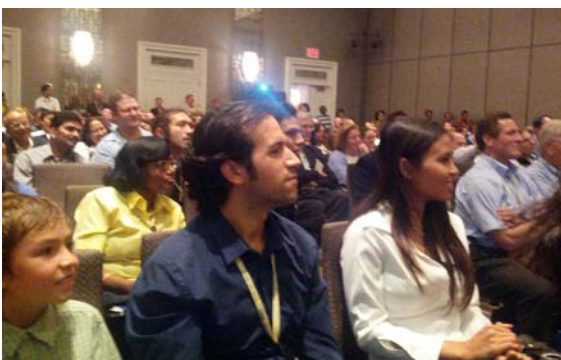
Two aspects concerning the participants in the Congress were particularly noteworthy from my perspective. First, I want to acknowledge the enthusiastic support from our European colleagues. All interactions with AFERP, GA, PSE and

SIF were highly positive and enthusiastic from the planning stages through to the launch of the Congress. All of us in the ASP want to thank these colleagues for all their help, not to mention the tremendous numbers of participants! Perhaps the most significant impression that the ICNPR left with me is the huge potential that our young scientists hold for the future of natural products research. Young people representing research groups around the world made brilliant presentations at ICNPR. Whether on the podium or at posters, the eloquence, poise, and confidence, displayed by so many of these young scientists signal great things to come. ■

Drs. da Silva Bolzani, Davies-Coleman, Newman, and Singh contributed to this article.



ICNPR2012: Speakers, Pastimes, and Tireless Volunteers



ICNPR2012: A Grand Success



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I would like to formally recognize the superb job done by the local committees (organization under ASP members Drs. Edward Kennelly and Guy Carter). I would also be remiss in not recognizing the truly excellent work of Ed's students; little did they realize that part of their educational process was to materially aid in the smooth running of this meeting. There are too many others for each to be formally recognized by name, but the time spent by Dr. Mark O'Neil Johnson of Sequoia Sciences and Dr. Jim Miller and Dr. Mike Balick of the New York Botanical Gardens has to be recognized for what in a military sense would be known as "above and beyond the call of duty."

The 75th Anniversary of the *Journal of Natural Products* was celebrated with an excellent symposium showing the breadth

a vested interest in these areas of research! From the papers that were presented, there are definite indications that continued investigations into the role of microbes in the production of secondary metabolites from plants and marine invertebrates may well pay dividends. This interplay also stretches into the more classical aspects of Pharmacognosy in that secondary metabolite production in medicinal plants may well be influenced by the microbial flora in on or around the plant(s) themselves. Just to demonstrate the ubiquity of microbes, the human is effectively 10% mammalian cells, 90% single-celled microbes, so investigation of the interplay is not as "wild" as it might appear! I hope to encourage presentations on these and other aspects in future ASP meetings.

...as far as can be determined, the largest scientific meeting solely on natural products held in the United States to date.

of the *Journal*, from its early days to its position today as one of the premier journals in the field, and I am happy to note that Editor-in-Chief Dr. Doug Kinghorn is still willing to continue for another period of time. I must also recognize the ASP Norman Farnsworth Research Achievement awardee, Dr. Chris Ireland of the University of Utah, Salt Lake City, Utah, and the Matt Suffness Young Investigator awardee, Dr. Philip Williams of the University of Hawaii, Manoa, Hawaii. The memorial symposium for the late Honorary ASP member Dr. Norman Farnsworth was a bitter-sweet moment for all of ASP. The three phases of Norm's academic life were covered by Drs. Harry Fong, Doug Kinghorn and Guido Pauli, all with stories and suitable cartoons and slides showing the effect that Norm had on Pharmacognosy and the ASP during his life.

From a scientific perspective, it was interesting that the three societies that involve natural products from a chemical and biological background all held their meetings, two annual, one semi-annual, on the East Coast of the United States within the time span of just over four weeks. The ICNPR was held in New York City in late July, the Society of Industrial Microbiology (SIM) took place in Washington D.C. in the second week of August, and the American Chemical Society (ACS) convened in Philadelphia later in August. I was lucky enough to attend all three, and in the latter two meetings, there were excellent talks on natural products by people who mostly did not attend the ASP meeting.

I hope in the next year or so, to be able to "persuade" researchers who presented at the SIM and ACS meetings to consider ASP as well. A number of the talks were on the interplay of microbes with plant and marine invertebrates, which would fit in well with talks that were given at the ASP this year. I should add in the spirit of full disclosure, for those who may not already know, that my original training was in microbial chemistry; I have

On the membership front, as a result of discussions at the Executive Committee and business meetings at ASP, a new schedule of membership fees has been introduced, due mainly to the work of the Assistant Treasurer, Dr. Guido Pauli, whereby the overall costs of membership decreases the longer the period that one signs up for. What should also be pointed out is that ASP is not only for graduate scientists from conventional training programs, but is also a society that welcomes interested participants from all levels of scientific training from none to post-doctoral. We should encourage technical (pre-BS level) professionals to apply. I have a vested interest in this regard, as I started my scientific career as a technician out of high school in the United Kingdom back in the middle 1950's. The membership committee and others within the Society are actively working on ways to increase membership numbers; this is a priority for this and future years.

The planning for the 2013 meeting in St. Louis, Missouri, is well under way under the auspices of Drs. Ray Cooper and Mark O'Neil-Johnson, and one important symposium will focus on an issue that Dr. Barbara Timmermann referred to in last year's address: the importance of women scientists in the field. This symposium will have lectures only from female cancer researchers covering a significant number of years. I will be chairing the session and there are "suggestions from the organizers" that I should be suitably dressed for the occasion!!

The 2014 Annual Meeting will be held in Halifax, Nova Scotia, Canada, and I must admit that it was a major load off of my shoulders when Dr. Paula Brown stepped into the breach as almost the last minute of the 2012 Annual Meeting accepting the responsibility of the local Canadian organizer.

Finally I would like to thank all of you for the privilege of serving you as the President of the ASP over the next year. ■

Research Achievement Award Winner: Dr. Chris Ireland

by Dr. Amy Keller

This year's awardee of the Norman R. Farnsworth Research Achievement Award, Dr. Chris Ireland, received his award and gave a presentation at the ICNPR2012, July 28-August 1, 2012.

Dr. Ireland told the *Newsletter*, "I am quite humbled to receive the Farnsworth Award. It was particularly poignant for me to listen to the presentations from Norm's former colleagues and students during the ceremony that described him as a visionary and a dedicated mentor, two qualities I believe we should all strive towards as academic scholars. It also provided me the opportunity to reflect on the impact that the ASP and its founding fathers had on my own professional development. I view this award as recognition of the hard work and dedication of an army of gifted students, postdoctoral fellows and colleagues that I have shared my career and life with over the past three decades. I have always said that my greatest scientific legacy will be the accomplishments of my former students and postdocs during their own careers and it was especially important to me that literally dozens of my former co-workers were there at the meeting to share this award with me."

When preparing for the award presentation, Dr. Ireland acknowledged "a great deal of trepidation." Despite this, he recognized an opportunity to see his career in distinct parts. He relates, "The initial phase focused on chemical investigations of marine invertebrates particularly sponges and ascidians. The middle phase extended our investigations beyond chem-

istry into understanding the molecular mechanism of action of the exotic molecules discovered in our lab. The current phase exploits the chemical and biological diversity of marine organisms for drug discovery. It is now easy to see how these transitions dovetailed and that the current program is really a synthesis of everything gone before. It is also easy to now see how the unique personality, energy and curiosity of each lab generation corpus built upon the foundations laid by their predecessors to continually elevate the quality of the program to where it is today."

Dr. Ireland continued to express gratitude to mentors and family. "I was fortunate to have two great mentors who taught me first how to be a scientist and second how to be a Professor and mentor. Professors D. John Faulkner and Paul J. Scheuer were truly giants in the field of marine natural products and they were both very supportive of their students and passionate about their science. They were also both intensely competitive and I think their rivalry helped propelled the field to the level that it is today. I would not have had the drive needed to succeed if they had not

instilled those traits in me."

"Finally, I owe a great debt to my family for their sacrifices and patience that allowed me to commit the time and effort necessary to succeed in academics and science. I have enjoyed every aspect of my career and am grateful to have Mary Kay as my partner in life and science so we could share the ride together." ■



Dr. Chris Ireland

I view this award as recognition of the hard work and dedication of an army of gifted students, postdoctoral fellows and colleagues that I have shared my career and life with over the past three decades.

MR. STEVEN LEITCH

Mr. Roy Upton Awarded ASP Tyler Prize

By Dr. Amy Keller

ASP member Mr. Roy Upton was awarded the Tyler Prize at ICNPR2012. The award recognizes an individual who has made outstanding scientific contributions to the broad field of dietary supplements, with special emphasis on botanicals. The contributions are usually in an area of phytochemistry, pharmacognosy, or pharmacology.

On receiving the prize, Mr. Upton told the *Newsletter*, “There are a mix of feelings; honored; humbled; and proud; honored that the work of the American Herbal Pharmacopoeia (AHP) could be recognized by such a distinguished honor in light of the thousands of incredible scientists and pharmacognosists who are doing primary medicinal plant research and are more deserving than I; humbled in that I know the award committee wished to recognize someone who reflects a high level of excellence and dedication as that exemplified by Professor Tyler’s contributions to modern pharmacognosy, and hoping that the work of AHP will reflect that; and proud that a relatively simple herbalist, regarded by many as one of the “first pharmacognosists,” could win such a distinguished award. This shows that the connection between traditional herbal medicine and modern pharmacognosy is not broken and has further room to develop.”

Mr. Upton serves as Executive Director and founder of AHP. Their mission as stated on their website (herbal-ahp.org) is “To promote the responsible use of herbal products and herbal medicines.” To this end, AHP produces monographs on herbal medicines focusing on quality control, safety, and efficacy.

In his award presentation, Mr. Upton sought to highlight a few main points. “The first is the historical precedent of the intimate connection between traditional herbal medicine, early pharmacognosy, and the fact that herbalists and pharmacognosists were the specialized experts representing the interface between plants and medicine,” Mr. Upton explained. Secondly, he went on to mention that “there are both philosophical and scientific reasons for studying medicinal plants in the manner in which they were used traditionally, and not

simply as a source of new drug discovery, a primary goal of pharmacognosy today.” Mr. Upton continued to indicate that many plants are not investigated in the context in which they are traditionally used. “This represents a rich area of research that can potentially yield enormous benefit in providing solutions to many of today’s most prominent diseases.”

“Third, is that pharmacognosy has been directed to research drugs from the conventional and in my opinion, very limited perspective of attacking disease and modulating normal physiological responses. Very little serious pharmacognostic investigation has been undertaken in terms of looking at plant substances that positively affect the inherent immune resistance of the host, the support of normal physiological mechanisms, or the multi-targeted action of single herbs and herbal formulae. Pharmacognosists have the ability to chart new directions in medicinal plant research.”

Mr. Upton concluded that “lastly, while new drug discovery is financially supported and potentially academically rewarding, there is a tremendous need for all of the tools of pharmacognosy to be applied to the botanical medicines industry. With most of the world population increasing their use of botanical medicines, there is a moral imperative, financially supportable, and equally rewarding potential to apply all the tools of pharmacognosy to ensuring the safety and efficacy of this broad product category.”

The Tyler Prize consists of a suitably inscribed plaque, a monetary prize of \$5,000, and travel expenses to the meeting to accept the award. The selection is made by a committee appointed by the ASP President, consisting of a chair, immediate past president of the Society, and chair of the Awards and Funds Committee.

Mr. Upton finished with a prescient quote. “Perhaps most importantly is the quote from Italian pharmacognosist DePasquale (1984): ‘Pharmacognosy is the science of drugs that originate from living beings and are studied to help other living beings.’ If we embrace this concept we can chart a new and dynamic course for modern pharmacognosy that has as its primary goal the alleviation of suffering of humanity.” ■

“...This shows that the connection between traditional herbal medicine and modern pharmacognosy is not broken and has further room to develop.”

ICNPR Honors ASP Founding Father

by Dr. Edward J. Kennelly, Ph.D.

The first session of ICNPR2012 was a tribute to the life of Professor Norman R. Farnsworth, a founding member of the American Society of Pharmacognosy, who died last year at the age of 81. The Scientific Organizing Committee of ICNPR2012 felt it was fitting to have a tribute to Professor Farnsworth's long and storied career in pharmacognosy at the opening session of the joint congress which he was instrumental in starting almost five decades ago.

Three of his colleagues, Drs. Harry Fong, A. Douglas Kinghorn, and Guido Pauli, spoke about his career, and this was followed by the highest award the American Society of Pharmacognosy offers, now known as the Norman Farnsworth Research Achievement Award, won this year by Dr. Chris Ireland.

First up was Dr. Fong, Professor Emeritus, University of Illinois at Chicago. Dr. Farnsworth and Fong were friends for 56 years. They were classmates, of sorts, at the University of Pittsburgh, graduating together in 1959, with doctorate and bachelor's degrees in Pharmacy, respectively. While working on his Ph.D., Farnsworth mentored Fong in his masters. Except for the four years that Fong studied for his Ph.D. under the late Dr. Jack L. Beal at Ohio State, the more than 50-year Farnsworth-Fong collaboration and partnership went unabated even after Fong's official retirement in 2004. According to Fong, "We were partners to the end, and our friendship will be eternal."

The second speaker was Dr. Douglas Kinghorn, Jack L. Beal Professor and Chair, The Ohio State University. Dr. Kinghorn had a 35-year professional relationship with Dr. Farnsworth. Dr. Farnsworth served as Dr. Kinghorn's



Professor Farnsworth

postdoctoral advisor at the University of Illinois Medical Center, and then Dr. Kinghorn was a faculty colleague at Illinois until he left to take up the Jack L. Beal endowed Chair at Ohio State. Kinghorn and Farnsworth had a joint interest in the discovery of anticancer agents from plants. In the early years of Kinghorn's career in Chicago, Farnsworth included him as a co-investigator in his various funded projects on this topic. Dr. Kinghorn later became Associate Director of the Program for Collaborative Research in the Pharmaceutical Sciences, a unit which Dr. Farnsworth directed. All told, Dr. Farnsworth and Dr. Kinghorn have co-published 135 research articles and reviews. According to Dr. Kinghorn, "The more

I got to know Norm, the more I realized—he was such an amazing man."

The final speaker was Dr. Guido Pauli, Associate Professor, University of Illinois at Chicago. Dr. Pauli first met Dr. Farnsworth 12 years ago. They became increasingly close collaborators, colleagues, and friends when Pauli joined the UIC faculty in 2001. Dr. Farnsworth and Dr. Fong initiated Dr. Pauli's involvement with the then newly established UIC/NIH Botanical Center, which is now in its 3rd cycle. Among the many views Dr. Farnsworth and Dr. Pauli shared: pharmacognosy is endangered but still THE best and most interesting science to be in. Over the past decade (2001-2011), Dr. Farnsworth has been a unique mentor to Pauli, has challenged him in helpful ways, and becoming a personal friend of the Dr. Pauli family. According to Dr. Pauli, "Among the many views Norm and I shared: pharmacognosy is endangered but still THE best and most interesting science to be in."

The tribute was video streamed to Dr. Farnsworth's widow, Mrs. Priscilla Farnsworth, who was not able to attend in person. ■

"Among the many views Norm and I shared: pharmacognosy is endangered but still THE best and most interesting science to be in."

—Dr. Guido Pauli

Young Members Rock ICNPR

By Dr. Kurt Reynertson

This year, the ASP Younger Members Committee hosted a Career Networking event at the fabulous La Fonda del Sol around the corner from the meeting conference rooms. Organized by Mr. Dan Kulakowski (City University of New York), Dr. Marcy Balunas (University of Connecticut), and myself (Johnson & Johnson), the event received generous financial support from PepsiCo. Following the Tuesday, July 31st, evening poster session, over 200 participants had the opportunity to leave the conference meeting rooms and delight in light tapas and drinks at La Fonda.

Dr. Gregory Yep, Senior Vice President for Global Long Term Research at PepsiCo kicked off the event with advice to participants about staying ready for new challenges in a difficult job market. Then Dr. Brian Schwartz, Vice President for Research and Sponsored Programs and co-director of the New Media Lab at the Graduate Center of the City University of New York entertained the crowd with more advice for planning for careers both outside and inside academia.

Next up were several 2-3 minute “elevator pitch” descriptions from newly-hired scientists in a wide variety of careers, including academia, industry, government, and law. Drs. Balunas and Brian Murphy (University of Illinois at Chicago) told about their recent transitions to permanent, tenure-track positions. Dr. Craig Hopp (NCCAM) then stepped up to talk about his new role as a program officer at NIH. Next we heard from scientists in the pharmaceuti-

cal industry. Drs. Charles Pathirana (Bristol-Myers Squibb) and Jeff Janso (Pfizer) explained how they have utilized their natural products skills to secure positions at large Pharma companies at a time when most are shedding natural products divisions.

Dr. Scott Baggett talked about the thrills and pitfalls of working at a small natural products-based start-up company, and Dr. Cassandra Quave (Emory/PhytoTEK) discussed how she was able to commercialize part of her academic research to create a start-up company of her own. Then came a few words from scientists who have moved on to consumer products companies. Drs. Taichi Inui (Wrigley), Ezra Bejar (HerbalLife), and I talked about our roles and the way we have ended up in our respective companies. Dr. Mauricio Alvarez (Pearl Cohen Zedek Latzer, LLP) then took the microphone to explain that his position in patent law has been an exciting adventure exposing him to many aspects of science. And finally Dr. Alison Pawlus (University of Minnesota) made everyone jealous describing her adventures studying wine in Bordeaux as a Fulbright Scholar.

All participants then mixed, socialized, and presumably made all the right connections to help them find that dream job. To stay connected the rest of the year, there is a new Pharmacognosy Network email listserve where questions, job postings, and anything else can be posted and discussed: <https://groups.google.com/forum/?fromgroups#!forum/pharmacognosy-network> ■



JAMES T. LYLES

ASP Annual Awards

By Dr. Amy C. Keller

The Newsletter wishes to recognize and congratulate all ASP award winners. Best wishes and congratulations to all.

Norman R. Farnsworth Research Achievement Award

Dr. Chris M. Ireland

University of Utah, Salt Lake City, Utah

Tyler Prize

Dr. Roy Upton

American Herbal Pharmacopoeia, Scotts Valley, California

Schwartz and Beal Awards

Arthur E. Schwartz Award

Dr. Tadeusz (Ted) Molinski, University of California,
San Diego, California

Jack L. Beal Award

Dr. Nadja Cech, University of North Carolina-Greensboro,
Greensboro, North Carolina

Matt Suffness Award

Dr. Phil Williams

University of Hawaii at Manoa, Manoa, Hawaii

Research Starter Grants

Dr. Bela Peethambaran

University of the Sciences, Philadelphia, Pennsylvania

Dr. Amy Lane

University of North Florida, Jacksonville, Florida

Dr. Robert Keyzers

Victoria University of Wellington, Wellington, New Zealand

Kilmer Prize

Ms. Lilibeth A. Salvador

University of Florida, Gainesville, Florida

Student Research Award

Ms. Deborah Esposito

Rutgers University, New Brunswick, New Jersey

Undergraduate Research Award

Ms. Maxine Tan

University of California-San Diego, San Diego, California (Dr. Brad
Moore, mentor)

Mr. Tyler Sevco

University of Pittsburgh, Pittsburgh, Pennsylvania (Dr. Xinyu Liu,
mentor)

Lynn Brady Travel Award

Ms. Rachel M. Hartley

University of Texas, Austin, Texas

Mr. Tom Wyche

University of Wisconsin-Madison, Madison, Wisconsin

Mr. Jeffrey Noro

University of New South Wales, Sydney, Australia

David Carew Travel Award

Ms. Emily Meyers

Scripps Institution of Oceanography, University of California-San
Diego, San Diego, California

ASP Waqar Bhatti Student Travel Award

Ms. Rana Montaser

University of Florida, Gainesville, Florida

D. John Faulkner Travel Award

Dr. Marcy Balunas

University of Connecticut, Mansfield, Connecticut

Travel Grant for Active Members

Dr. Yit-Heng Chooi

University of California-Los Angeles, Los Angeles, California

Dr. Ulyana Munoz-Acuna

Ohio State University, Mansfield, Ohio

Dr. Charlotte Simmler

University of Illinois at Chicago, Chicago, Illinois

Dr. Xinyu Liu

University of Pittsburgh, Pittsburgh, Pennsylvania

Student Travel Grant

Mr. Mike Caspers

University of Kansas

Mr. Neal Goebel

Oregon State University

Mr. Oliver Vining

Oregon State University

Mr. Stephen Parrish

University of Hawaii-Manoa

Ms. Shangwen Luo

University of Illinois at Chicago

Mr. Andrew G. Newsome

University of Illinois at Chicago

Mr. Job Tchoumtchoua

University of Athens, Athens, Greece

Ms. Jessica Ponder

University of Colorado, Aurora, Colorado

Ms. Tammi Vasiljevik

University of Kansas, Lawrence, Kansas

Mr. Kevin Lewellyn

University of Mississippi, Oxford, Mississippi

Mr. Jason Woodhouse

University of New South Wales, Sydney, Australia

Mr. John Kim

San Jose State University, San Jose, California

Mr. Patrick Still

Ohio State University, Mansfield, Ohio

ICNPR Celebrates Schwarting and Beal Award Winners

By Dr. Amy C. Keller

At the Closing Banquet of the ICNPR2012, the 2011 Arthur E. Schwarting Award winner ASP member Dr. Ted Molinski and Jack L. Beal Award winner ASP member Dr. Nadja Cech and co-authors received their checks and plaques at the ASP Banquet. The papers were “Xestoproxamines A-C from *Xestospongia proxima*. Assignment of Absolute Stereostructure of Bis-piperidine Alkaloids by Integrated Degradation-CD Analysis,” and “Synergy-Directed Fractionation of Botanical Medicines: A Case Study with Goldenseal (*Hydrastis canadensis*),” respectively, both appearing in the *Journal of Natural Products*’ 74th volume.

Dr. Cech told the *Newsletter*, “I am truly humbled to have been selected for this award. It is a rare honor to be recognized for the quality of one’s science, and I express my sincere thanks to the committee, the *JNP* editors, and former ASP President Barbara Timmermann. This research was several years in the making and represents a major effort by my excellent students and collaborators. It is extremely gratifying to have it be so well received.”

In addition, Dr. Molinski related, “It is an honor for Mr. Brandon Morinaka and me to be recognized with the Arthur E. Schwarting award. I am humbled and grateful to both the Associate Editors and the selection committee who had a tough choice from many outstanding articles. I like to give credit to Brandon; he persisted with what I thought was a very tough problem

and his efforts were well rewarded. It turned out golden! I like to think that the gist of the paper is a method applicable to the larger family of macrocyclic bis-piperidine alkaloids from marine sponges.”

The *Newsletter* congratulates these award winners and their co-authors! ■



Top: Dr. Cech receives award.

MR. ROY UPTON

Center: Mr. Morinaka, boating in the field.

Bottom: Goldenseal (*Hydrastis canadensis*).

DR. HIYAS A. JUNIO

WELCOME TO ST. LOUIS!

Natural Products at a Crossroad: Current and Future Directions

By Drs. Ray Cooper and Mark O'Neil Johnson

The flush and excitement of the incredible meeting in New York is receding and we are full steam ahead with plans for the 2013 Annual Meeting. Next year, the ASP returns to the Midwest for the 54th Annual Meeting in St. Louis, Missouri, from July 13-17, 2013. We have a marvelous meeting planned to be held at The Hyatt Regency Hotel. The hotel is located in the heart of the downtown area, next to the famous Arch, by the river and downtown attractions. There are numerous restaurants nearby and a short walking distance to the St. Louis Cardinals baseball park.

The Hyatt hotel is a very well appointed hotel. There is ample lecture and ballroom space for the conference with one entire floor allocated to the meeting including a main ballroom, lecture halls with a large break out area, and an ample area for poster presentations. We have negotiated very reasonable hotel rates and a number of guest rooms all with pleasant ambiance, and excellent amenities have been set aside for meeting attendees. Our central location in St. Louis and affordable meeting venue should make this an outstanding opportunity for students and postdoctoral investigators to attend.

The city of St. Louis is well served by air with the nearby St. Louis Lambert International Airport hosting most major airlines especially American Airline, United Airlines, Delta, and Southwest. At the airport, there is ample taxi service and also a direct service of the Metro link light-rail service running to the downtown area. By road, St. Louis also has excellent interconnecting highway routes into the city. By rail, AMTRAK runs frequent trains from Chicago and other points.

For the meeting, we have planned several exciting social activities and there are options for private local tours. Some activities include an opening mixer at the Hyatt on Saturday July 13, followed by an "Evening at the Gardens" at the fabulous Missouri Botanical Gardens on Monday July 15. Last but not least, on Wednesday evening, July 17, we conclude with the traditional ASP Banquet at the Hyatt.

On Tuesday afternoon, July 16, we are planning a free afternoon with the option of an Anheuser Busch Brewery tour and hope to make this a Young Investigator Event. Other major attractions in St. Louis include the famous Arch (yes you can go to the top), Cardinals baseball games, Glass Blowing Center, The St. Louis Zoo (free admission), and many local museums (mostly free admissions). There are Mississippi river access and attractions, downtown Jazz clubs, microbreweries and an incredible Vodka Bar, frequented by George Clooney when he made the movie *Up in the Air* here in St. Louis. Also, with transport, the wineries of Missouri are within easy reach.

We are reaching out to a broad and diverse Natural Products community involved in industry, academia, and education. We hope to attract new "voices" to the Meeting. Our theme, "Natural Products at a Crossroad: Current and Future Directions," embraces the fact that natural products touches on many scientific disciplines.

There are several large universities in St. Louis: Washington University, St. Louis University, University of Missouri, and St. Louis College of Pharmacy. The Danforth Center is conducting world class research in plant biology and chemistry, algae, and other biotechnology. Regionally and within driving distance we have the University of Missouri at Columbia, University of Kansas, the University of Illinois at Chicago, Chicago State University, University of Mississippi (Ole Miss), and University of Iowa.

We are delighted to tell you of our science program including three Saturday Workshops in place for you to choose from.

The selected scientific topics for the meeting include:

Advances in Marine Natural Products, Microbial Products, Botanicals
Women in Science
Natural Products as Anti-Cancer Agents
Application of Natural Products for Pet Foods
Natural Products: Drug Research and Current Drugs on the Market
Frontiers of Discovery Through Spectroscopy, Isolation/Separation Methods
New Innovations in Agrochemical/Biotechnology
Ethnobotany and Botanical Discovery

On behalf of the Scientific Organizing Committee, we are delighted to have the opportunity to create a wonderful ASP program and we do hope you will "Meet Me In St. Louis."

Scientific Organizing Committee

Ray Cooper – PhytoScience and Mark O'Neil-Johnson, Sequoia, Co-Chairs
Barbara Timmermann – University of Kansas
John Beale – St Louis College Pharmacy
Amy Wright – Harbor Branch Oceanographic Inst.
Ikhlas Khan – University of Mississippi
Veronica Butterweck – University of Applied Sciences, Northwestern Switzerland
Judith Rollinger – University of Innsbruck
Nic Oberlies – University N. Carolina
Rainer Bussmann – Missouri Botanical Gardens
Jim Gloer – University of Iowa
Melany P. Puglisi – Weening-Chicago State University
Toni Kutchan – Danforth Center St Louis
Roy Okuda – San Jose State University

If you have any questions please do not hesitate to contact us.
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Slatkin Symposium Held in Chicago, Illinois

By Dr. Melany P. Puglisi and Edward J. Kennelly

Dr. David Slatkin, who served as ASP Treasurer for 31 years, was honored by Chicago State University College of Pharmacy on October 19-20, 2012, at the Double-Tree by Hilton Hotel, Chicago-Alsip, Illinois. ASP was the Premier Sponsor of this symposium, organized by ASP member Dr. Melany Puglisi. Over 100 people attended including ASP members from around the country and the greater Chicago area. The day and a half David J. Slatkin Symposium highlighted his career and accomplishments.

Dr. Slatkin is considered one of the country's most influential pharmacists and has made tremendous contributions to the field of pharmaceutical sciences, Pharmacognosy, and pharmaceutical education. He is the founding Dean of three different colleges of pharmacy, including the Chicago State University College of Pharmacy, Chicago, Illinois. His distinguished career as a teacher and administrator includes service at Northeast Louisiana University School of Pharmacy, Monroe, Louisiana, the University of Pittsburgh School of Pharmacy, Pittsburgh, Pennsylvania, and the Midwestern University College of Pharmacy, Glendale, Arizona. Dr. Slatkin holds Bachelor's degrees from Wayne State University, Detroit, Michigan, and Mercer University's Southern School of Pharmacy, Atlanta, Georgia, as well as a Master's degree and Ph.D. from the University of Mississippi School of Pharmacy, University, Mississippi.

His achievements have been recognized by many schools and professional organizations with awards including the Merck Award from Mercer University, the American Foundation for Pharmaceutical Education, and Edwin Leigh Newcomb Memorial Fellow at the University of Mississippi. In 1999, he was named one of the 50 Most Influential Pharmacists in the country by the journal *American Pharmacist*. An author of more than 80 scientific publications, and has served as reviewer for the *Journal of Natural Products* and the *Journal of Pharmaceutical Sciences*. He has served as Treasurer of the ASP since 1981 and is a member of the Rho Chi Honorary Society and the Phi Delta Chi pharmacy fraternity.

The scientific portion of the Symposium began on Saturday, October 20, and included many distinguished



Dr. David Slatkin

members of the ASP, who honored Dr. Slatkin's important contributions to pharmacy as well as the Society. ASP Honorary Member and *Journal of Natural Products* Editor-in-Chief, Dr. A. Douglas Kinghorn, kicked off the Symposium with a plenary lecture entitled "Natural Products Research as a Collaborative Pharmaceutical Science." In addition to discussing his NIH-funded work on natural products leads for cancer treatment like silvestrol, Dr. Kinghorn also talked about the history of the *Journal of Natural Products* and Dr. Slatkin's key role in its evolution. Dr. Kinghorn commented that during negotiations with the American Chemical Society to co-publish the *Journal* in the 1990's, "David was always there to provide a sober and sane point of view."

Invited speakers included ASP members Drs. John Cardellina, James McAlpine, John Pezzuto, and Paul Schiff. Each of these invited speakers gave updates on their scientific achievements as well as tributes to Dr. Slatkin. Dr. Schiff fondly recalled working with "Slats" at the University of Pittsburgh College of Pharmacy (Pitt) beginning in the 1970's after the late Professor Norman Farnsworth left that institution to join University of Illinois at Chicago. Dr. Schiff worked closely with Drs. Joseph Knapp and Slatkin, recalling that the three shared equally and cooperatively in teaching and research at Pitt. This collaborative spirit earned them a variety of endearing nicknames such as "the three amigos," "the terrible trio," "the unholy three," "the gruesome threesome," and even "the three stooges." Dr. Slatkin was the youngest of the threesome, and was sometimes just called "the kid." Dr. Schiff fondly remembers "the kid" struggling to keep pace with the others in the threesome going up University of Pittsburgh's infamously steep Cardiac Hill.

A poster session was held in the afternoon of October 20, and presentations from the laboratories of ASP members included Drs. Ehab Abourashed, Edward Kennelly, Brian Murphy, Cedric Pearce, and Melany Puglisi. Two researchers in Dr. Murphy's laboratory, Ms. Skylar Carlson and Dr. Xiaomei Wei, and one member from Dr. Puglisi's research group, Dr. Nora Kirby-Swenson, were formally recognized for their outstanding presentations.

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MR. ROOSEVELT HOLLMAN

Slatkin Symposium Held in Chicago, Illinois

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Social events included an elaborate opening reception on Friday evening and a lovely closing dinner. At the dinner, ASP President David Newman honored Dr. Slatkin as did ASP member Dr. Robert Borris. President Newman told the *Newsletter*, "This was a symposium that allowed the ASP to pay tribute to David for his many, many years of untiring work for the benefit of the Society, in particular as the Treasurer for most of these years. We wish him well in his retirement from the post and that he has trained his successors well."

Dr. Barry O'Keefe, the official ASP presidential roaster, took the challenge to roast the former ASP Treasurer on with great gusto. Dr. O'Keefe gave a tour-de-force Powerpoint presentation that spanned Dr. Slatkin's youth in Brooklyn to his current achievements in Chicago.

Dr. Slatkin got the last word. He reminisced about how he began his career in pharmacy almost as a whim when a brother-in-law suggested he visit Mercer University, one of the nearest pharmacy colleges. He described a chance meeting with the pharmacy dean at Mercer, and how the dean invited him to begin classes at the start of that fall term, a matter of days. That

chance meeting set the tone in some respects for Dr. Slatkin's own approach as a Dean. Dean Slatkin was well-known as being student focused and very accessible. In fact, Chicago State valedictorian, Dr. Sherry Williams, said she herself had a very similar chance meeting with then Dean Slatkin that convinced her to get her degree from that institution.

Dr. Slatkin thanked everyone for attending the Symposium. He discussed the challenges he is facing in with his health now, and how important his family, especially his wife, has been to his life.

The symposium brought together the colleagues and long-time friends of Dr. Slatkin to honor his career accomplishments and the impact he has made on the careers of the faculty and students in pharmacy and pharmacognosy. There are very few academicians that have made as great an impact on their field of expertise as Dr. Slatkin has in pharmacy education ■

More information regarding the speakers, poster session and the symposium can be found at www.slatkinsymposium.com.

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Behind The Scenes

by Dr. Amy Keller

This summer, the *Journal of Natural Products* published an article from ASP member Dr. Jürgen Rohr and his colleagues entitled, "Saquayamycins G–K, cytotoxic angucyclines from *Streptomyces* sp. including two analogues bearing the aminosugar rednose." When interviewed Dr. Rohr related, "Thanks for featuring my group in the ASP Newsletter. I consider that a great honor." Please read the full article in the *Journal of Natural Products*, 2012, 75(7), 1383-1392.

1. How did you become interested in working with *Streptomyces*, and how did you come to focus on cytotoxic compounds?

My PhD training as organic natural product chemist was with Dr. Axel Zeeck in Göttingen, Germany. In his lab, I worked on isolation/structure elucidation of *Streptomyces* products. The material we used were crude products from *Streptomyces* fermentation, obtained from Dr. Hans Zahner's lab. The work triggered me to also get a microbiology minor degree. For that, I was

partly trained in the lab of the late Dr. Zahner, who worked on *Streptomyces* his entire life. Dr. Zahner was a fascinating and ingenious researcher, really inspiring, and also a very humorous anti-bureaucrat. Finally, I worked as post-doc with Dr. Heinz Floss, who was probably the most influential scientist for my career; he brought me to the fascinating field of biosynthetic natural product biochemistry, which I am predominantly pursuing since I became independent. Dr. Floss also taught me how to lead a scientific group, and I basically followed his philosophy (see below). I ran into interesting cytotoxic compounds partly coincidentally, but the fact that my father Paul Rohr died from colon cancer also played a significant role.

2. Who in your laboratory carried out the research?

For the success of the recent *Journal of Natural Products* paper, I would name two main players: Dr. Madan Kharel, who collected the soil sample and isolated the *Streptomyces* strain, and Dr. Khaled Shaaban, who isolated the com-



Khaled Shaaban, Nidhi Tibrewal, Tyler Huber, Jürgen Rohr, Madan Kharel, Jhong-Min Chen (back), Guojun Wang (front), Theresa Downey

MS. CATINA ROSSOL

pounds and did all the structure elucidation work. Both are great scientists and work currently in the Kentucky Center of Pharmaceutical Research Innovation, Lexington, Kentucky, which is directed by my colleague, Dr. Jon Thorson.

3. Could you provide a brief explanation of the work and results in your own words? In what way are the data in your paper new?

The *Journal of Natural Products* paper describes the isolation and structures of new angucycline anticancer antibiotics. Most fascinating was the occurrence of the rare aminosugar rednose, which had been found only once before, in the 'bohemian' anthracycline rudolphomycin, hence the name. The paper followed up on my idea that the micro-fauna of the Southern Appalachian Mountains was never really explored, although that region is known for unprecedented life diversity, mostly known for plants, salamanders, and mushrooms. That paper is one of the few non-biosynthetic

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manuscripts we submitted in the past 15 years, and proves that terrestrial resources are by far not exploited. However, most of our work centers on biosynthetic studies. The newest direction is combinatorial biosynthetic enzymology, which uses enzyme mixtures (we used up to 15 enzymes in such cocktails) to elucidate biosynthetic sequences of event. The advantage is that these enzymes mixtures are free from artifacts caused by whole cell systems. The results are clearer and unambiguous, and we published several papers this year on that topic.

4. What impact does this research have on natural product science and health research in general?

Understanding complex biosynthetic machinery opens up new directions of drug discovery, namely the chemoenzymatic generation of new active compounds. Since we focus mainly on post-PKS (polyketide synthase) enzymes, the methods will lead to new, significantly improved drugs, like the recently published new mithramycin analogues, which have a great potential to be developed as clinical drugs.

5. What is a favorite nonscientific activity of your lab?

That is different from co-worker to co-worker. As a group, we like to hike or canoe. I like skiing a lot, and we tried a skiing outing once, but that was a disaster (most of my people didn't manage to go down a 4-inch steep hill)!

6. What is your lab's motto?

We do not have a motto. My general leadership style to leave talented co-workers a lot of free hand to explore their own ideas and to integrate these into their theses or postdoctoral work (this is a philosophy adopted from Dr. Floss). That not only motivates people, it also opens up great new directions and synergistic ideas; for example the above mentioned 'combinatorial biosynthetic enzymology' was initiated by Dr. Kharel on deoxysugar pathways. Later we used this to explore entire post-PKS cascades, with remarkable success.

7. What are your current highlights in the lab?

That is hard to answer, and always changes. Right now it is the work on fascinating post-PKS enzymes. We discovered that many of these have at least dual functionality, e.g., we recently published a glycosyltransferase that uses two significantly different acceptor and two significantly different donor substrates. Nothing like that had ever been discovered before. We also discovered PKS release enzymes that in addition catalyze decarboxylation and dehydration reactions, but look from a BLAST search like oxygenases. Most recently, we also published two reductase/methyltransferase dual action enzymes, which each closely cooperate with another enzyme of the pathway, in one case that is the above mentioned glycosyltransferase, in the other case that is a cooperation to regenerate the co-factor FADH₂. ■

Understanding complex biosynthetic machinery opens up new directions of drug discovery, namely the chemoenzymatic generation of new active compounds.

First Impressions: Younger Members and ASP

By Dr. Edward Kennelly

On July 2, 2012, volunteer coordinator, Dr. Marcy Balunas (University of Connecticut) and I sat with about 25 young volunteers at the Grand Hyatt at Grand Central Terminal preparing for the upcoming ICNPR2012 meeting. Registration numbers at that point were at about 1,200, pushing ICNPR records, and we knew for the meeting to be successful we needed a group of energetic and hard-working volunteers. The diversity of volunteers in front of us was impressive, including two from one of the most selective public high schools in New York City to graduate students and postdoctoral fellows from around the tristate area.

As an icebreaker, Dr. Balunas asked the volunteers to tell us about their favorite “ASP moment.” For the majority of these young people, this was the first time attending an ASP meeting, and for many, this was their first introduction to any scientific congress. The question may have seemed premature to some of them, but for me it was an easy one.

The favorite ASP moment I described was my very first meeting in Chicago in 1992. I had recently isolated and identified a new saponin from a plant used in Jamaica for teeth cleaning, and I was excited to present this work

I was reminded recently again about how important these first meetings can be for young scientists when I read the terrific biography of past ASP President Dr. Clark in the ASP History book. In this article, Dr. Clark remembers her early interactions with ASP, much like I did: “In 1976 Alice Clark travelled to her first ASP meeting in Cable, Wisconsin, to present her recently completed Master’s research. Being her first oral presentation at her first national meeting, she was nervous and had practiced repeatedly. Unfortunately, the final slide with the structure of the new compound she had isolated was missing (left in the projector at home!), and trying to “think on her feet,” she drew the entire structure from memory, forgetting that she had shown it just two slides before! Despite this misstep, she recalls feeling nothing but overwhelming support from the audience, and a sense of belonging to a family she had not known until that moment.”

The article concludes with the following observation that I agree with whole heartedly, “Of her participation in ASP, she recalls it ‘was one of three major experiences during my professional career that helped to pre-

...it was one of three major experiences during my professional career that helped to prepare me for the leadership roles I was called to take on later in life.

at a national conference. I wrote an ASP Travel Grant with the help of my mentors. I still remember the day that I received a snail mail letter from ASP Awards Chair, Dr. Alice Clark, congratulating me on my student travel grant. I was excited and proud to present my work on *Gouania lupuloides* at the 1992 conference. I met international figures in the field of natural products research like ASP member Dr. David Kingston (who was next to me in the poster session with a presentation on the very hot topic of paclitaxel derivatives), and of course, the late Dr. Norman Farnsworth who I was too intimidated to speak to. In these past 20 years, I can say the society has had a significant impact on my professional career.

pare me for the leadership roles I was called to take on later in life.’

Without the friendships made through ASP and the words of encouragement and support, I would not have had as rewarding a career.’ She reminds us ‘if you embrace the society and stayinvolved, it will encourage you and support you,’ and could become your professional family as well.”

I hope that many of the 25 ICNPR2012 volunteers, as well as the many of the hundreds of younger people who attended their first ASP-sponsored meeting in New York this year, have found a new professional family that they will call home for decades to come. ■



In Memoriam: Dr. Gerald Sullivan

By Dr. Amy Keller, and Ms. Anna Heran

ASP mourns the loss of member Dr. Gerald Sullivan, who passed away on May 15, 2012, in Sequim, Washington at 77 years old.

Dr. Sullivan received both a Bachelor and a Bachelor of Pharmacy degree from Washington State University (WSU), Pullman, Washington, in 1957. He went on to work in the United States Army Medical Corp before obtaining a Masters in Pharmacognosy with Dr. Melvin R. Gibson at WSU and obtained his PhD in Pharmacognosy from the University of Washington, Seattle, Washington in 1966 with Dr. Varro Tyler. Soon afterward, he began teaching at the University of Texas (UT), Austin, Texas, as an Assistant Professor of Pharmacognosy.

In addition to discovering and isolating compounds from various plants and fungi, Dr. Sullivan's research interests also included "seabeans" or seed and fruits distributed by tropical ocean currents; he was frequent contributor to the seabeam newsletter *The Drifting Seed*, with columns ranging from the scientific to the potential art of these traveling plant progenies (www.seanbean.com).

ASP member and friend, Dr. James Robbers, told the *Newsletter*, "Gerry Sullivan has been a loyal friend since we started Pharmacy School at Washington State University 60 years ago. We took our first Pharmacognosy course from Dr. Melvin Gibson, the founder and first Editor of the *ASP Newsletter*. In addition, we both received our doctorates at the University of Washington under the tutelage of Dr. Tip Tyler, the first President of the Society. Gerry was a stand-up guy with a high standard of excellence who gave the Society his active support during its formative years, and for this we owe him a debt of gratitude."

Dr. Sullivan also earned the nickname "Dr. Vanilla" following an individual project where he tested extracts containing Mexican vanilla for the presence of coumarin (potentially toxic to the liver) while working at UT. Dr. Sullivan asserted that there may have been confusion between coumarin and the anti-coagulant coumadin, causing many to fear that their vanilla extract could cause blood thinning. "Dr. Vanilla" freely provided testing of vanilla extract for the public for a time.

Dr. Sullivan's contributions to the ASP are many, and it was not hard to find mention of him in the ASP Archives. Dr. Sullivan was first mentioned in the 1966 issue of the *Newsletter* when it was announced that he had been appointed as an Assistant Professor of Pharmacognosy at the University of Texas, Austin, Texas. Thereafter, his name

continued to appear on a fairly regular basis, showing both his activity with the ASP, as well as his professional development and commitment to the field.



Dr. "Vanilla" Sullivan wearing the sea bean *Entada gigas*. This sea bean traveled from the Amazon River to where it was found —along the United States shores of the Gulf of

ASP President related, "Although I did not know Dr. Gerry Sullivan well, we had "crossed paths" over the years at a variety of scientific venues, and I wish to express our collective sorrow on hearing that Gerry, a long-term member of the ASP, died last May. As mentioned in the article by Dr. Ed Kennelly, he was one of the early members of ASP and was a tried and true pharmacognocist, having studied under one of the "giants of the field", Dr. Varro Tyler, in his early graduate days. We shall miss him."

There are announcements of various research grants he received; Dr. Sullivan is listed as serving on the Awards and Funds Committee in 1970-71 and 1974, and nominated for the Executive Committee later in 1971 and for Treasurer in 1972. One of Dr. Sullivan's greatest services to the ASP was as chairman of the local planning committee for the 25th Annual Meeting of ASP in the summer

of 1984 at University of Texas, Austin, Texas. From all accounts, this was a highly successful meeting.

In *American Society of Pharmacognosy: 50 Years of Progress in Natural Products Research*, the meeting is remembered as having "continued the successful tradition of numerous past meetings, with 142 registrants and 10 Symposium Speakers in attendance. The Program featured numerous contributed papers and posters, and plenary lectures on Biotechnology in Natural Products Research. Plenary speakers included Drs. Bill Remers, Creed Abell, John Staba, J. S. Rokem, Peter Heinsteins and Yuzuru Shimizu. (ASP) President Schiff concluded the Annual Meeting with some closing remarks and a passage of the gavel to J. Michael Edwards, the 25th President."

ASP would not be the successful organization it is without members stepping up and helping out when duty calls, and Dr. Sullivan stands as an exemplar of the spirit of doing that has helped build this organization. Dr. Sullivan is survived by his wife Carol of 53 years, his two sons Jade and Gib, and two grandchildren.

The family suggests that any donations be made to the Hospice of Clallam County, 540 East 8th Street, Port Angeles, Washington, 98362. ■

MRS. CAROL SULLIVAN

From the Archives: "Dr. Vanilla"

By Drs. Amy Keller, and Edward Kennelly

ASP member Dr. Gerald Sullivan passed away earlier this year. His wife, Mrs. Carol Sullivan, who told the Newsletter of some of his career highlights, including his work on Mexican vanilla toxicity that resulted in an article in the *Austin American Statesman* on November 24, 1980, just prior to Thanksgiving.

The Mexican vanilla work began when Dr. Sullivan was an Associate Professor of Pharmacy at the University of Texas, and he read alarming reports of these products containing the anticoagulant drug coumadin. Dr. Sullivan did not find coumadin in the Mexican vanilla samples he analyzed, but rather coumarin, also a known toxicant, but associated with liver toxicity not blood thinning.

Dr. Sullivan initiated a project where he tested vanilla extracts for the presence of coumarin. He freely provided testing of vanilla extract for the public, resulting in more than 600 samples arriving in the mail from around the United States. He analyzed each for coumarin, and would send back results to consumers in a self-addressed postcard.

In the 1980 *Austin American Statesman* article, an FDA official brushes aside the chemical compound nomenclature issue, focusing rather on the fact that there is some toxic compound in Mexican vanilla. Dr. Sullivan may have felt vindicated by a March 26, 2009 *FDA Consumers Update* that concludes some Mexican vanilla products contain coumarin because they are made with tonka beans not vanilla beans.

While working on this project, Dr. Sullivan would return home each day from his laboratory at UT with a strong vanilla scent, and his wife began calling him "Dr. Vanilla." The nickname stuck. Mrs. Sullivan also remembers that he tested his family's vanilla since they enjoyed Mexican vanilla.

Our society will miss this colorful (and flavorful) character. Please see Dr. Sullivan's obituary in this issue. ■

The Newsletter wishes to thank Mrs. Carol Sullivan for her assistance with this article.

While working on this project, Dr. Sullivan would return home each day from his laboratory at UT with a strong vanilla scent, and his wife began calling him "Dr. Vanilla."



Above: *Austin American Statesman* article, November 24, 1980, earning Dr. Sullivan the nickname of 'Dr. Vanilla'.

New Members of ASP 2012

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 19 domestic full members, 23 international full members, and 20 associate members. We look forward to meeting you and learning more about you and your work.

ACTIVE MEMBERS

Dr. Celso Almeida
Algueirao, Portugal

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Chicago, Illinois



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. 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.

3rd International Symposium on Medicinal and Nutraceutical Plants

Aracaju, Sergipe State, Brazil

October 14-19, 2012

www.3ismnp.com.br/index_en.htm

2012 David J. Slatkin Symposium

Alsip, Illinois

October 19-20, 2012

slatkinsymposium.com/

1st International Conference on Pharma-Food (ICPF 2012)

Shizuoka, Japan

November 15-16, 2012

[//w3pharm.u-shizuoka-ken.ac.jp/ICPF2012/index.php/component/content/category/9-icpf2012.html](http://w3pharm.u-shizuoka-ken.ac.jp/ICPF2012/index.php/component/content/category/9-icpf2012.html)

Plant Lipids: Structure, Metabolism & Function (Gordon Research Conference)

Galveston, Texas

January 26-27, 2013

www.grc.org/programs.

ASP 54th Annual Meeting

St. Louis, Missouri

July 13-18, 2013

www.pharmacognosy.us/calendar-of-events/future-asp-meetings/



Brief News From Washington

By Dr. Georgia Perdue

- Highlights from the June, 2012, meeting of the National Institutes of Health (NIH) Advisory Committee to the Director (ACD).
- **Dr. Francis Collins, NIH director, very excitedly told his ACD that five pharmaceutical companies "... moved with incredible speed to join us..." i.e., the National Center and for Advancing Translational Sciences (NCATS). They will provide a total of 58 "compounds and biologics they discovered, and which have gone through Phase I-III, and are safe but did not work for their intended use."** The investment from the companies represents "hundreds of millions of dollars," said Dr. Collins. "Many investigators in academia and small business would love to have them." The five companies are: **Abbott Laboratories, Bristol-Myers Squibb, GlaxoSmithKline, Janssen Pharmaceutical Research and Development, LLC and Sanofi. The \$20 million NCATS research program will fund 2 to 3 year cooperative agreements for this effort.** "Now we have the legal templates which the companies' lawyers have drawn up." "We are thrilled with the willingness of the companies to join in [this effort]," said an ebullient Dr. Collins.
- **In 2013, the same grant policies will continue; NIH hopes to fund a total of 9,415 competing Research Project Grants.** "The total number of investigators supported by NIH has not changed," said Dr. Collins.
- The budget is keeping up with inflation, but "since 2003 we have lost... purchasing power," said Dr. Collins.



- A bothersome topic noted by Dr. Collins, is that NIH "has not been as effective as it should be to get its message out. We have not done a good job with the universities— when something exciting happens that was funded by NIH it should be prominently noted." Many avenues are being pursued to better get the message out (see NIH website).

- While Congress has not passed any appropriations bills, it did pass the **Food and Drug Administration (FDA) Safety and Innovation Act (S.3187)**. It reauthorizes the user fee program which allows FDA to collect user fees from drug companies totaling \$6 billion over five years. There is a new twist this year: FDA is allowed to also collect fees for generic drugs, bio-similar and biological products and medical devices. **The bill also helps FDA expedite approval of new drugs.** And even more importantly, **Congress added five more years of exclusivity for new antibiotics** as an incentive for their discovery thereby preventing generics from competing in those extended years.
- At the July President's Council of Advisers on Science and Technology (PCAST) meeting, one of the reports approved was *The Future of the United States Science and Technology Research Enterprise* (see previous column). A few highlights from Dr. William Press, PCAST vice-chairman: total basic research has grown; the government and universities must ensure the quality and productivity of the basic research base; "universities are increasingly the hubs

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—A few highlights from Dr. William Press, PCAST vice- chairman

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of the innovation ecosystem;" ask the President for research and development expenditures to be no less than 2%, and preferably 3%, and ask Congress to embrace this recommendation; **make the research and development tax credits permanent**; increase funding for fellowships and training grants; increase the agility of funding new fields and unexpected research for new investigators; attract and retain the world's best researchers; increase the leadership in public/private partnership; **confront the number of years it takes to get a PhD in biomedical research**. The report should be available within a couple months.

- Drs. Anthony Fauci, Director National Institute of Allergy and Infectious Diseases and David Morens, an epidemiologist and senior adviser to Dr. Fauci, wrote a most interesting article about **the little-known founder of NIH, Dr. Joseph J. Kinyoun**. The article was timely as NIH celebrated its 125th Anniversary on August 27, 2012. Briefly, it is a fascinating story of a man born in Missouri, following his father's footsteps, and becoming a doctor. In 1887, he "founded the [one room] Hygienic Laboratory on Staten Island, New York, to diagnose cholera, plague, and smallpox" The laboratory ultimately moved to Washington, DC, where it became the NIH. He visited Louis Pasteur's laboratory in Paris, France "to learn how to produce the rabies vaccine." The detailed article of this very important man can be found in the June issue of *mBio* or the NIH website.
- National Cancer Institute Director Dr. Harold Varmus

told a first ever combined meeting of the National Cancer Advisory Board and the Board of Scientific Advisors in June that in the **grant application "biosketch"** applicants should move away from "simple recitations of publications and lists of authors and journal titles to a **more narrative-based exposition of what people have achieved in science**." The NIH institute directors have approved his idea. He hopes to "**change the way in which information about contributions to science is collected in our grant applications**."

- In July, 2012, the National Center for Complementary and Alternative Medicine (NCCAM) reported that a trial with silymarin, a "mixture of components" from milk thistle, *Silybum marianum*, in patients with chronic hepatitis C, did not provide greater benefit than the placebo. The study was funded by NCCAM and the National Institute of Diabetes, Digestive and Kidney Diseases. The study has been published in the *Journal of the American Medical Association*.
- In mid-September NIH Director Francis Collins announced that Dr. Christopher P. Austin, a developmental neurogeneticist, has been chosen as the new director for NCATS. Dr. Austin came to NIH from Merck in 2002. He worked on translational research in the National Human Genome Research Institute, and held other positions within NIH including director of translational therapeutics. Dr. Austin received his bachelor's degree in biology from Princeton University, Princeton, New Jersey, graduated from Harvard Medical School, and trained at the Massachusetts General Hospital, Boston, Massachusetts. ■

Briefly, it is a fascinating story of a man born in Missouri, following his father's footsteps, and becoming a doctor. In 1887, he "founded the [one room] Hygienic Laboratory on Staten Island, New York, to diagnose cholera, plague, and smallpox" The laboratory ultimately moved to Washington, DC, where it became the NIH.

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