



### ASP Incoming Presidential Address: On Scientific Cooperation and Mentors

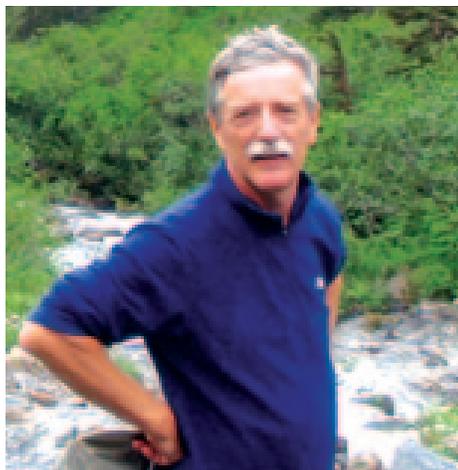
by President John Beutler

**W**e are all familiar with the competitive aspects of science. We compete for poster prizes, awards, priority of publication, grant funding, jobs, and many other things. This is all part of the normal conduct of science. But cooperation is also part of the story. These days it is pretty hard to operate without scientific collaborations, since no one person has all of the skills needed to complete a research project any more. We cooperate in the common work of the Society, editing and publishing the *Journal of Natural Products*, organizing meetings every year, and conducting the business of the Foundation.

The most important thing we do as a Society, however, is to nurture young scientists in their careers. We really do not want to become one of those species that eats its own young when food, grants, or jobs get scarce. The ASP has always been a friendly place for new scientists, and we need to keep it that way.

In my own career, I have had several formal mentors, including Dr. Ara Der Marderosian

*continued on page 3*



Dr. Beutler

PETE BEUTLER

#### IN THIS ISSUE

##### WINTER 2010

###### Features

ASP Incoming Presidential Address	1
JNP Announces Impact Factor	1
CENtral Science Blogs	3
Research Achievement Awardee, Kinghorn	4
Varro Tyler Prize Awardee, Blumenthal	5
NCCAM Funding Opportunity	6
ASP Honorary Member	7
View From Our Annual Meeting	8
Membership Recruitment & Retention	9

###### Departments

Editor's Corner	2
Jobs Update	10
Behind the Scenes in Pharmacognosy	11
Web Page News	12
ASP Award & Grant Recipients	13
Meet a New ASP Member	14
New Members of ASP	15
Brief News from Washington	16
Election Results, 2009	17
OpenNAPIS Project	17
From the Archives	18
Conference Calendar	19

### Journal of Natural Products Announces Historically High Impact Factor

by Ms. Amy Keller and Dr. Edward J. Kennelly

**T**he *Journal of Natural Products* announced an impact factor of 3.159, the highest in the *Journal's* history! Dr. A. Douglas Kinghorn, Editor at the *Journal*, presented the news at the ASP Annual Meeting in Tampa, Florida, this past summer. Upon hearing the exciting news, President Beutler related, "The consistently rising impact factor of *J. Nat. Prod.* means that higher quality research is being published in the *Journal*. Dr. Kinghorn, his associate editors, and many referees deserve thanks for driving the impact factor up with their hard work and dedication to the *Journal*, making it the premier journal for primary research in natural products in the world."

The impact factor of a journal is comprised of two parts: the numerator, which is the number of citations in the current year to items published in the previous

two years, and the denominator, which is the number of substantive articles and reviews published in the same two years. In 1997, the first year the *Journal's* impact factor was available, it was 1.432, and the recent increase is more than double!

ASP member Dr. Kinghorn told the *Newsletter*, "The ISI Impact Factor data for 2009 represent a double milestone, since the *Journal of Natural Products* has both exceeded 3.0 in Impact Factor and 15,000 total cites for the first time. The reasons for this outside recognition of our success are numerous, but these include the rapid publication time after manuscript submission, our tightly edited technical articles, the professional appearance of the *Journal's* website, and the cachet of having one's work included in a co-publication of the American Chemical

*continued on page 3*

## EDITOR'S CORNER



In this issue of the *Newsletter*, we are greeted by our new President, Dr. John Beutler. President Beutler discusses the important role of the Society in mentoring and fostering the careers of our younger members. President Beutler writes, "The most important thing we can do as a Society... is to nurture young scientists in their careers." The *Newsletter* covered this important mentoring topic in considerable detail several years ago, and I encourage newer members to look at that issue for an analysis of mentoring from many different perspectives.

I know in my own career, I have looked to ASP members for mentorship at many different points. Many members of the Society have provided me with valuable assistance, and I hope that we can continue to do this for generations of pharmacognosists in the future.

Our second lead article reports on the record-high impact factor for the *Journal of Natural Products*, the Society's flagship journal. The new impact factor, 3.159, reflects the hard work of many ASP members, including the editorial board, and especially Editor-in-Chief, Dr. A. Douglas Kinghorn. Congratulations to Doug and everyone associated with the *Journal* for this important milestone.

The 51<sup>st</sup> Annual Meeting in Tampa, Florida was a great success. The *Newsletter* highlights the achievements of some of the award winners, including Dr. Kinghorn, winner of the Normal R. Farnsworth Research Achievement Award, and Mr. Mark Blumenthal, winner of the Varro E. Tyler Prize. These are the two top awards the Society presents each year, and *Newsletter* covers each of these awards with extensive articles. We also list the winners of other awards and grants, and highlight the achievement of one of the Student Research Award winner, Ms. Julia Strathmann, in the regular column, "Behind the Scenes in Pharmacognosy." Congratulations to all the award winners at this year's ASP Meeting.

In "From the Archives," we learn about the Society's involvement in placing a commemorative plaque at the site of the original collection of *Taxus brevifolia* in Washington state. Dr. James Fuchs tells us about his new found interest in pharmacognosy, thanks to ASP member, Dr. Doug Kinghorn, and his long-standing interest in football. Dr. Georgia Perdue continues to update members on the news from Washington based on her attendance at many federal granting agency meetings.

The *Newsletter* staff wishes you a productive autumn, and please contact us if you have any ASP-related news that you want us to report on, or if you would like to contribute an article yourself.

## 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 contribution deadlines are:**

**Spring Issue Feb. 15**

**Summer Issue May 18**

**Fall Issue Aug. 18**

**Winter Issue Nov. 17**

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# Medicinal Chemistry and Pharmacognosy at CENTral Science Blogs

by Dr. David Kroll

**B**logs? Twitter? Facebook?

Are these just the purview of self-absorbed teenagers or folks in their pajamas with a laptop at their kitchen table?

Well, the editors at *Chemical & Engineering News* have been taking these media to the professional level over the last several years. In March, C&EN expanded their main portal, CENTral Science, to seven blogs written by their editors, staff writers, and select freelancers with the topics presented in a more conversational manner than in their print content. CENTral Science blogs span topics from drug development news and first disclosures of chemical structures (The Haystack) to green industries (Cleantech Chemistry) and chemical health and safety (The Safety Zone).

Beginning on August 24, 2010, pharmacognosy took a place at CENTral Science with the addition of Terra Sigillata, a blog on “medicines from the Earth” ([www.cenblog.org/terra-sigillata](http://www.cenblog.org/terra-sigillata)). The blog is written by ASP member and natural products pharmacologist, Dr. David Kroll, Professor of Pharmaceutical Sciences at North Carolina Central University in Durham, North Carolina. In its previous home at the ScienceBlogs network, Terra Sig rose in popularity to upwards of 60,000 pageviews per month.

“Being invited to the CENTral Science platform raises the stature and reach of the blog and I hope to give greater voice to the awesome power of natural products among the larger chemistry community,” says Dr. Kroll. “The opportunity to tap into the broad readership of our umbrella organization cannot be overestimated.”

As a professor at a historically-black college/university that serves first-generation and low-wealth students from all backgrounds, Kroll also notes that the blog will continue to serve as a bully pulpit to promote research education and accomplishments of underrepresented groups worldwide.

C&EN Online Editor, Rachel Pepling, notes that CENTral Science had been planning to expand their network to include external writers from the chemistry and pharmaceutical blogosphere. “Terra Sigillata is a terrific fit within our network of blogs. David is a biologist who plays well with chemists, and we’re thrilled to add his perspective and unique voice to CENTral Science. Plus, he’s a Gator.”

Dr. Kroll welcomes story leads, pharmacognosy research and education news, and any ASP announcements by e-mail to [terra.sigillata@gmail.com](mailto:terra.sigillata@gmail.com). ■

## ASP Incoming Presidential Address: On Scientific Cooperation and Mentors

continued from page 1

(my thesis adviser), Dr. Phil LeQuesne and Dr. Sam Enna (my postdoctoral mentors). They were certainly very important. Equally important were informal mentors, and the ASP was one place where I found them. Drs. Matt Suffness, Tip Tyler, John Daly, and Koji Nakanishi were some of the folks who gave me encouragement and support early in my career. What I am trying to say is that we need to create support mechanisms to assist all of the younger members of our society.

Not only is cooperation and mentorship a good thing for science, it is a good thing for the future of the society. Over the last year I led a membership task force that looked at how we can better attract and retain members, and we made a report in St.

Petersburg on our findings. In the coming year, Dr. Barbara Timmerman has been asked to figure out how to implement some of the suggestions made by the task force. This involves adding benefits that are both tangible and intangible, and most of these things will involve some sort of cooperation. The overall goal is to encourage development of young scientists in our discipline.

Other things to look at in the next year are how we might address the needs of technical level scientists within ASP, whether we can conduct elections online, and if we can find effective ways to elevate the profile of the discipline in the science community. Please feel free to send me your thoughts on these issues and others that concern you in the coming year. ■

## Journal of Natural Products Announces Historically High Impact Factor

continued from page 1

Society and the American Society of Pharmacognosy.”

Dr. Kinghorn began his term as Editor-in-Chief of the *Journal of Natural Products* with the January issue of Volume 57 in 1994. He took over the job from Dr. James E. Robbers who had edited the *Journal* from 1984-1993, Volumes 47-56. Dr. Kinghorn is the fifth Editor-in-Chief of the *Journal* since 1938.

Negotiations between ACS and ASP to copublish the *Journal of Natural Products* began in the mid-1990’s, and copublishing began with the January 1996 issue of the *Journal*. ASP and ACS are both included on the Management Board of the *Journal*. The review and publication process has changed considerably in the

past decade. Prior to joining forces with ACS, the *Journal* was a relatively small operation, run by the editor. In those bygone days the *Journal* had no web presence, and most of the correspondence was by mail or telephone.

With joint ASP-ACS publication of the *Journal* in 1996, access to ACS state-of-the-art technology for tracking manuscripts, rapidly exchanging information between the editors, and selecting reviewers provided vast improvements in the overall publication process. There has been a very significant increase in scientific status and impact of the *Journal of Natural Products* due to the joint ASP-ACS publication. ■

# Kinghorn Wins Research Achievement Award

by Ms. Amy Keller

**D**r. A. Douglas Kinghorn received the Norman R. Farnsworth Research Achievement Award at the ASP Annual Meeting, July 10-14, 2010 in Tampa, Florida. Dr. Kinghorn's award presentation focused on natural products continuing to be a source of drug discovery.

"I wanted to get over to the audience that as the first decade of 21<sup>st</sup> Century is coming to a close, there have been a decent number of new natural product-derived substances introduced into therapy in recent years. Most of these have come from terrestrial microbes, but several have resulted from the investigation of plants, and others from marine sources and land-based animals," said Dr. Kinghorn.

Dr. Kinghorn also emphasized the current successes of natural product chemistry, saying, "There is a reasonable pipeline of similar compounds now in advanced clinical trials. Therefore, it makes sense to continue to work on all forms of organisms for natural product drug discovery, although a concerted effort should be made to obtain specimens from collection locations that have not been investigated previously. While some members of the natural product community have expressed concern about the comparative lack of intriguing new structural classes of lead compounds being found currently among plant secondary metabolites, interest in examining bioactive plant constituents does not seem to be waning on a global basis."

Dr. Kinghorn was awarded his Ph.D. in 1975 and a D.Sc. in 1990, both from the University of London, and is currently the Jack L. Beal Professor and Chair, Division of Medicinal Chemistry & Pharmacognosy at the Ohio State University School of Pharmacy, Columbus, Ohio. Dr. Kinghorn serves as Editor of the *Journal of Natural Products*, copublished by the ASP along with the American Chemical Society.

The statistics for discovering bioactivity from natural products remains high. Dr. Kinghorn notes, "For example, possibly as many as 20-25% of new natural product structures are published by investigators from all over the world in the *Journal of Natural Products* on an annual basis, and about 80% of such papers report some type of biological activity. When



Dr. A. Douglas Kinghorn

the numbers of new compounds reported from terrestrial plants are compared in 2000 and 2009, they represent about 63% and 66% of all new natural products published in the *Journal*, in their respective year, as compared to compounds isolated from other types of organisms."

"A major reason why there is a continued interest in the structure elucidation of plant-derived bioactive compounds results from the modernization of systems of traditional medicine in East and South Asian countries. In the United States, the impact of the 1994 Dietary Supplement Health and Education Act has been far reaching on biomedical research in general, and several groups are presently

engaged in identifying new compounds from botanical dietary supplements, with support from the NIH. In addition, European natural products researchers have had a sustained interest in the phytochemical constituents of herbal remedies for a quarter of a century or more."

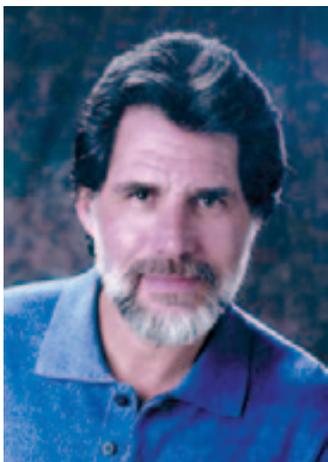
Despite this popular support for natural product research, Dr. Kinghorn observes that there is cause for global concern, mentioning that, "it is important also that tropical plant species continue to be investigated for their bioactive natural product constituents, especially in view of the present widespread erosion of the rain forests in many countries. A dark cloud on natural product drug discovery in general is the apparent decline in interest in this type of endeavor by large pharmaceutical companies, for a variety of reasons."

Dr. Kinghorn does not hesitate to speculate on the positive future of pharmacognosy. When reflecting on the past successes of the field, he notes, "among others, our illustrious colleagues, Drs. Mansukh Wani and the late Monroe Wall, of Research Triangle Institute, have shown through their discoveries of the anticancer compounds camptothecin and taxol (paclitaxel) that a small, focused research group with government support can make a major contribution to natural product drug discovery. It is to be hoped that younger members of ASP will continue to have an interest in searching for new drug lead molecules from higher plants in the future." ■

*The ASP Newsletter congratulates Dr. Kinghorn, and wishes him all the best.*

# Blumenthal Awarded Varro Tyler Prize

by Ms. Amy Keller



Mr. Mark Blumenthal

Mr. Blumenthal received the Varro E. Tyler Prize at the award banquet at the ASP Annual Meeting, July 10-14, 2010 in Tampa, Florida. As part of the award presentation, Mr. Blumenthal spoke about Dr. Tyler's legacy in pharmacognosy, and how the American Botanical Council (ABC), of which Mr. Blumenthal is Executive Director, strives to continue this legacy of teaching, knowledge sharing, and outreach.

Mr. Blumenthal founded the ABC, an independent, nonprofit organization whose mission is

to facilitate the dissemination of accurate, and reliable information on herbs. Mr. Blumenthal also edits and publishes *HerbalGram*, an international, peer-reviewed quarterly journal.

When asked how he felt about winning the Tyler Prize, Mr. Blumenthal responded, "Of course, I am deeply honored and humbled to be named a recipient of the ASP Varro Tyler Prize. Frankly, it never occurred to me that I would even be considered for this honor since I do not have a degree in pharmacognosy or natural products chemistry, or even ethnobotany, or any biological science for that matter. But I am a "scientist" of a sort; I have a degree in political science, but I am not sure that really counts!"

Mr. Blumenthal has served as an adjunct associate professor of medicinal chemistry at the University of Texas, College of Pharmacy, in Austin, Texas for six years. He is also the Senior Editor of the English translation of *The Complete German Commission E Monographs – Therapeutic Guide to Herbal Medicines* (1998), *Herbal Medicine: Expanded Commission E Monographs* (2000), *The ABC Clinical Guide to Herbs* (2003), and *Rational Phytotherapy, 5<sup>th</sup> Edition* (2004).

Mr. Blumenthal continued, "I am particularly honored to receive the Tyler award because Varro Tyler was an important figure in my life; he was one of my key mentors, and, as I pointed out in my acceptance speech, Tip Tyler had a strong influence on me and the direction of the American Botanical Council. For example, our translation and publication of our first book, *The Complete German Commission E Monographs – Therapeutic Guide to Herbal Medicines* (1998), was a result of Tip's urging. He wrote the foreword to this book, as well as the foreword to our second book, *Herbal Medicine: Expanded Commission E Monographs* (2000), and our third book, *The ABC Clinical Guide to Herbs* (2003) was dedicated to him."

Mr. Blumenthal's interest in herbs has been long standing. He notes, "I became a vegetarian as a protest against the Vietnam

war in 1968 when I was graduating from the University of Texas at Austin. I started going to health food stores, such as they were back then; they were nothing like Whole Foods Markets today. While there, I noticed lots of herbal teas which I had never seen before, as well as educational literature, most of which was based on folklore and traditional use. There was not much science on herbs back then! I got hooked into studying herbs, and wild edible plants, as a hobby. Later, I lived on a commune in northern New Mexico and a few years later, in 1974, a friend and I started a small herb wholesaling business back in Austin.

"Eventually, I became more interested in herb research, education, regulation, and advocacy than in the process of selling herbs, and I started publishing *HerbalGram* as a newsletter (initially for several other herb organizations which I had helped to found with other friends), and in 1988, I started ABC as a nonprofit vehicle to help make *HerbalGram* into a credible, visually-compelling, science-based publication modeled after *Scientific American*."

According to Mr. Blumenthal, there are a few important issues facing the future of pharmacognosy. In particular, Mr. Blumenthal feels that there is a concern about the future funding of medicinal plants. He wonders whether pharmacognosy in the future will include medicinal plants, "other than as a source of novel compounds for drug development. For example, some of us have jokingly suggested that the ASP's [and the American Chemical Society's] *Journal of Natural Products* might be renamed the *Journal of Structural Elucidation*, and yet such a statement is not intended, nor should it be misinterpreted, as disrespectful to ASP or the *JNP* editor. (I have an enormous level of respect for Doug Kinghorn as an excellent scientist and a really great guy!) I am merely voicing some of the concerns that have been expressed by a significant group, perhaps a minority, I do not know, of ASP members."

In this same vein, Mr. Blumenthal identifies concerns about a focus on single compounds, and not on complex mixtures. He continues that this is "one of the essential differences between conventional pharmaceutical drugs and the more chemically complex phytomedicines and dietary supplements – the area of growth in consumer interest and use in the marketplace. For example, I think there should probably be more synergy between ASP and ABC.

Mr. Blumenthal muses that "I really do not have 'pride' per se, but I have a deep sense of gratitude that I have been fortunate enough to be able to create a career in the education and promotion of herbs, phytomedicine, and related disciplines. And, the one area of which I am truly deeply grateful is the fact that noted economic botanist and author Dr. James A. Duke, and Dr. Norman R. Farnsworth, one of the world's most well-known and respected pharmacognosists, both came together and assisted me in founding ABC in 1988."

*continued on page 6*

# NCCAM Funding Opportunity

by Dr. Craig Hopp



NCCAM has recently published a funding announcement entitled “Mechanistic Research on CAM Natural Products (R01)”.

This announcement (RFA-AT-11-001) solicits applications to study the potential mechanisms of action of promising CAM natural products. Natural products are widely used by Americans for health purposes. Knowledge about the active components, their molecular and cellular targets, as well as markers of potential beneficial or harmful biological effects are critical pieces of preliminary information needed to insure maximally informative clinical efficacy studies on these products. Research on the development of improved methodology for the isolation and characterization of constituents of natural products and on their determination in the natural matrix will also be supported under this initiative.

A major goal of fundamental research in natural products is to generate clinical hypotheses that will facilitate definitive clinical investigation. Clinical trials of CAM natural products will be maximally informative if they incorporate well-formulated biological hypotheses, are built on a sound foundation of basic mechanistic and pharmacologic understanding, and incorporate assessment of defined signatures of biological effects. Thus, the design of maximally informative clinical efficacy studies of CAM natural products requires mechanistic insight as a first step.

Essential to the development of quality assurance processes for complex products and an understanding of their likely mechanism(s) of action is a thorough knowledge of their composition. Most of the techniques for the standardization and characterization of plants focus on the analysis of a limited number of “marker” compounds. Frequently, however, the activities of

medicinal plants are not well understood, and, therefore, their analysis should not be biased towards a few abundant or easily detected compounds. Tools are needed that can qualitatively and quantitatively capture the chemical diversity of the plant. Furthermore, one of the philosophical underpinnings of botanical use is that multiple components can act through additive or synergistic mechanisms to impart a greater biologic effect than can be achieved by any component in isolation. In order to evaluate that hypothesis, the components must be chemically and biologically characterized individually and in various combinations.

Given the complexity of many natural products, multiple biological effects are possible. Development of modern translational tools, such as targeted proteomics, or measures of epigenetics or gene expression, that capture a broad signature of biological activities can provide useful measures of complex biological effects.

Many of the components in botanical products are complex molecules with low bioavailability. It is also known that at least some of these molecules are metabolized rapidly either by gut microflora, digestive enzymes, or host metabolism generating compounds that may be more bioactive and/or readily absorbed. Little is known, however, about their possible bioactivity, or the organisms or processes that produce them. One example of microbial induction of an active metabolite is the production of equol from soy daidzein. Additional research is needed to ascertain what role metabolic processes play in the activity of medicinal plants.

Applicants should indicate how their proposed research would address fundamental mechanistic questions and ultimately help answer questions about efficacy. Data from these studies should support improved approaches to the design of clinical trials of these interventions. ■

## Blumenthal Awarded Varro Tyler Prize

*continued from page 5*

“And, a few years later, Tip Tyler, as soon as he retired from being Executive Vice-president and Provost at Purdue, joined as our fourth member of the ABC Board of Trustees. Having Jim, Norm and Tip’s names on the early ABC letterhead helped open a lot of doors for the young ABC, and gave us some instant credibility. I will always owe Jim, Norm and Tip a profound debt of gratitude for their trust and confidence in me and their support of ABC and its nonprofit educational mission and programs.”

When asked what he would like to pass along to ASP members, Mr. Blumenthal mentioned, “I remember one of Varro Tyler’s comments to me about the different roles of ABC in relation to ASP. As most ASP members are well aware, Tip Tyler was one of the original founders of ASP back in 1959, along with Norm Farnsworth and others. I believe it’s fair to say that Tip, as well as Norm, are classical pharmacognosists in the sense that they believe that higher plants, as well as fungi etc., can and should be explored as not only sources for new compounds for use as drugs and other useful natural

products, but also that the entire plant part or its chemically complex extract should also be investigated for therapeutic purposes.”

“While the research direction of many members of ASP has tended to focus on novel compounds, structural elucidation, and related pursuits, Tip, and I believe Norm too, saw in ABC’s mission a science-based organization promoting research and education and the use of the more chemically-complex herbal materials and their extracts, as well as fractions from such extracts. Tip once told me that he saw ABC as a form of ‘applied pharmacognosy;’ taking the scientifically-studied value and benefit of medicinal plants to a wider public audience. ABC has a public mission to increase cultural awareness and acceptance of beneficial medicinal plants. In truth, both organizations have related missions, to the extent that ASP deals with plants although we do include fungi as well as a practical consideration.”

The ASP Newsletter wishes to congratulate Mr. Blumenthal and to wish him well in his continued work directing ABC and editing and publishing *HerbalGram*. ■

# ASP Honorary Member

by Dr. William Keller

*Editor's Note: The article below and accompanying photos are excerpts of Dr. Keller's prepared speech for the banquet at the ASP Annual Meeting this past summer.*

To receive the Honorary Membership in ASP is the highlight of my career, and I am deeply honored. My comments will briefly focus on my background and philosophy, but with a heavy dose of gratitude.

I would like to prove how grateful I am to the ASP, its members, and to those who were instrumental in shaping and building my scientific career. I would say that the lion's share of my thanks should go to my parents, who were both extremely supportive during my formative years. My Mom, in particular, left an indelible mark on me.

Dr. Varro E. Tyler, one of the ASP Founding Fathers, in his usual persuasive way, convinced me to pursue an advanced degree in pharmacognosy rather than attending medical school. I am grateful that Dr. Tyler provided me with the inspiration to study this wonderful discipline called pharmacognosy.

I earned an M.S. degree at Idaho State University, Pocatello, Idaho, with Dr. Frank Cole as my major professor. I owe Dr. Cole my understanding and appreciation of botany and classical pharmacognosy.

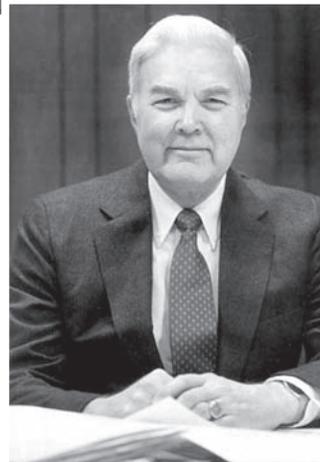
Drs. Lynn Brady and Jerry McLaughlin were both instrumental in shaping my direction and scientific philosophy. Both served as major professors during my dissertation research at the University of Washington. I am grateful for Dr. McLaughlin's determination and research focus while Dr. Brady fostered patience, scientific deliberation, and good judgment. Both of these mentors pointed me in the direction of academia, and in 1972, I accepted the position of Assistant Professor at Northeast Louisiana University (NLU), Monroe, Louisiana. That was a wonderful experience, partly because of the warm welcome that I received from none other than Dr. David Slatkin, who had accepted a professorial position at NLU the year before. Dr. Slatkin and I had great fun during the time that we were together there. I learned a lot from him, and we established a long lasting friendship.

After 23 years of working my way up the academic ladder at NLU, I enjoyed six years at Samford University as Professor and chair of the Department of Pharmaceutical Sciences, Birmingham,



Above: Dr. Keller and his wife, Tram.

Right: Dr. Varro Tyler



ham, Alabama. I then stunned most of my colleagues by moving to Utah as Vice President of Health Sciences at Nature's Sunshine, a nutritional supplement company. I have immersed myself in this position for nine years now, and find that my activities are fundamentally the same as those of a professor. I still present lectures on natural products, but now to a different audience. Research is still very important to me, but now it is in collaboration with some outstanding colleagues. Service represents a large part of my activities, and service to the ASP as Secretary has been a labor of love for over 25 years. And so, you see that I still embrace teaching, research, and service.

My good friend and colleague, Dr. A. Douglas Kinghorn, has provided me with the research collaboration that constantly renews my fascination with pharmacognosy. The academic ideal applies here in that our collaborative research on Nature's Sunshine product ingredients contributes to my company seminars. Another friend and colleague is Dr. Otto Sticher. I am grateful for Otto's kind invitation to join ETH Zurich as a Guest Professor in 1994.

The ASP has been a very important part of my professional life for over 40 years now. Serving this great organization has been a pleasure. And to be rewarded with Honorary Member status is really meaningful to me. As the years pass, a scientist generally becomes more reflective and philosophical. Personally, I now prefer to look at the big picture rather than having the narrow focus of my younger years. And that is why this event is so meaningful to me.

I would like to extend a very special thanks to my loving wife, Tram. Without Tram's companionship, support, encouragement, and advice, I do not think that I would be receiving this honor tonight. She has been my guiding light for over 20 years now.

In closing, I want to thank all my friends and colleagues who have worked with me and who have laughed with me, and all of the pharmacognosists who have touched my life over the past 40 years. ■

# View From Our Conference



**T**he ASP 51<sup>st</sup> Annual Meeting, July 10-14, 2010 in Tampa, Florida, was a resounding success. Highlights included outstanding invited talks and a very enjoyable social program including a sunset dinner on the beach, and a festive awards banquet, all held at the lovely Trade Winds Resort.

The conference included talks and poster presentations with symposia ranging from Bioassays and Targets, Drug Discovery-Problematic Diseases, and Natural Products in Agriculture. The eight general symposia were well designed, and there was ample opportunity for socializing and networking.

The weather remained beautiful for the entire conference, and meeting goers had access to great local cuisine, and pristine beaches. We look forward to seeing you next year!



# Report of ASP Membership Recruitment and Retention

by Dr. John Beutler and Ms. Amy Keller

Recently, the ASP has noticed an apparent decline in membership. To attempt to understand why full members do not renew their membership, why associate members do not become full members, and to propose actions that might counter these trends, outgoing ASP President Ted Molinski established a task force to investigate the issue. This article is based on a report from the task force presented at the recent ASP Annual Meeting.

Membership is critical to any organization. If the society depends on dues as a major part of its finances, dues income is critical to continuing operation. If member numbers fall, the human resources of a volunteer society will be insufficient to carry

out the necessary functions of the society such as hosting meetings, serving on committees, and editing the journal.

Data is required to justify that perception, if true. There are two important measures of membership: 1) the number of members in different categories and 2) the amount of membership income from dues.

Approximately 200 members were enrolled at the Society's founding, and these numbers grew steadily through the 1960s to 2000, after which they reached a plateau during the last decade of between 1100 and 1200 members (Figure 1, filled circles). However, these numbers in recent years have not necessarily reflected the number of members who were paid in full, as the Treasurer would retain unpaid members on the rolls for some time after the membership expired in hopes of receiving a renewal.

The gross yearly membership income as reported in the Treasurer's report, can serve as an alternative method of estimating the membership, when adjusted for changes in the cost of dues (Figure 1, triangles). This is an underestimate since the calculation assumes that all members are full members.

What the trends show is that ASP membership has been stagnant for over a decade and may be declining, perhaps having peaked in 2001. The lack of incentive formerly provided by the *Journal of Natural Products (J. Nat. Prod.)* appears to be a concern.

The ASP is hardly in a unique situation among scientific societies. An article in *The Scientist* highlighted the choices scientists make in renewing their society memberships (March 2010, p.33). The benefits of belonging to a society are shrinking, with easy access to journals online and many meetings available in which to present research. Consequently, membership of many societies is stagnant or shrinking. As the author states, "If scientific societies truly want to promote their field of research and the careers of their members, then they should embrace new perspectives and approaches. If a society were helping me deal with the rapidly increasing rate of innovation and discovery in biology, then it would give me a great reason to bother remaining a member."

In the specific case of the ASP, the changes have included co-publication of *J. Nat. Prod.* with the ACS since 1995, as well as a dues increase from \$35 to \$75 in 2005. There is no longer a benefit to belonging to ASP in order to get a reduced rate for *J. Nat. Prod.*, especially with the move to an all-electronic format.

Current tangible benefits of ASP membership include discounted registration at ASP meetings, discounted *J. Nat. Prod.* subscription, access to ASP grants & awards and employment service. In addition, the ASP provides networking opportunities at meetings and interim meetings, professional leadership opportunities, ASP Fellows participation in the *J. Nat. Prod.* editorial process, Younger Members Committee and access to member directory. Also, ASP members receive an ASP history book.

Figure 1. ASP Membership Trends

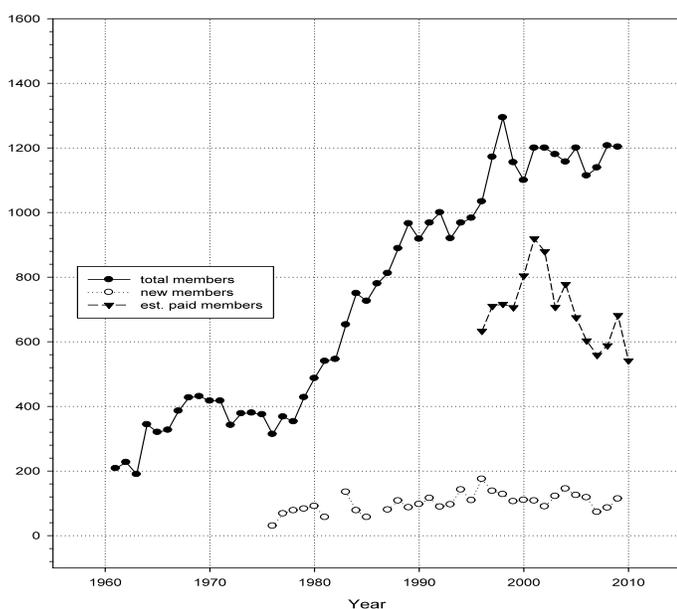
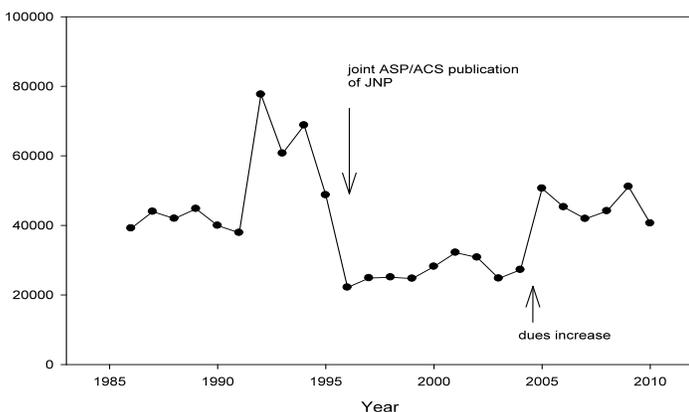


Figure 2. ASP Membership Income



## Report of ASP Membership Recruitment and Retention

Less tangible benefits include a sense of camaraderie that goes with a small-scale meeting, as well as the opportunity to travel to attractive destinations for the Annual Meeting.

No systematic survey has been made of the reasons that members do not renew their membership. Obvious reasons include unemployment or a shift to a different field of employment as pharmacognosists are famous for becoming deans in academia and analytical chemists in industry, as well as death and retirement. It may be helpful for the society to attempt to conduct exit interviews on a systematic basis when members do not renew.

**“If scientific societies truly want to promote their field of research and the careers of their members, then they should embrace new perspectives and approaches.”**

Increasing the tangible benefits of ASP membership ought to increase new members and help to retain current members. Some possible benefits that could be implemented include shared electronic natural produce databases and resources, and online courses. Online access to *JNP* for a year with membership and a DVD copy of *J. Nat. Prod.* for the year could also be used as incentives for membership. An expanded focus on

young scientists could include things such as social networking sites like Facebook and LinkedIn. The ASP could also expand the number of awards by decreasing cash value of senior awards and expand the reach of the *Newsletter*.

Another possible strategy for increasing member numbers would be to include the membership dues in the Annual Meeting registration, perhaps at a small discount. While not all members would renew, it would pass the cost of membership to their employer, and would be likely to increase membership rolls.

At this point it seems that there is insufficient data on membership to confidently choose actions which would benefit the society. Perhaps a summer stipend for a graduate student could be used to mine the membership records to answer demographic questions. For example, what is the spectrum of length of continuous membership? What fraction make the transition from associate member to full member? Are foreign members more likely to drop membership? What fraction of members stay enrolled for three years or more?

In any case, membership is important to the ASP, and hopefully the Society can grow members through the next decade and beyond. ■

The ASP Newsletter wishes to thank the members of the Membership Recruitment and Retention Task Force: Drs. John A. Beutler, Chair, Gil Belofsky, Aaron Dossey, Wendy Kelley, A. Douglas Kinghorn, Guido Pauli, and David Slatkin.

## ASP Jobs Update

by Ms. Amy Keller and Dr. Scott Baggett

**F**rom August 2009 to June 2010, the ASP jobs website received approximately 47 jobs. This reflects a similar number as compared to the previous year. Jobs posted have included undergraduate internships, post-doctoral and academic professorships, and pharmaceutical and government jobs.

The ASP jobs website has been redesigned to allow easier

posting of jobs. Simply enter the appropriate information into the form available at [ww.pharmacognosy.us](http://ww.pharmacognosy.us). This is the preferred format. After submission, you will receive an automatic reply confirming receipt, and the posting will occur in two-three days. No editing or formatting will be done to submitted jobs. If no deletion date is stated on the form, the job will be removed after six months. To remove a job, or if you have any questions, please contact Dr. Scott Baggett at [phcogjobs@gmail.com](mailto:phcogjobs@gmail.com). ■

# Behind The Scenes: Student Research Award Winner, Strathmann

by Ms. Amy Keller

At the recent ASP Annual Meeting in Tampa, Florida, Ms. Julia Strathmann gave her Student Research Award presentation, entitled "Xanthohumol-induced transient superoxide anion radical formation triggers cancer cells into apoptosis via a mitochondria-mediated mechanism." The Newsletter interviewed Ms. Strathmann and her advisor, ASP member Dr. Clarissa Gerhäuser, who both told us more about this exciting research. The Newsletter wishes to congratulate Ms. Strathmann on her award, and on the accompanying publication, published this March online in *FASEB Journal*, 2010, 24, 2938-2950.

## How did you become interested in xanthohumol?

**Dr. Gerhäuser and Ms. Strathmann:** Beer is a rich source of polyphenols with potential cancer chemopreventive activities. The story of xanthohumol actually began with the fractionation of 300 liters of a lager-type beer. We followed inhibition of cyclooxygenase 1 (Cox-1) during activity guided-fractionation and discovered xanthohumol as the active Cox-1 inhibiting principle, although it is found in beer only at very low concentrations of about 0.1 mg/L. Further characterization of xanthohumol in a series of in vitro bioassays revealed that this prenylated chalcone has a broad spectrum of chemopreventive activities at all stages of carcinogenesis. Recently we could confirm cancer preventive potential of xanthohumol in the rat model of 7,12-dimethylbenz[a]anthracene (DMBA)-induced breast cancer, which is likely due to its anti-hormonal and anti-proliferative activities.

## How do you feel being a student research award winner?

**Ms. Strathmann:** Winning the ASP student research award is a great honor for me. I am very happy that the work was considered to be prize worthy, and that actually our manuscript "Xanthohumol-induced transient superoxide anion radical formation triggers cancer cells into apoptosis via a mitochondria-mediated mechanism" was chosen for the ASP student research award. I had never expected that! Moreover, being given the opportunity to present at the ASP Annual Meeting in Tampa, Florida, was a unique experience which I enjoyed very much. I am very grateful to



YAN DE ANDRES

Back: from left to right: Mr. Antonio Garreta, Dr. Clarissa Gerhäuser, Ms. Marion Baehr, Dr. Norbert Frank, and Ms. Julia Strathmann. Front: from left to right: Ms. Silke Tudor, Ms. Renate Steinle, Ms. Jung Kim, and Ms. Karin Klimo.

the ASP scientific committee for giving me the opportunity to experience how it feels to be a student research award winner, which I definitely did not want to miss!

## How does it feel to mentor an award winner?

**Dr. Gerhäuser:** I am very proud of Julia. She was an excellent graduate student, and was very persistent in pursuing this project. It took us some time to clarify what was actually going on, and Julia had to establish many new methods in the lab. She never gave up, although most assays did not run at the first try and had to be optimized and adapted. I am very happy that all her efforts finally were rewarded by the student research award.

## 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?

**Dr. Gerhäuser and Ms. Strathmann:** Prooxidant effects of xanthohumol described in our publication in *FASEB Journal* were discovered 'by chance,' when Julia was reinvestigating production of reactive oxygen species (ROS) induced by other chemopreventive agents. We and others had described xanthohumol previously as an antioxidant, so we were quite surprised when we realized that treatment of cultured cells with xanthohumol led to ROS production within seconds. We had used antimycin A, an inhibitor of the mitochondrial respiratory chain as a positive control. Since the kinetics of ROS production by

## Behind The Scenes: Student Research Award Winner, Strathmann

both compounds were very similar, we were able to identify mitochondria as a source of ROS. By using ROS scavengers, we could clearly demonstrate that immediate ROS production via the mitochondria was important for apoptosis induction by xanthohumol. It was not known before that xanthohumol targets mitochondria to release ROS, and that ROS production is the trigger for apoptosis induction.

### What impact does this research have?

**Dr. Gerhäuser and Ms. Strathmann:** So far, we have only investigated apoptosis induction as a downstream effect of xanthohumol-mediated ROS release. However, it is very likely that the consequent change in the intracellular redox milieu might affect other chemopreventive mechanisms, such as Nrf-2-mediated induction of Phase 2 enzymes, anti-inflammatory mechanisms via transcription factor NF- $\kappa$ B, anti-angiogenic activity, and autophagy. All of these mechanisms are affected by xanthohumol, but only now do we realize that they might all be triggered by the same initial event, transient ROS production. What will be challenging in the future is to demonstrate that ROS production and all subsequent events are also relevant *in vivo*.

### What was the most challenging part of the project detailed in this paper?

**Dr. Gerhäuser and Ms. Strathmann:** There are many potential sources of ROS in a cell. Initially we focused on enzymes located in the cell membrane, and Julia spent weeks in isolating membrane preparations to measure enzyme activities and ROS. It took some time to convince ourselves that xanthohumol can enter a cell and target the mitochondria so rapidly. Probably, the most difficult part of the project was to accurately and precisely elucidate the kinetics of events that followed xanthohumol treatment. Since ROS are very short-lived molecules and cells are stressed very easily during experimental handling, it was very challenging to generate reproducible and reliable data.

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

**Dr. Gerhäuser:** We like to party. We celebrate anything (and sometimes even without a reason), from birthdays to guests and trainees coming and leaving, moving to a new lab, and successful Ph.D. exams. Since our group is quite international, we

always have a wonderful choice of food from around the world. Recently, we even introduced a 'Happy Hour' with margaritas as a reward for accepted manuscripts...

### What is your lab's motto?



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

**Dr. Gerhäuser:** We like to travel. Some time ago, eight of us flew to Milan, Italy, as a lab excursion, just on one day, thanks to the cheap European airlines. Some had never entered a plane before, so this was quite an experience. Our lab neighbors did not even believe that we were really there. Since a one-day trip was definitely too short, we recently went to Montpellier in the south of France and stayed for two nights. As we could not just leave for two days, we took a day off! This was a wonderful experience, the food was just great, and we had a lot of fun. ■

## ASP Web Page News

by Dr. John Porter

It has been an eventful year for the web presence of ASP. After a number of changes to the site last year, a proposal was received to do a major overhaul of the site design and migrate the site to a new server. The Executive Committee contracted with Inverted Web Development (ASP member Mr. Jeremy Beau and his business partner Mr. Steven Mautone), to set up the site with a new domain name, [www.pharmacognosy.us](http://www.pharmacognosy.us), hosted on WordPress, with a variety of changes giving a new look and feel.

In addition, we now have capabilities on Facebook, Twitter, and LinkedIn. These social networking sites should be useful, especially for the younger members, and there are a number of members joined on each of these branch outlets for the society's electronic presence.

Information available on the website includes recent Annual

Meeting details, maintained by the meeting organizers, and the ASP award winners, election results and the *Newsletter*. Another feature of the site is the opportunity to post pictures of events, collection sites, organisms, members, and any other appropriate content.

The semi-annual report shows that we have between 5,000 and 6,000 visitors per month. These visitors find the site through direct knowledge of the URL, referral from other sites, and referral from search engines.

We welcome all comments and suggestions from members and hope to continue to make the website useful to as many members as possible. Suggestions for additional pages of interest, additional functions, photographs, and improvements to the site and welcome and should be directed to the Webmaster, Dr. John Porter, at [j.porter@usp.edu](mailto:j.porter@usp.edu). ■

# Congratulations to all ASP Award and Grant Recipients!

## **Norman R. Farnsworth Research Achievement Award**

**A. Douglas Kinghorn**  
Ohio State University

## **Varro Tyler Prize for Research on Botanicals**

**Mark Blumenthal**  
American Botanical Council

## **Matt Suffness Young Investigator Award**

**Eric Schmidt**  
University of Utah

## **Research Starter Grant**

**Katherine Maloney**  
Harvey Mudd College

**Jennifer Anthony**  
University of the Sciences in Philadelphia

## **Kilmer Prize**

**Ahmed Orabi Elnager**  
University of Louisiana at Monroe

## **Student Research Award**

**Julia Strathmann**  
German Cancer Research Center

## **Travel Grants for Active Members**

**Kevin Tidgewell**  
Smithsonian Tropical Research Institute,  
SCRIPPS Institute of Oceanography/  
University of California, San Diego

**M. Florencia Rodriguez Brasco**  
University of Illinois at Chicago

**Leonel Rojo**  
Biotech Center, Rutgers University

## **Student Travel Grants**

**Zhuang Jin**  
University of Louisville

**Justyna Sikorska**  
Ohio State University

**Fernando Gabriel Brindis Hernandez**  
Universidad Nacional Autonoma de Mexico, Mexico City

**Feng Qiu**  
University of Illinois at Chicago

**Wadim Matochko**  
University of Winnepeg

**Feng He**  
City University of New York

## **Lynn Brady Travel Awards**

**Wanli Lu**  
Oregon State University

**Mudit Mudit**  
University of Louisiana at Monroe

**Niclas Engene**  
SCRIPPS Institute of Oceanography/  
University of California, San Diego

## **Undergraduate Research Awards**

**Tyler Atchison**  
University of Winnepeg

**Taryn O'Neill**  
University of New Brunswick, Saint John

**Eugenia Dzub Reyes**  
Unidad de Biotecnologia Centro de Investigacion  
Cientifica de Yucatan

DR. GUIDO PAULI



MR. NEL PAULI

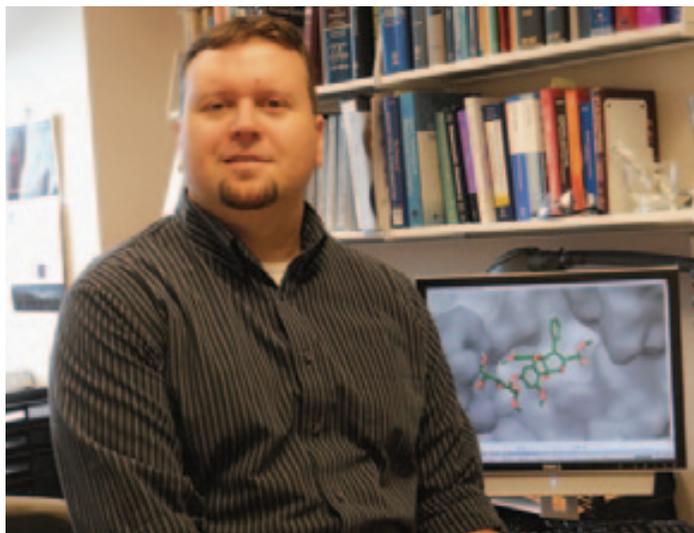


DR. GUIDO PAULI

# Meet a New ASP Member

by Dr. Diane S. Swaffar

ASP continues to welcome many new members to the Society throughout the year. We are pleased to feature new member, **Dr. James R. Fuchs**, who is currently Assistant Professor in the Division of Medicinal Chemistry and Pharmacognosy at the Ohio State University (OSU) College of Pharmacy in Columbus, Ohio. We are grateful to Dr. Fuchs for taking time from his busy schedule to give us the opportunity to get more acquainted with him.



Dr. James Fuchs in one of his synthetic labs at OSU.

## How did you hear about the ASP?

Dr. Doug Kinghorn here at OSU introduced me to ASP. My group had been doing synthetic work on a project with Doug, and he invited me to present some of our work at the 50<sup>th</sup> Anniversary ASP meeting in Waikiki, Hawai'i, in 2009. Honestly, I did not know what "pharmacognosy" was prior to getting to Ohio State!

## Why did you join ASP?

I was immediately hooked after attending the meeting in Hawai'i. The science was excellent and the people in the society are great! I hope to continue building relationships and collaborations with ASP members and further the study of natural products.

## Do you belong to any other scientific societies?

Yes, I am also a member of the American Chemical Society and the American Association for Cancer Research.

## What are your current research interests in pharmacognosy?

I am a medicinal chemist who specializes in the synthesis of natural products and their derivatives. We are primarily interested in anticancer agents with novel, or at least interesting, mechanisms of action. Recently, however, we have also begun working with collaborators in the area of infectious disease. Essentially, it is the compound that dictates the specific application, but we want to

know how and why it works and if we can somehow make it better. I was always taught that nature is the best chemist. The diversity and complexity of natural products in regard to both their chemical and biological properties are amazing.

## What is your scientific background?

I received my B.S. degree in Chemistry from the University of Toledo, Toledo, Ohio. I did two years of undergraduate research and realized that I enjoyed making molecules. I went to Penn State, State College, Pennsylvania, for my Ph.D. studies in organic chemistry and carried out the total synthesis of natural products, mostly alkaloids, in the laboratory of Dr. Ray Funk. It was during my graduate studies that I became interested in how these molecules exert their biological activities. This ultimately pushed me into the field of medicinal chemistry and postdoctoral studies at the Scripps Research Institute, La Jolla, California, with Dr. Dale Boger. I was fortunate enough to move straight from La Jolla to my present position at Ohio State, where I have been for three years now.

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

I want to stay up to date on work being done in the field. I also see membership as a good way to interact with the scientists involved in the isolation of these wonderful compounds. I think that natural product chemists and synthetic chemists really can learn a lot from one another and can do great things when they work together.

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

I do not feel like I have a lot of spare time, but what time I do have, I typically spend with my wife and daughter. I also enjoy running (although I am not very good at it) and painting, both of which I find very relaxing. I am also a big sports fan, so I am excited about the start of football season.

## What are you currently reading?

I really do not read too much outside of the lab. My wife acts as my filter for novels. If she thinks I will like a book and recommends it to me, I usually end up reading it. Recently she recommended *Tyrannosaur Canyon* by Douglas Preston. She thinks I'll enjoy the scientific side of the story. Besides, my father is really into fossil collecting and paleontology so I grew up very familiar with that field. I have made it through the prologue, but not too much more. ■

# 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 11 domestic full members, three international full members, and seven associate members. We look forward to meeting you and learning more about you and your work.

## FULL MEMBERS

Dr. Amad Mohammed Al-Azzawi  
Ras Al Khaimah, United Arab Emirates

Dr. Dwight Baker  
Acton, Massachusetts

Dr. Maureen Bonness  
Naples, Florida

Dr. Mario Alberto Figueroa  
Greensboro, North Carolina

James R. Fuchs  
Columbus, Ohio

Dr. Ambrose Furey  
Cork, Ireland

Dr. Thomas G. Gritzmacher  
Decatur, Georgia

Engy A. Mahrous  
Memphis, Tennessee

Jeremiah, B. Maroko  
Blaine, Minnesota

Dr. Emmanuel Kyame Opong  
Winneba, Ghana

Dr. Gary D. Reznik  
St. Louis, Missouri

Dr. Arlene A. Sy-Cordero  
Raleigh, North Carolina

Dr. Mani Upreti  
Dunwoody, Georgia

Dr. Jianping Zhao  
University, Mississippi

## ASSOCIATE MEMBERS

Mr. Juan J. Araya  
Lawrence, Kansas

Mr. Scott Bain  
Portland, Oregon

Daniel Kulakowski  
Bronx, New York

Jacqueline L. Salm  
Sarasota, Florida

Ms. Courtney Snelten  
Chicago, Illinois

Ms. Karen M. VanderMolen  
Cornelius, North Carolina

Tifanie Vansach  
Boca Raton, Florida



## Brief News From Washington



by Dr. Georgia Perdue

➤ The FDA recently approved the Sanofi–Aventis drug **Jevtana (cabazitaxel)** to be used in combination with prednisone in patients with **metastatic hormone-refractory prostate cancer** for which Taxotere (docetaxel) no longer is effective. Cabazitaxel is a semi-synthetic derivative of 10-deacetylbaicalin III. It acts by binding and stabilizing tubulin.

➤ The **14<sup>th</sup> National Cancer Institute (NCI) director**, Dr. Harold Varmus, was sworn in by Health and Human Services Secretary Kathleen Sebelius in July. The new 14<sup>th</sup> NCI director told NCI employees that “...there is no better time... to lead the nation’s cancer research efforts.” Among his priorities: “reforming the clinical trials system,” referring to the recent Institute Of Medicine study on the subject ( see previous column) and the cancer drug approval and regulation process which needs to be “... adjusted to a modern era....” He will hold a series of meetings with people in a variety of fields from across the country to obtain answers to provocative questions to help NCI scientists think about the next steps in their work. This could also lead to public/private partnerships. Less than a month earlier his predecessor, **Dr. John Niederhuber**, commented to the National Cancer Advisory Board (NCAB) that “one of the tiresome parts of the job [was] constantly having to take the bushel basket off the light of the NCI so that everyone else [could] see the wonderful things that go on at this institute ... and its leadership in science and clinical care. There is always jealousy ...[primarily] in the Office of the Director at NIH... one of the more disappointing parts of my tenure here....”

➤ The National Institute of Allergy and Infectious Diseases (NI-AID) will spend \$14 million in the first year of a seven-year effort to establish 10 new **International Centers of Excellence for Malaria Research**. They will be in Africa, Asia, Pacific Islands and Latin America, where malaria is endemic. Some of these areas were part of the President’s Malaria Initiative launched in 2005 to fight malaria.

➤ The FDA has ordered the makers of **Qulaquin** (quinine sulfate) to provide a risk management plan which informs patients of the serious side effects experienced from using this “off label” product for night-time leg cramps. Qulaquin was approved by FDA for the treatment of uncomplicated malaria for travelers who had been in malaria-endemic areas.

➤ The FDA has advised consumers to immediately stop using **Slim-30 Herb Supplement** because it contains Sibuantramine, an appetite suppressant used for weight loss.

➤ The FDA has warned consumers to stop taking **Que She**, an **herbal weight loss supplement**, supposedly an “**all natural blend of Chinese herbs**,” widely distributed on the Internet. It contains, among other things, the beta blocker propranolol, the weight loss drug Sibutramine and ephedrine and fenfluramine.

➤ **By 2013, the NCI will be in its new two-building campus**, at Shady Grove, on the I-270 biotech corridor, north of the NIH campus. The NCI building is well under construction in the complex which consists of biotech firms, the Shady Grove Adventist Hospital, the University of Maryland complex, the Johns Hopkins University new extension, a possible University of Maryland medical school, and other private-sector facilities.

NCI’s Dr. James Doroshov’s presentation about the **NExT program** at the June National Cancer Advisory Board (NCAB) meeting fueled some simmering embers. **NExT** incorporated Rapid Access to Interventional Development (RAID), the Chemical Biology Consortium (CBC), and the Functional Biology Consortium (FBC), to support the academic community and the private sector in drug discovery and development. It is now considered “a very successful and well structured program.” Dr. Doroshov noted that when he came to NCI six years ago, it took him two years to untangle a very complicated process and put the discovery and development of agents into one pipeline. The extramural community’s input helped him greatly; they pointed out the need for “more access to various kinds of chemistry resources, not just medicinal chemistry.” He succeeded in creating the resources for the development of small molecules and biologics to flow through early phase clinical trials. Academic investigators can now work with pharma and biotech companies because last year, the CBC helped jumpstart this new approach by providing resources like high-throughput screening to academic investigators, and found a way to share intellectual property rights. One can **apply four times a year** for these **resources**, similar to the RAID program, by going to the NCI website. **The five-page application** is reviewed online by either a discovery or development special-emphasis panel consisting equally of academics and pharma. At the end of the presentation, **NCAB members spoke up**. **Dr. Bruce Chabner**, formerly with NCI, said “this is a wonderful evolution of what was a very limited RAID program. [NExT ] brings in compounds from every stage of development and discovery which is terrific....” **Dr. Niederhuber** said he hopes the NCAB “will protect this program.” He fears that it is “envied” because of the new [Continuing Umbrella of Research Experiences] **CURE program**, dealing with diversity training, run by the NIH Director. “You need to be aware of the politics of CURE that may impact this program.” Other members were adamant that NCAB keep track of this program so it does not get swallowed up. **Dr. Carolyn Runowicz**, chairman of the NCAB, wants the minutes to reflect that “we strongly support this [program] and [want the] budget ... for its support.”

*continued on page 17*

## Brief News From Washington

continued from page 16

➤ **A New Drug Application for Eribulin, the halichondrin B analog**, has been submitted to Food and Drug Administration. Its long journey began when **Halichondrin B was isolated from the marine sponge *Halichondria okadai***, by Dr. George Pettit's group at Arizona State University, Tempe, Arizona, in the 1980s. It was introduced in March 1992 by NCI's Dr. Michael Boyd to the NCI Decision Network Committee as a candidate for Stage A preclinical development. Dr. Boyd considered it "an exceedingly potent, naturally occurring tubulin-interactive antimitotic agent...." Supply became a problem. In 1998 it was synthesized by Dr. Yoshito Kishi at Harvard University, Boston, Massachusetts. By 1998 a simpler method for synthesis was carried out at Eisai Research Institute, and the **analog Eribulin** was launched.

➤ **SBIR Phase II Bridge Awards to Accelerate the Development of Cancer Therapeutics**, .... approved by the NCAB in June will be a reissued as a Request For Application (RFA), award date 4/2011. One expectation is that this initiative will foster new business relationships which, with an infusion of more financing, will help bring agents and technologies more quickly to the marketplace.

➤ The House Agriculture, Rural Development, FDA, and Related Agencies appropriations subcommittee, chaired by Congresswoman Rosa DeLauro (D-CT), approved a \$2.5 billion budget for FDA, an increase of \$55 million. Most all appropriations budgets are going nowhere.

➤ National Institutes of Health Director Dr. Francis Collins told his Advisory Committee to the Director (ACD) in June that the

**National Institute of Environmental Health Sciences (NIEHS)** "has been very much engaged from the beginning" of the **Gulf oil spill**. NIEHS and the National Science Foundation (NSF) have co-funded ocean centers which focus on ecological impact and have been "actively pulled into this effort." NIEHS also runs a training program for clean-up workers. In June some 22,000 workers had been trained in a four-hour course dealing with environmental risks, etc. NIEHS will also study the acute and chronic effects of the oil exposure. The NIH Genomics Center, Rockville, Maryland, has been studying the oil dispersants with high-throughput screening to determine what if any toxicities may be created by these compounds.

➤ At the ACD, Dr. Collins lamented the election loss of Senator Arlen Specter (D-PA) and the retirement of Representative David Obey (D-WI) because they were "not pushovers; they were dedicated ... to medical research." Representative Obey was "faced with enormous Solomonic decisions about where to put resources... at NIH."

➤ Dr. Collins predicts **success rates for NIH grants to fall below 20% in FY 2011 and 2012** .

➤ In August, FDA approved the Sanofi-Aventis "new one-vial formulation" of Taxotere A® (docetaxel) injection. It will be available in the fall.

➤ Interesting from United States Department of Agriculture: scientists say rancid butter can be recycled into diesel fuel! ■

## Tellers Committee Report: 2009 ASP Election

by Ms. Amy Keller

**T**he Teller's Committee reported that Dr. Barbara Timmermann was elected Vice President for 2010-2011. Dr. Nick Oberlies was elected as Executive Committee member from 2010-2013.

A total of 1,170 ballots were mailed in February, 2010, with

720 mailed in the United States, and 450 mailed internationally. Of this, 230 ballots were returned and counted. The vote response was 20% of the eligible voters of ASP. ■

## OpenNAPIS Project

by Dr. Gregg Dietzman

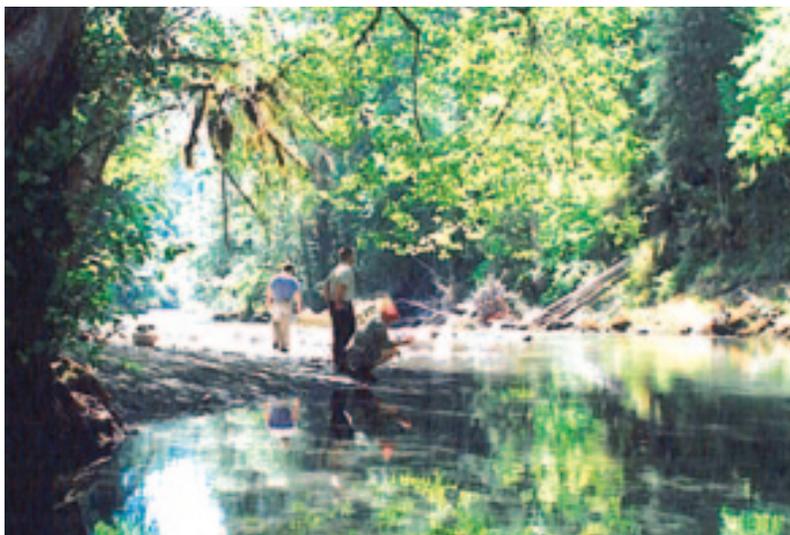
**W**hite Point Systems, Inc. announces The OpenNAPIS Project, a data standard for natural products discovery.

OpenNAPIS is a database design standard and open source software components that support the natural products drug discovery, dietary supplements and bioenergy research communities. The database design standard will be finalized in

Q3-2010 and software components will become available starting Q4-2011. Based in part on the commercially available NAPISR software technology, the OpenNAPIS project is supported by Small Business Innovation Research (SBIR) grant funds from the National Institute of General Medical Sciences (NIH/NIGMS).

Learn more and participate by taking the on-line survey at <http://opennapis.org>.

## From the Archives



Left to right: Drs. Nick Oberlies, Jim McAlpine, and John Beutler



Dr. Mansukh Wani with the permanent plaque in Washington, August 2002

by Ms. Anna Heran

Some very recent additions to the ASP archives came to the Lloyd Library from ASP member Mr. Tom McCloud and ASP President John Beutler regarding the commemorative plaque for *Taxus brevifolia*, which was sponsored by ASP. For those of you who have been in ASP for the last decade or so, this is not news, but for newer members, this will be a more interesting piece of information from ASP's history. As I am certain you all know, *Taxus* is the plant from which paclitaxol (Taxol™), the anti-cancer agent, was first derived.

While it is not quite 50 years since the original collection of the plant from the forests of Washington in 1962, it has been 10 years since the ASP ad hoc committee was formed to pay tribute to the work of the scientists, particularly ASP members Drs. Monroe Wall and Mansukh Wani, who discovered paclitaxol. The Lloyd received the cast aluminum proof plaque that ASP members voted to approve. The original bronze plaque is still in Washington state, at La Wis Wis campground in the Gifford Pinchot National Forest.

Along with the proof plaque came a binder and a large envelope filled with information documenting the ad hoc committee's attempts to locate the exact spot where the original *Taxus* collection occurred. There are numerous photographs of the committee members, including Mr. McCloud, and Drs. Beutler, Nick

Oberlies, and Jim McAlpine, on their journey into the forests of Washington, as well as images of the terrain and eventual location of *Taxus*. This is a wonderful addition to the ASP collection as it documents the work of pharmacognosists on a specific, and very successful, plant-based drug. What is especially nice for the Lloyd is that we are already in possession, thanks to Dr. Oberlies, of the Soxhlet Extractor that was used to process *Taxus*.

So what will be the future of this plaque? We are in the process of writing a grant to help fund a new display area at the Lloyd that would allow us to reassemble, in modified form, the Soxhlet, put the plaque on display, and tell the story of *Taxus* and paclitaxol and the work of Drs. Wall and Wani. In addition, the Lloyd has access to a Lloyd Cold Still that would go on display near the Soxhlet so that we can tell about the role of such equipment in the delivery of plant-based pharmaceuticals.

If you are interested in helping with this effort in any way, such as letters of support, personal or institutional donations to help this effort, or just want to know more about what we are doing at the Lloyd and how the materials from ASP contribute to a greater understanding of drug development as an educational tool, just call or send an e-mail or stop in any time you are in Cincinnati, Ohio. We would be happy to share more about the Lloyd with ASP members. ■

# 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).

## **FIP Pharmaceutical Sciences 2010 World Congress/ American Association of Pharmaceutical Scientists (AAPS) Annual Meeting and Exposition**

Morial Convention Center, New Orleans, Louisiana  
November 14-18, 2010  
[www.pswc2010.org](http://www.pswc2010.org)

## **Society for Economic Botany**

St. Louis, Missouri  
July 9-13, 2011  
[www.econbot.org](http://www.econbot.org)

## **The First International Conference on Natural Health**

Mostaganem University, Mostaganem, Algeria  
December 7-9, 2010  
[conahe.univ-mosta.dz](http://conahe.univ-mosta.dz)

## **52<sup>nd</sup> ASP Annual Meeting**

Paradise Point Resort, San Diego, California  
July 30-August 3, 2011  
[www.pharmacognosy.us](http://www.pharmacognosy.us)

## **The International Chemical Congress of Pacific Basin Societies (Pacifichem 2010)**

Honolulu, Hawai'i  
December 15-20, 2010  
[www.pacifichem.org](http://www.pacifichem.org)



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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. Cassady, 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  
Dr. Harry H.S. Fong, University of Illinois at Chicago · A. Douglas Kinghorn, Ohio State University  
Dr. James E. Robbers, Purdue University · Yuzuru Shimizu, University of Rhode Island  
Dr. David J. Slatkin, Chicago State University · Dr. E. John Staba, University of Minnesota  
Dr. Otto Sticher, Swiss Federal Institute of Technology  
Dr. Hildebert Wagner, University of Munich · Dr. Mansukh Wani, Research Triangle Institute

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

David J. Slatkin, Ph.D, Treasurer, The American Society of Pharmacognosy,  
3149 Dundee Road, #260, Northbrook, Illinois 60062. Email: [asphcog@aol.com](mailto:asphcog@aol.com)