

ASPB News



THE NEWSLETTER OF THE AMERICAN SOCIETY OF PLANT BIOLOGISTS

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July/August 2006

President's Letter

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ASPB in an Open Access World

In the first "letter" that I wrote upon becoming ASPB president, I closed by expressing the thought that Open Access (OA), the "free availability and unrestricted use" of published research, was among the most important issues on the horizon that the Society would have to address. As Don Ort wrote in an editorial upon becoming editor-in-chief of *Plant Physiology*, OA is "the preeminent force driving change in academic publishing." I'd like to pick up on the issue of OA in my letter today.

I think that most members of our Society would agree that the scientific endeavor is best served by having the results of scientific research made available to as wide an audience as possible as rapidly as possible. Thus, from these "first principles," one might conclude that OA would unquestionably be a good thing. However, as with many issues, there are considerations regarding the adoption of OA that complicate drawing a simple conclusion.

As we all know, ASPB serves the plant biology community in a variety of ways. At the core of our Society are the publication of our premier scientific journals, *Plant Physiology* and *The Plant Cell*, and the organization of the annual Plant Biology meeting. In addition, there are the activities of the ASPB committees that support and strengthen the plant biology community. There is, for instance, the Committee on Public Affairs, which provides a voice for the plant biology community in the halls of Congress and funding agencies and elsewhere where our interests as plant biologists are concerned. There are the Education Committee, which promotes education



Mike Thomashow

and outreach in plant biology, and the Minority Affairs Committee and the Women in Plant Biology Committee, which work to broaden the participation of individuals engaged in plant biology research and education. The Society also funds "good works" projects each year, the Education Foundation provides grants in support of public outreach efforts, and so on. Our Society does a lot for which we can be proud!

Fine, but what does this have to do with OA?

The simple answer: money.

Although much of what is accomplished by ASPB is a direct result of the volunteer efforts of our membership, there are also substantial financial costs, ranging from the editorial review and production expenses associated with publishing our scientific journals, to the operational expenses associated with conducting the work of our committees, to the awarding of travel grants that enable talented young scientists to present their research findings on an international stage at the annual Plant Biology meeting. At present, there are multiple revenue streams that enable ASPB to carry out these functions, such as publication page charges to authors, membership dues, and donations from individuals and companies. However, the largest single revenue stream for our Society is journal subscriptions, and of these, institutional subscriptions contribute the large majority of income. And herein lies a major challenge that OA presents to us, as well as similar scientific societies.



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The *ASPB News* is available online as well as in print. Members will be alerted by e-mail when a new issue is posted. The *ASPB News* welcomes member feedback. Contact the editor at nancyw@aspb.org.

ASPB Officers & Staff

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ASPB News: October 5, 2006

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It is difficult to predict all of the outcomes that would occur if OA were to come into effect. However, one outcome that is all but certain is that institutional subscriptions would become a thing of the past (why would university libraries and other institutions pay for content that their patrons have free access to?), resulting in a dramatic loss of revenue. This, of course, could have an enormous impact on our Society. Indeed, unless the lost revenue were to be made up for in some other way, ASPB would not even be able to fully afford carrying out its two core functions of publishing our scientific journals and holding the annual Plant Biology conference. In short, the fundamental nature of ASPB would change, with much of what our Society does to serve and enrich the plant biology community brought to an end.

Certainly, OA is a complex issue. And it is one that is being given considerable thought in many circles. Due to space limitations, I cannot go through the history of the OA movement in this letter, but I can tell you that there are strong proponents for OA. For instance, Senators Cornyn and Lieberman recently introduced a bill (S. 2695) into the U.S. Senate, the "Federal Research Public Access Act of 2006," which would make it law

that federal agencies with an annual research budget of over \$100 million "shall develop a Federal research public access policy that ... [provides for]... free online public access to final peer-reviewed manuscripts or published versions as soon as practicable, but no later than 6 months after publication in peer-reviewed journals." While it is difficult to predict how great an impact a six month window between publication and OA release would have on our institutional subscriptions, further shortening or removing the window would put in grave jeopardy ASPB's life as we know it.

Given the overall situation with OA, it is prudent for our Society to seriously consider how we might accommodate an OA world, whether it be brought upon us through external mandate (e.g., federal legislation) or because the Society chose to adopt OA voluntarily, concluding that it is the right thing to do. Indeed, this is being done. Fact finding, creative thinking, and an OA experiment are now in progress. About a year ago, ASPB leadership initiated a strategic planning process that includes as a fundamental goal the identification of new potential revenue streams and the development of potential alternative business models that would be compatible with an OA world. Concurrently,

as you know, *Plant Physiology* and *The Plant Cell* are experimenting with voluntary "author pays" OA. In addition, the editors-in-chief and members of the Publications Committee are discussing alternative OA models that could potentially satisfy the spirit of OA (freely available access to research results), but not require a dramatic change in ASPB's current business model. In short, OA is being given serious time and thought at ASPB.

We are a strong and vibrant Society. As I have stated before, for more than three-quarters of a century, ASPB has had a role in helping the plant biology community fulfill its aspirations, and there is no reason to think that things will be any different in the future. At times, however, there are complex issues that we must confront. OA is one of them. There is no question that our Society has the creative capacity to successfully address this issue. As ideas and action plans are developed and the course of the OA movement becomes more clear, you will be kept informed through articles in this newsletter. Stay tuned!

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ASPB 2006 Election Results

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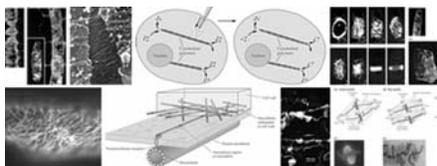
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Details to follow in the
September/October issue of
the *ASPB News*.

Biochemistry & Molecular Biology of Plants Online Image Library!



ASPB's Online Image Library contains all the images from the best-selling textbook/reference work *Biochemistry & Molecular Biology of Plants*, by Buchanan, Grissem, and Jones.

The Online Image Library features images listed by chapter plus the capability to search by individual images. And images are easily imported into PowerPoint for use in presentations.

Perpetual access to the site is available for \$49.95. ASPB members receive a **20% DISCOUNT**, making the purchase price for members \$39.95.

To purchase the images from *Biochemistry & Molecular Biology of Plants* using our secure web site, go to <http://www.aspb.org/publications/biotext/imagelibrary/>. Log in as a member for your member discount. Contact info@aspb.org for more information.



“The Biology of Transpiration: From Guard Cells to Globe”

Conference Organized by Assmann, Long, and Mott Scheduled for October

Imagine you are marooned on an island with the scientist that you most admire. Now imagine that without the hassles of being stuck on an island, you are whisked away to a beautiful mountain resort where you will dine, relax, and discuss research with the greatest minds in your field.

This is the inspiring context in which researchers in the field of transpiration will meet on October 10–14. The small and intimate meeting titled, “The Biology of Transpiration: From Guard Cells to Globe,” will be held at the picturesque Snowbird Mountain Resort in Utah—what one organizer calls one of the most beautiful places in the country.

The organizers of the meeting are, Sarah M. (Sally) Assmann, Waller Professor of Plant Biology at Penn State University; Steve Long, Robert Emerson Professor of Plant Science and Crop Science at the University of Illinois; and Keith Mott, professor of biology at Utah State University and editor-in-chief of *Plant, Cell & Environment*. They have carefully designed this meeting to bring together scientists who study transpiration from disparate vantage points.

Although “transpiration” might only evoke memories of decorating plant branches with plastic sandwich bags in plant physiology class for those not in the field, Mott pointed out that, along with photosynthesis, transpiration is one of the most significant processes in plants. “Transpiration itself is the single largest water flux from terrestrial ecosystems,” said Mott. “That is where most of the water from the ground goes and how it gets into the atmosphere, so it has enormous implications for global climate modeling and agriculture.”

Long, a global change biologist, emphasized that the topics covered in this meeting will specifically include the whole process of water movement from the soil through the roots and via the vasculature to the leaves, and then out to the atmosphere via the stomata.

Although stomata researchers have been meeting regularly at specialized conferences since 1977, the organizers agree that a meet-

ing that encompasses all areas of transpiration is long overdue.

“We now have insight into which genes control stomatal numbers and which genes control the ability of stomata to respond to the environment,” Long pointed out. “There have been major advances in determining the extent to which hydraulic restrictions both at the macro level of the xylem pipework and at the micro level of aquaporins in root and leaf cells may affect transpiration. In addition, noninvasive gas exchange and thermal imaging techniques now enable us to measure and analyze transpiration from the leaf to the landscape scale.”

Significant advances have been made at each level of transpiration biology, and the organizers hope this meeting will help catalyze collaborations between different labs that are needed to move into the next big phase of transpiration research.

“A next important phase will be integrating these individual discoveries to understand implications at the whole plant and system level, and the extent to which these discoveries can be applied in improving crop water use and in projecting global change impacts on the hydrologic cycle,” Long said.

Long, who edits the journal *Global Change Biology*, explained that many aspects of global change—such as increases in temperature, carbon dioxide, and tropospheric ozone—affect transpiration.

“Decreases in transpiration, particularly within continents, would lead to decreased rainfall and increased discharge into rivers, with implications for both crop yields and flooding,” Long warned.

The organizers hope that the dialogues at such a cross-disciplinary meeting will help researchers gain insight into possible adaptation strategies.

“Molecular biologists will be getting educated in whole plant global methods. Meanwhile, scientists working at the global level or ecophysiological level will be able to see how much model plants, such as *Arabidopsis*, have to offer in terms of being able to defini-

tively test hypotheses,” Assmann noted.

“Ecologists have for a long time realized the complexity of their systems. Signal transduction networks are equally as complicated and can really benefit from the systems biology approaches that have taken off in the last few years,” she said.

“A number of meetings in the past have focused on stomata at the single cell or single leaf level,” Assmann explained, “but we thought it was important to get people together working at all levels. More and more, we are becoming specialists rather than generalists; this is a way to bridge that gap.”

“The big difference between this meeting and meetings in the past on stomata is that this is a meeting on transpiration, which includes stomata but also a lot of other areas for which there are no specialized meetings,” Mott explained. “This is a chance for people who are all investigating the general topic of transpiration, but working on a variety of different areas and on many different scales, to get together and talk.”

If the scenic location itself isn’t enough to draw a crowd, the impressive list of speakers is. Assmann encourages and expects participation from both ecologically oriented scientists and those who are more laboratory oriented. “Our speaker list should attract all of them,” she said.

“Anyone who knows the area will realize that it is a very impressive line-up,” Mott added. You can see the list of confirmed speakers on the meeting flyer, posted on the ASPB website (links below). The speakers will be coming from several different countries, and the organizers anticipate that will encourage international attendance.

The meeting’s intimacy (registration is capped at 200) offers an opportunity for graduate students and postdoctoral researchers to interact with established professors in their field—often a challenging feat at larger meetings.

“Graduate students and postdocs are encouraged to attend the meeting because

continued on next page

Kelly Reeves, 2006 AAAS/ASPB Mass Media Fellow, Spending Summer at NPR

Kelly Reeves, University of Wyoming, has been awarded the 2006 AAAS/ASPB Mass Media Science & Engineering Fellowship. She is spending 10 weeks this summer at the Science Desk at National Public Radio (NPR).

Kelly is a graduate student in the Department of Botany at the University of Wyoming. She studies the environmental controls on the postglacial migration of beech near its northwestern range limits. She has a BA in earth and planetary sciences from Johns Hopkins University, where she assisted a project through the Baltimore Ecosystem Study documenting long-term vegetation change in an urban watershed. Although her current research interests are in plant paleoecology, working toward a master's degree in botany has exposed her to the broader field of plant biology. Coursework in science writing sparked her interest in science journalism, and she is thrilled to have the opportunity to put her skills to prac-



Kelly Reeves

and grateful to ASPB for sponsoring her.

The AAAS/ASPB Mass Media Fellowship is designed to enhance coverage of science-related issues in the media to improve public understanding and appreciation of science and technology. Fellows work for 10 weeks during the summer as reporters, researchers, and production assistants in

mass media organizations nationwide. They collaborate with media professionals at radio and television stations, newspapers, and magazines to make important science news clear and comprehensible to the public. This is ASPB's third year of participation in this 32-year-old program that has supported nearly 500 fellows.

We wish Kelly a fun and productive summer and look forward to reading a full report of her adventures at NPR in a Fall issue of the *ASPB News*. 🌱

Transpiration *continued from page 5*

they are the future of the field," Mott says.

Some funding from the National Science Foundation is available to help support graduate student attendance at the meeting. And "early birds" who register before July 15th will enjoy a significant discount.

Because of the remote location of Snowbird, all participants will stay at the resort, adding to the meetings interactive retreat atmosphere.

The Snowbird resort boasts plenty of recreational activities to keep participants occupied during meeting breaks. "You can walk out your door and be hiking," Assmann noted, "and we are planning some free time during daylight hours so people can go out and

take advantage of the natural environment."

In addition to maintaining hiking trails, the resort rents mountain bikes and offers tennis, swimming, aerobics, and yoga. If long days in the laboratory have left you out of shape, you can ride the aerial tram for breathtaking views without breaking a sweat.

For more information on the meeting or to register, please check out the following sites:

<http://www.aspb.org/meetings/transpiration06/>

<http://www.aspb.org/meetings/transpiration06/TranspirationFlyer.pdf> 🌱

Sarah Nell Davidson
Cornell University
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Future ASPB Annual Meeting Sites



2007: Chicago, Illinois

July 7-11

Hilton Chicago

ASPB will hold its 2007 annual meeting in conjunction with the Botanical Society of America (BSA), the American Bryological and Lichenological Society (ABLS), the American Fern Society (AFS), the American Society of Plant Taxonomists (ASPT), and the Phytochemical Society of North America (PSNA). Mark your calendars and look for more information soon.

Plant Biology 2008

Mérida, Mexico

June 27-July 2, 2008

Plant Biology 2009

Honolulu, Hawaii

July 18-22

For more information go to
<http://www.aspb.org/meetings/>.

Important Dates in 2006

September 29

Mid-Atlantic Section Crab Feast
ASPB headquarters
Rockville, Maryland

October 10-14

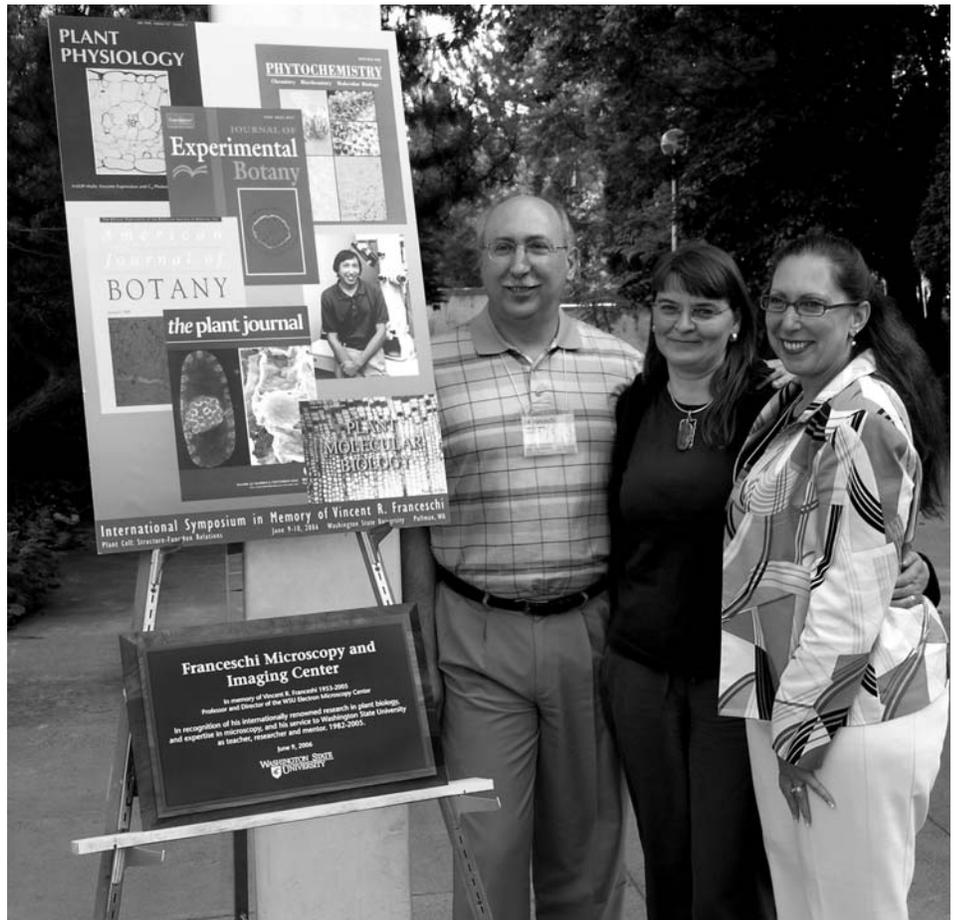
The Biology of Transpiration:
From Guard Cells to Globe
Snowbird Mountain Resort
Snowbird, Utah

International Symposium Held in Memory of Vincent Franceschi at Washington State University

On June 9–10 Washington State University (WSU) hosted an International Symposium in Memory of Vincent R. Franceschi, who died unexpectedly April 30, 2005 (see the story in the July/August 2005 issue of the *ASPB News*). At the time of his death, he was director of both the School of Biological Sciences and the Electron Microscopy and Imaging Center. For some months, sentiment had been growing that a symposium would be a suitable way to recognize Professor Franceschi's accomplishments as a scientist and his service to WSU, where he spent his entire professional career.

The symposium had two full days of sessions featuring speakers who were all Franceschi's colleagues, collaborators, mentors, or students. A ceremony to rename the Electron Microscopy and Imaging Center after Vince was held on Friday, June 9. The center, located in WSU's Abelson Hall, is internationally recognized for its teaching and research in modern methods of microscopy. The renaming acknowledges Vince's internationally recognized research in several areas of plant biology and his expertise in microscopy, as well as his service to Washington State University as teacher, researcher, and mentor.

Gerry Edwards
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Pictured from left are Vince's brother, Joseph Franceschi, of Sandy, Utah; Vince's fiancée, Dr. Mechthild Tegeder, of the School of Biological Sciences, Washington State University; and Vince's sister, Angela Franceschi Worden, of Ormond Beach, Florida.

To see more photos from the symposium go to <http://www.franceschi.wsu.edu>.

Gary Toenniessen Addresses Council of Science Editors

Biotechnology and Plant Breeding Are Key to Alleviating Hunger and Rural Poverty in Africa and Asia

"Working Toward a Sustainable, Equitable World" was the theme of the Council of Science Editors' annual meeting, held May 20–23 in Tampa, Florida. In his plenary address, Gary Toenniessen, director of food security for the Rockefeller Foundation, emphasized the role of plant breeding in solving problems of hunger and poverty. He stated that most poverty in Africa and Asia results from low-productivity farming in

these largely agrarian societies, resulting in a lack of income.

He first described how the Asian Green Revolution—the introduction of semi-dwarf, high-yielding varieties (HYV) of rice and wheat—increased both labor productivity and the demand for labor. The HYV require greater inputs (fertilizer and irrigation) than do traditional varieties to produce the higher yields; they are true-breeding (so farmers

could save seed); and they are early-maturing, often ready for harvest in 100 days rather than the 160–180 days required by traditional varieties. This means that farmers can plant two or three crops per year instead of just one, which enables the labor force to work throughout the year. The use of fertilizer and irrigation also allows one or a few varieties to be used in many different locations. These

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ASPB Diversity Bank: A Powerful Tool for the Recruitment and Retention of Minority Plant Biologists

Like many other scientific organizations—and, indeed, organizations in general—ASPB has struggled to have its membership demographics reflect the broad diversity of the U.S. population at large. One need look no farther than ASPB's annual meeting to recognize the near absence of certain racial and ethnic groups among our attendees and presenters.

Beyond ASPB, it also has been difficult for many well-funded and resourceful plant biology programs at our best institutions to identify and attract members of underrepresented minorities at all levels. The reasons most often given for the lack of participation among underrepresented minorities are that these people are not present at the institutions from which stellar plant biology programs typically recruit students and faculty and that the few who are present tend to be uninterested in plant biology.

Like many things, the true story is more complicated. There have been significant strides in the development of the training pool at the lower levels (i.e., K–12 and undergraduate) through programs that expose students to basic science research. Increasingly, a significant number of these students come from groups that traditionally have not been exposed to science and research at the levels usually required to establish robust careers in the related fields. Admittedly, these efforts have not had a marked impact on plant-related fields because many of these students (and their families) tend to equate “science” careers with professional opportunities in medicine. This problem is not limited to underrepresented minorities—young people of many ethnicities seem to favor medical training over research—and addressing it requires the plant biology community to broaden its message to potential trainees from all ethnic groups. We need to let people know that there is a wide variety of professional opportunities available to plant biologists.

Even when underrepresented minorities choose to enter the initial phases of a

research career, the disparity becomes more acute as the pool of individuals shrinks at each step up the academic training and career ladder. Again, the reasons for this are complex. The lack of a “critical mass” among underrepresented minority groups poses significant challenges in convincing potential faculty and student trainees from underrepresented groups that such environs are hospitable and encouraging to their career development. Additionally, isolation through paucity of numbers amplifies the regular day-to-day struggles faced by many students and faculty. It then comes as no surprise that most students from underrepresented groups begin their education and training at majority minority institutions or that the faculties of such institutions comprise individuals from ethnic and racial groups that, for the most part, are absent from the major research institutions. Ironically, the value of building quality relationships among majority minority institutions and those that train scientists (including plant biologists) to the highest levels appears to have been forgotten by some who otherwise seek to enhance diversity among the trainees and faculty in major research universities.

A shrunken pool, however, does not mean an empty pool. If we continue to look only in those institutions from which we have typically recruited students into our programs in the past, we will preserve the status quo of underrepresentation. The main reason for this is that the talent pool at traditional research universities is one in which we are already competing vigorously with other disciplines (or, perhaps, “areas of endeavor” if you're speaking above of research in general)—and with modest success. A significant talent pool exists at the more than 90 percent of U.S. institutions that are not research focused, and—when it comes to the underrepresented minority talent pool—especially at the very large number of minority serving institutions (MSIs) that have minority student (and oftentimes faculty) populations that outnumber the majority. But the faculty

at these institutions typically have weak research support from their administrations, despite the fact that their student populations frequently are receptive to positive research experiences—just the kind of experience that in many instances can transform into a career interest.

ASPB, through its investment in resources, the strong support of its leadership, and a vigorous Minority Affairs Committee that works closely with other Society committees (e.g., the Membership Committee and the Education Committee), has developed a series of initiatives aimed at improving access to the talent pool and at matching resources (i.e., graduate programs, training opportunities, etc.) with individuals at all training levels. The ultimate goal is to broaden the appeal and accessibility of plant-related research and training among all individuals, but particularly among scholars at MSIs who might not otherwise have the opportunity to connect with the broader plant science community.

One initiative is to offer travel awards for students and faculty who would not normally attend the ASPB meeting but who have presented their plant biology research at the meetings of organizations like the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) and the Annual Biomedical Research Conference for Minority Students (ABRCMS). Both of these organizations serve to bring individuals from underrepresented minorities in the sciences together to promote science-related careers. Additionally, ASPB–MAC has designed a number of other outreach activities aimed at faculty and students at institutions having significant minority representation but sparse research-focused resources. These initiatives also seek to engage ASPB members at majority institutions and provide them with options to satisfy criterion 2, for those seeking federal research funds, and with avenues for recruitment of minority students and faculty.

The centerpiece of the outreach initiatives is the development of the ASPB Diversity

Bank. It is a web-based resource to facilitate the connections needed to expose students to plant research and to foster networking among faculty at MSIs and those at other institutions. Modeled after the ASPB Job Bank and created with the assistance of ASPB's manager of marketing and web services, Wendy Sahli, the Diversity Bank provides updated and continuous access to information about potential opportunities for engagement, interaction, and collaboration.

Diversity Bank Features

Summer Research Opportunities for Faculty and Undergraduates. Any institution or faculty member who has a summer research program or who is interested in mentoring faculty or students during the summer may list their program on the site. It is not necessary to have a comprehensive program; an individual faculty member can make an indi-

vidual contribution to ASPB's efforts. The Diversity Bank will list these summer research opportunities for either undergraduates or faculty from MSIs. Similarly, faculty and students at MSIs can register at the website, indicating their specific interests. All parties can register additionally for e-mail alerts so that new information added to the database will appear in their e-mail inboxes according to their preferences.

Research Seminars in Plant Biology. To foster networking among MSI faculty and their colleagues at other institutions—and to bring plant research into institutions at which it may not formally exist—ASPB asks its members to volunteer through the Diversity Bank to give seminars at MSIs. Minority serving institutions also can register as potential hosts for visiting seminar speakers. Such visits will not only capture the attention of many potential graduate students, but also

will lead to connections and collaborations and in some cases, we hope, to initiating modest plant research programs at MSIs.

What's Next? The success of the Diversity Bank begins with—and will continue to depend on—the active participation of ASPB's members. Please register at the website and volunteer to host students or give a seminar. As the Diversity Bank becomes populated with plant research opportunities, the Minority Affairs Committee will be working hard with ASPB staff to bring this new resource to the attention of our colleagues at MSIs.

To access the ASPB Diversity Bank, log in as a member of ASPB and click on the Diversity Bank button or go to <http://www.aspb.org/diversitybank/>.

Elli Wurtzel and Anthony DePass
Minority Affairs Committee

Toenniessen
continued from page 7

and other factors combined to benefit those farmers (both large and small), consumers (who then pay lower prices), landless laborers, input suppliers, and output purchasers, resulting in significant benefits to the overall economy.

These benefits, however, have bypassed many farmers who did not adopt the HYV and who remain in poverty today. These are farmers who lack the means of irrigating their lands and are dependent on rainfall or limited supplemental irrigation and include some of the agrarian population in Asia and most of Africa. These farmers continue to plant traditional varieties because they are drought tolerant, whereas the HYV are not. A rainfall-dependent farmer who plants HYV risks complete crop loss when the rains don't come.

Toenniessen described how advances in plant breeding and biotechnology are being used to develop new crop varieties that are drought tolerate and that yield as well as the

HYV when the rains are good. He also explained how biotechnology is being applied to difficult traits such as weed control. For example, *Striga* is a parasitic weed that attaches to maize roots and results in severe yield reduction throughout Africa. A naturally occurring maize mutant resistant to the herbicide imidazoline has been developed into a new variety (StrigAway®) that can restore maize production under *Striga*-infested conditions to normal levels.

Some of the big challenges in Africa, which The Rockefeller Foundation and others are working to address, are in building the capacity for biotechnology and plant breeding and in building the input and output markets. When the Green Revolution began, Asia already had in place a vast system of irrigation and a foundation in biotechnology, both of which are lacking throughout much of Africa today. Africa is largely dependent on rainfall, and a new Green Revolution is needed that follows a "niche-breeding" approach, aimed at the development of many new crop varieties that are fine-tuned to local

environments. This approach focuses on limiting yield losses (under extreme environmental conditions) rather than "increasing yields." Building the capacity for biotechnology includes training plant biologists and breeders, and Toenniessen estimated that Africa needs at least 1,000 Ph.D. plant breeders working throughout the continent.

Toenniessen described his image of success in Kenya: a farmer with just one hectare, who is able to acquire and use new fertilizers and varieties to produce maize on one-half of her land, some of which she is able to sell at a good price and some of which goes to feed livestock that she keeps on another quarter of her land, and in the remaining quarter she is able to grow vegetables for her family and for market. Many steps will go into making this a reality, but the first step is to boost the productivity of maize for this farmer—in her local non irrigated environment. For further reading, see Toenniessen et al. (2003), *Curr. Opin. Plant Biol.* 6, 191–198.

Nan Eckardt
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Ogren Awarded Honorary Doctor of Science Degree

On May 12, 2006, the University of Wisconsin–Madison awarded ASPB member William Ogren an honorary doctor of science degree.

The aggregate of William Ogren’s work is an astonishing string of breakthrough discoveries that rewrote textbooks, including fundamental discoveries in photosynthesis. Contributions from his lab include how oxygen inhibits photosynthesis; high-precision measurements of this process that are now used in global models predicting how fast carbon dioxide accumulates in the atmosphere; popularization of the use of *Arabidopsis*, now the model plant species; and the first example in plants of one gene that makes two variations of a protein by the process called alternative splicing. The influences of Dr. Ogren have been as disparate and multidisciplinary as engendering a major genome project and underpinning models of greenhouse gas effects. His first seminal discovery laid the foundation for our current understanding of photorespiration, and his genetic analyses extended our understanding of its biochemical pathways.



Ogren’s entire research career was spent as a scientist with the USDA Agricultural Research Service at Urbana, Illinois. He is now retired and lives on Hilton Head Island, South Carolina.

William Ogren (left) receives an honorary doctor of science degree from University of Wisconsin–Madison chancellor John D. Wiley. Photo courtesy of Empire Photo.



Don Ort

NPR Interviews Don Ort on CO₂ Effects on Crop Yields

ASPB member Donald Ort, professor of plant biology at the University of Illinois, USDA–ARS, and editor-in-chief of *Plant Physiology*, was interviewed live on National Public Radio’s “Talk of the Nation: Science Friday” program June 30. The subject discussed was lower-than-expected crop yield stimulation with rising CO₂ concentrations. The program addressed findings from research conducted by Ort, Stephen Long, Elizabeth Ainsworth, Andrew Leakey, and Josef Nösberger as published in the June 30 edition of *Science* (<http://www.sciencemag.org/>

[cgi/content/full/312/5782/1918](http://www.sciencemag.org/cgi/content/full/312/5782/1918) along with supporting online material at <http://www.sciencemag.org/cgi/data/312/5782/1918/DC1/1>). You can listen to the NPR interview by going to <http://www.npr.org/templates/story/story.php?storyId=5525593>.

On a related subject, Steve Long is organizing presentations on “Plants Mitigating Global Change” that will be presented at the ASPB annual meeting August 5 in Boston (<http://www.aspb.org/meetings/pb-2006/>).

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The Bioethics Imperative XXIV

Faculty Effort Certifications in a Sea of Change: Unsettled Issues in Current Compliance Practices

“Mokita”: The truth we all know and agree not to talk about. *Papua New Guinea*

In a prior column, we reviewed Effort Certifications (ECs) or Effort Reports (<http://www.aspb.org/newsletter/novdec05/11mandoli22.cfm>) and examined basic aspects of the Office of Management and Budget Circular A-21 (Cost Principles for Educational Institutions: http://www.whitehouse.gov/omb/circulars/a021/a21_2004.html) that outline ECs (<http://www.aspb.org/newsletter/janfeb06/10mandoli23.cfm>). We also have explored the potential ramifications of breaches of EC rules (<http://www.aspb.org/newsletter/janfeb06/10mandoli23.cfm>) as well as how allegations of wrongdoing would be routed through the Office of the Inspector General (<http://www.aspb.org/newsletter/janfeb05/10mandoli20.cfm> and <http://www.aspb.org/newsletter/julaug05/08mandoli21.cfm>). Now, let's examine some of the issues and vagaries that face us all as Circular A-21 has experienced increased enforcement by the U.S. government.

We got into this snafu for two reasons: the lenient way that A-21 was written and the fact institutions may independently decide how they will abide by A-21. Recognizing that creativity does not work on a time clock, EC “reporting rules...have been the product of compromise designed to free faculty as much as possible from the trouble and indignity of periodic timekeeping (e.g. punching timecards), while at the same time providing the federal government with some assurance that the faculty effort it is paying grantee institutions is in fact delivered” (1). Some say that this very leniency, deliberately incorporated with the best of intentions, is now coming back to bite us.

Second, each university is responsible for its interpretation of and compliance with A-21. This means that there is not one simple or “right way” to interpret and comply with A-21. Faculty need to communicate proactively with their institution regarding specific situ-

ations and use the compliance vehicles that their own institution has established.

Is the government serious about this? You bet. Recent federal settlements include Northwestern University in 2003 (\$5.5 million + legal fees + \$970,500 to whistleblower), Johns Hopkins University in 2004 (\$2.6 million + legal fees + \$440,000 to whistleblower), and Harvard University in 2004 (\$2.4 million + \$850,000 paid back in 2002).

The probability of finding any particular type of infraction at a large institution is higher than finding one in a smaller institution simply because there are more people, more grants, and therefore more opportunities to err. Sensing their own vulnerability and gauging how much they have to lose, universities and their legal counsel have become proactive in protecting the university from the increased emphasis on A-21. Several institutions now

- have posted online EC policies/rules and mandatory training (for example, <http://www.research.northwestern.edu/research/policies/effortReporting.html>; http://research.unc.edu/osr/effort_reporting.php#overview; <http://www.washington.edu/research/osp/gim/gim35.html>)
- have built an online FAQ for ECs (<http://www.washington.edu/research/maa/fec/#FAQs>).

There are efforts under way to address EC compliance and other sticky issues. For example, the Federal Demonstration Partnership (<http://thefdp.org/>) “is a cooperative initiative among 10 federal agencies and 98 institutional recipients of federal funds [whose] purpose is to reduce the administrative burdens associated with research grants and contracts.”

However, my strong feeling is that such policy and training will not be as well received if it is solely a top-down effort. An engaged faculty is an empowered and more compliant faculty. Faculty-shared governance is one important mechanism for ensuring a

faculty voice. For example, the University of Washington (UW) system of Shared Governance was established in 1897 and follows a Faculty Code adopted in 1956 (see Volume 2 at <http://www.washington.edu/faculty/facsenate/handbook/handbook.html>). Established in response to McCarthyian intrusions by the Washington State legislature, Shared Governance includes faculty councils designed both to provide for faculty stewardship of the university and to establish protections for faculty. Charged with dealing with this particular issue, the UW Faculty Council on Research concluded that “the accuracy of faculty effort reporting and the adequacy of its documentation represent a significant continuing compliance problem for research universities” (2).

At the core of compliance is each individual faculty member's obligation. In the next issue I will describe and discuss my eight “Catch 22s” of EC compliance. 

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I thank Brent Stewart (chair of the Faculty Council on Research, University of Washington) for permission to quote from the FCR report on FECs, Donna Kerr (secretary of the faculty, University of Washington) for information about Shared Governance, and two administrators at UW who provided detailed input and depth to the issues and who wish to remain anonymous.

References

1. FCR Report to the Faculty Senate regarding Faculty Effort Certification, January 19, 2006.
2. Ibid.



Thrown into Cold Water—Twice

I first came to the United States in August 1986, for a Ph.D. program at the University of Wisconsin–Madison. My initial culture shock occurred when I told the apartment manager that the undergrads in my neighboring rooms were too noisy and I couldn't study in my room. He told me no one studied in their room and that I should study in the library. However, he had obviously said something to my neighbors. One night I had people standing beneath my window shouting my name, pronounced in the incorrect way that most Americans do when they try it for the first time, and something else, which I only understood enough of to know they were not friendly. When matters went from bad to worse, someone helped me report the incident to the Foreign Student Office. By then the original manager had been fired for something else he had done. One of the counselors from the Foreign Student Office forced the new manager to watch a film titled *Thrown into Cold Water* with us. The film talked about various bad experiences foreign students had when they first came to the United States, and it likened these experiences to being “thrown into cold water.” I remember feeling colder when I walked out of the room that evening. Not only because the manager had fallen asleep in the first five minutes, but also because I wondered: How could you make these people understand just by telling them how bad we felt?

Then came October and the weather turned cold, too (for me, at least). I remember asking the PI of the lab where I was rotating, “When is this miserable winter weather going to end?” I still remember the look of confusion on his face. After a few seconds, he managed to say nicely, “Probably next March.” Unfortunately, (for me, at least) the answer was the end of May, as my five years in Wisconsin taught me.

Two incidents have had the most profound impact on my attitudes toward survival in a foreign culture. I volunteered for

some work in the Foreign Student Office when I felt I had my head above water. In one of the training sessions, a counselor from India told us that whenever an American would say to her, “You have a funny accent,” she would always say, “So do you!” The other incident is that I took a class co-taught by my adviser and another professor. For the final exam, they gave out 10 broad questions one week before the exam and at the time of the exam, they told us which five of the questions to answer. The Saturday afternoon before the exam, my adviser saw me studying in the lab. He asked why I had to spend so much time preparing for this exam. I told him that because English is not my primary language, I couldn't just prepare an outline of the answers and then try to construct what I wanted to say during the exam. I had to write down the exact words of the answers and memorize them. He was surprised and said that he didn't know that this exam style would cause an extra burden for foreign students. The next year, another foreign student in the lab next door took the same class. She didn't finish what she wanted to write in the time allotted for the exam. She asked the other professor for some extra time because English was not her primary language. The other professor simply told her that if she really thought language was the problem, then she should not have taken the class because the exam style was announced at the beginning of the semester.

I can keep on recounting all the cold water I was dunked in. For example, I once had a classmate ask me if I knew what “chocolate” was after I told her that I had never done a crossword puzzle; I did my laundry using fabric softener, not detergent, my first few months in the States; and I was stopped by someone on the street asking me if I was from Korea when there was a hostage situation in North Korea. But to continue would be like removing the data not supporting your conclusion. In the years I was in the United States, I made some of the best

friends of my life. They taught me everything from how to eat a burrito to how to drive, and introduced me to (and got me hooked on) mystery novels, gardening, and, good grief, the weak American coffee.

At the end of my seven-and-a-half years of study in the U.S., I applied for and was offered a job at the Institute of Molecular Biology (IMB), Academia Sinica, in Taipei. The offer seemed too good to turn down. Little did I know what kind of cold water awaited me there. The idea of mentoring and nurturing young scientists has not been established in our culture. For example, beginning faculty members usually have the heaviest teaching load during their first few years. The load is reduced as they become more senior and can transfer the load to other, younger faculty members (the exact saying is “the old daughter-in-law has finally been promoted to the mother-in-law”). Although I didn't have to teach, I was given half a bench and no office when I first arrived because I was entangled in some complicated political fights and personnel transition. I tried to fight for an office and was immediately threatened with a negative vote on my future promotion. Then my brother was involved in a car accident. Instead of paying lawyers and insurance companies like one would do in the States, we had gangsters knocking on our door every night and we ended up paying the gangsters. At the beginning, I argued that things should be settled legally and offered to pay for the lawyers. My brother turned his eyes and said coldly, “You have become a foreigner!”

Because this is the “Women in Plant Biology” column, I should write something about being a female scientist in our culture. In Taiwan, the medical schools start at the undergraduate level, and in my time, medical schools were grouped with the biology departments under one category in our college entrance exam. Therefore, the biology departments in a lot of good universities

have a high proportion of female students because the male students, owing to career concerns, would retake the exam year after year until they finally got into medical school. The IMB is a relatively young institute in Taiwan, and all the directors and current faculty are trained in the United States. Therefore, with a larger pool of women in college and an unbiased hiring practice, we have exactly 50 percent female faculty members in IMB. This is something unique in the world, and we are proud of that.

Outside the enclave of IMB, however, the traditional Chinese culture still dominates. When I told my Chinese friends that I once worked for a famous female scientist (Dr. Joanne Chory) as a postdoc, almost all of them asked, "Is she married?" None of my

American friends ever asked that. I have also been offered well-intentioned advice to hide the plaques displaying my awards so that I don't endanger my marriage. Even within IMB, all the married female faculty have spouses who are faculty in engineering or biology departments in academia, and almost all of us rely on nannies or housekeepers to let the candle last longer when it's being burned at both ends.

My experiences of the "cold waters" have helped me understand myself better and appreciate the diversity of people around me.

Maybe that is why I have been blessed with very good luck in finding good students (and good housekeepers!). For example, four postdocs have come through my lab. I have had a great time working with every one of

them. It's amusing for me to think about how different they are in personality and in their approaches to science. We always have so much fun every time we have a reunion—because of their differences. My experiences have also made me stronger when dealing with the difficulties encountered by women in my culture. Of course, they have also made me appreciate how fortunate I am to be in a work environment where I can get intellectual support not only for research, but also for survival skills as a woman scientist. 🌱

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PLANT BIOLOGY
UNIVERSITY OF CALIFORNIA RIVERSIDE

24th SYMPOSIUM IN PLANT BIOLOGY

Gene Silencing: The Biology of Small RNAs and the Epigenome

January 18-20, 2007 ♦ Riverside Convention Center ♦ Riverside, California

Organizers: Jian-Kang Zhu, Shou-wei Ding, Xuemei Chen
UNIVERSITY OF CALIFORNIA, RIVERSIDE

SESSIONS:
 Small RNA Biogenesis and Action Mechanisms
 Small RNA Function and Development
 Small RNA Function in Stress and Other Physiological Processes
 Transcriptional Silencing and DNA Methylation
 Transcriptional Silencing and Histone Modifications

REGISTRATION & INFORMATION:
www.extension.ucr.edu/conferencing/plantbiology2007/

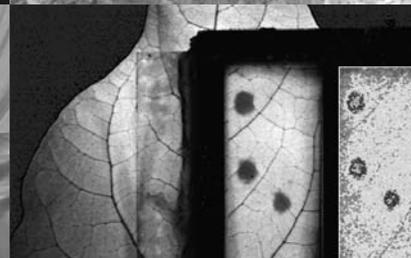
The Biology of Transpiration: From Guard Cells to Globe

Snowbird Mountain Resort, UT

October 10-14, 2006

Organizers: Sally Assmann, Steve Long, and Keith Mott

<http://www.aspb.org/meetings/transpiration06>



Plant Physiology Special Issue
Biology of Transpiration
January 2007
<http://www.aspb.org/BiologyofTranspiration>

There have been a number of successful meetings on stomata in past years, starting with a SEB symposium in Lancaster in 1979, followed by meetings in Hawaii (1983), a FESPP workshop in East Berlin (1989), a SEB sponsored symposium in Canterbury in 1997, and a meeting sponsored by *New Phytologist* in Birmingham in 2001. This meeting will continue and expand that tradition, using the topic of transpiration as a focal point. In the past five years, there have been rapid advances at several organizational levels in the understanding and measurement of the biology of transpiration. These areas have developed separately, yet each has major implications for the others. To catalyze needed interactions among scientists working in diverse areas, all aspects of water transport will be covered at levels spanning from gene expression to global modeling, including:

- root water uptake
- regulation of water flow by aquaporins
- long distance transport and xylem hydraulics
- guard cell physiology and development
- mechanisms controlling transpiration from the leaf to the globe.

A goal of this meeting is to bring together outstanding scientists from around the globe who might not otherwise meet. To provide the participants with an intimate retreat-like atmosphere for debate and interaction, the meeting will be limited to approximately 200 participants. The meeting will include invited talks, talks chosen from abstracts, and poster discussions; each day's program will cover topics at several organizational levels.

Confirmed Speakers and Tentative Titles

Dominique Bergmann (Stanford University, USA) A genomics approach to understanding guard cell development

Joseph Berry (Carnegie Institution, USA) The stable isotopic signature of stomata in the atmosphere

Michael Blatt (University of Glasgow, UK) Vesicle trafficking and ion-channel regulation in guard cells

Susanne von Caemmerer (ANU, Australia) Stomatal behavior in photosynthetic mutants

William Davies (Lancaster University, UK) Root signaling of water status

Graham Farquhar (ANU, Australia) Revisiting optimization theory and transpiration efficiency

Carl Bernacchi (ISWS/University of Illinois, USA) Stomata, evapotranspiration and atmospheric change

David Fowler (Centre for Ecology and Hydrology, UK) Rising tropospheric ozone: the role of stomata in mediating damage

Alistair Hetherington (Lancaster University, UK) Signaling networks in guard cell responses to ABA and CO₂

Rainer Hedrich (University of Würzburg Germany) Guard-cell electrophysiology in the intact leaf

N. Michele Holbrook (Harvard University, USA) The interplay between the xylem and transpiration

Hamlynn Jones (University of Dundee, UK) Remote sensing of stomatal behavior from leaf to landscape

Christophe Maurel (INRA/CNRS, France) Aquaporins and water transport through roots

Jennifer McElwain (The Field Museum, USA) Functional adaptation of transpiration to past climates and atmospheres

Russell Monson (University of Colorado, USA) Landscape-atmosphere exchanges: the role of stomata

Fred Sack (Ohio State University, USA) Division regulation in Arabidopsis stomatal development

Julian Schroeder (UCSD, USA) The genomics and cell biology of guard cells

Ken-ichiro Shimazaki (Kyushu University, Japan) Blue light regulation of stomatal function

John Sperry (University of Utah, USA) Coordination of stomatal and xylem function

E. Ian Woodward (Sheffield University, UK) Vegetation dynamics and the role of stomata

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ASPB members share a common goal of promoting the growth, development, and outreach of plant biology as a pure and applied science. This column features some of the dedicated and innovative members of ASPB who believe that membership in our Society is crucial to the future of plant biology. If you are interested in contributing to this feature, please contact ASPB Membership at info@aspb.org.



Name: Sharlene Weatherwax

Title: Program Manager

Place of Work: Department of Energy (DOE)

Research Area: Plant Signal Transduction

Member since: 1997

1. Why has being a member of ASPB been important?

The most important thing about being an ASPB member is the sense of community. I joined as a postdoc when I switched scientific fields, and I didn't know anyone in the community. Now that I'm no longer doing hands-on research, I maintain my connection with ASPB because I want to keep up with the science—the ideas and the people.

2. Was someone instrumental in getting you to join ASPB?

Elaine Tobin and Bernie Phinney told me that all the cool people were ASPB members. That's all the incentive I needed.

3. What would you tell colleagues to encourage them to join?

I would tell them that the plant biology community is a very dynamic and collaborative group, and that ASPB contributes to this through fostering communication and dialogue within the group. There are lots of other professional societies, but their focus is much broader.

4. Have you enhanced your career using ASPB job postings or through networking at an ASPB function?

Although I didn't get my current job through an ASPB job posting, my career definitely benefits through meeting people and hearing about their research at ASPB functions. In addition to attendance at the annual meetings, another example of the informal networking that I enjoy is the yearly Mid-Atlantic Section Crab Feast!

5. Have you had any success at finding candidates as a result of a job posting at the meeting or on our online Job Bank?

No, but I often suggest that early-career scientists regularly peruse the online job bank for updated listings. If I were looking to hire someone, I would definitely make sure the position was listed on the ASPB online Job Bank.

6. Do you read print journals? If so, where do you usually read them?

Yes, I read print journals—it's like a present coming in the mail! I usually bring them with me when I'm traveling (subway, airplane).

7. What do you think is the next "big thing" in plant biology?

I hope the next big thing in plant biology is the use of plants as renewable resources for bioenergy. Certainly, DOE has a mission priority to reduce our dependence on foreign oil and replace a significant fraction of transportation fuels with biofuels.

8. What person, living or deceased, do you most admire?

I most admire Marie Curie, for her dedication to science and society. I can't imagine being a scientist today without the groundbreaking work of such a determined woman.

9. What are you reading these days?

Does e-mail count? I'm currently reading *The World Is Flat* by Thomas Friedman and *On Food and Cooking* by Harold McGee. After that I need to catch up on the most recent Harry Potter book.

10. What are your hobbies?

I enjoy good food and wine, and I do enough remodeling of our old home that it's practically a hobby! We also enjoy gardening—last year we had a field of okra growing in our front yard!

11. What is your most treasured possession?

Friends and family—and, of course, my dog.

12. What do you still have left to learn?

Lots of things! The field of plant biology, and biology in general, is moving so fast, it's a challenge to retain and synthesize the new information and new opportunities! I'm sure there are also lots of new recipes out there I need to try.

LUDWIG JOST BOOK FOR SALE

David Webber has a leather-bound German-language edition of *pflanzenphysiologie*, dated 1906, hand written and signed by Ludwig Jost. It is in excellent condition.

Anyone interested should contact Dr. Webber directly at davidwebberr@hotmail.com.



ASPB members share a common goal of promoting the growth, development, and outreach of plant biology as a pure and applied science. This column features some of the dedicated and innovative members of ASPB who believe that membership in our Society is crucial to the future of plant biology. If you are interested in contributing to this feature, please contact ASPB Membership at info@aspb.org.



Name: Rodrigo A. Gutiérrez

Title: Postdoctoral Fellow/Assistant Professor

Place of Work or School: New York University/P. Universidad Católica de Chile

Research Area: Systems Biology

Member since: 2005

1. Why has being a member of ASPB been important?

I think ASPB is a cornerstone of plant biology in the world. ASPB's role in connecting scientists worldwide and in providing a forum for exchange of the scientific knowledge is central in my professional life. The member directory allows me to identify fellow scientists with similar interests. The international conference provides the opportunity to communicate my findings effectively and learn the latest advances in plant biology.

ASPB is also essential in my day-to-day education. ASPB gives access to some of the highest quality journals in plant research and textbooks with broad knowledge about plant biology. I enjoy and benefit from being part of this community and throughout my career I hope to be able to contribute to the Society at least a fraction of what I gain by being a member.

2. Was someone instrumental in getting you to join ASPB?

Although I have been planning to join for several years, I have to recognize

that Brian Hyps [ASPB director of public affairs] during last year's meeting of the American Society for Cell Biology gave me the final push to actually press the button on the web. Thanks, Brian!

3. What would you tell colleagues to encourage them to join?

I would recommend that every plant biologist be a member. The best ways to connect with people and be on top of the new developments in the field are to read *ASPB News* and the journals and attend the international scientific conferences. Membership also gives us opportunities to contribute to this valuable organization.

4. Have you enhanced your career using ASPB job postings or through networking at an ASPB function?

I have benefited by being a member, but I should certainly make better use of the resources for networking that ASPB provides.

5. Have you had any success at finding candidates as a result of a job posting at the meeting or on our online Job Bank?

I have not yet. But I will, as I start my new research group in Plant Systems Biology next year in P. Universidad Católica de Chile. I will try my best to recruit talented students and postdoctoral researchers from around the world to do research in our brand-new facilities in Santiago, the largest city in Chile and one of the fastest developing cities in Latin America. I will use the ASPB job postings and other services provided by ASPB to let people know of this opportunity.

6. Do you read print journals? If so, where do you usually read them?

I hardly read print journals anymore. I read all papers as PDF on my computer screen. Only when the articles are not available from JSTOR or other reposi-

tories do I visit the library and get the dust off some old issues. Too bad so many good books are not available in electronic format yet. I would buy quite a number of book chapters and read more books in general if they were accessible from my browser.

7. What do you think is the next "big thing" in plant biology?

Systems biology.

8. What are you reading these days?

Depending on my mood and intellectual energy level, I read research papers, reviews, or the books *Data Mining: Multimedia, Soft Computing and Bioinformatics* (Mitra & Acharya, eds., Wiley); and *Angels & Demons* by Dan Brown.

9. What are your hobbies?

Software development and web design, West African percussion. And I love to collect and hear traditional music from around the world.

10. What is your most treasured possession?

If by possession we mean something under my care, at least temporarily, my two-and-a-half year-old son. In order of impact on my professional life, my e-mail inbox, laptop, iPod, and djembe from Guinea (when the stress level builds up, there is nothing better than a good drumming session to relax).

11. What do you still have left to learn?

Too many things to list here. But at the very least, some of what is going to be published in the next issues of *The Plant Cell*, *Plant Physiology*, *Science*, *Nature*, *BMC Bioinformatics*, *Bioinformatics*, *Gemone Research*, *PNAS*... a good measure of statistics, math, computer sciences, and biology from areas not related to plants. I will have no trouble keeping myself busy for a long time.

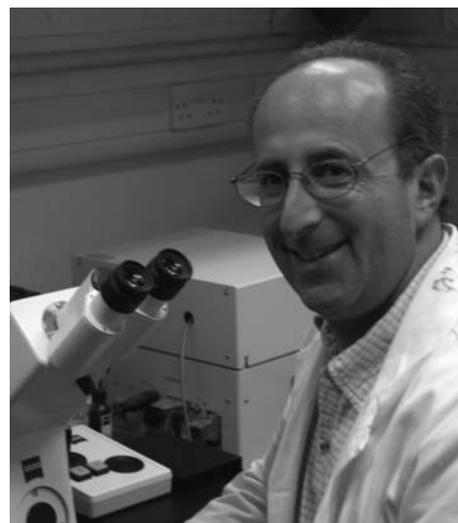
People
continued from page 10

Blatt Awarded Guggenheim Fellow

ASPB member Michael R. Blatt has been awarded a Guggenheim Fellow for 2006. He holds the endowed Regius Chair of Botany and is head of plant sciences at the University of Glasgow. He is one of 187 recipients selected from nearly 3,000 applicants. His area of expertise is the roles and means of membrane transport of proteins in cellular homeostasis as well as plant cell signaling and ion channel structure.

Professor Blatt plans to spend several months of the fellowship at the National Institutes of Health in Bethesda.

The fellowships are given to professionals in the natural and social sciences, humanities, and creative arts as an incentive to pursue unrestricted research. A total of \$7.5 million was awarded this year.



Michael Blatt

CALL FOR PROPOSALS

WSSA Undergraduate Research Award—2007

The Weed Science Society of America has developed an Undergraduate Student Research Grant designed to encourage and involve exceptional undergraduates in agricultural research. Interested faculty members are encouraged to identify potential award candidates and discuss the possibility of sponsoring a research project. Awards may be used as a stipend, for research budget expenses (travel, supplies, etc.), to defer fees, to defray living expenses for summer research, or any combination of these items.

AWARD

Up to \$1000 for support of undergraduate research to be conducted over a minimum of one quarter/semester during 2007. This award may be used to defray the cost of research supplies or as a stipend. Support of a faculty sponsor is required. Awards will be made to the student, to be administered by the faculty sponsor's department.

APPLICANT

The applicant is an undergraduate student with a strong interest in Weed Science. Students majoring in all related disciplines may apply.

TO APPLY

Applicants should prepare a 2-3 page research proposal including name, address, phone number, title, objective, experimental approach, discussion, budget and references. The discussion section of the proposal should describe the expected results and their possible significance to Weed Science. The student should provide a cover letter in which general academic and career goals are discussed. A copy of the student's academic transcripts must also be provided.

FACULTY SPONSOR

Any faculty member who is actively engaged in Weed Science research is qualified to be a sponsor. The faculty sponsor should review the research proposal with special attention to the budget; the distribution of funds should be approved by both the student and sponsor. In addition, the sponsor should provide a letter of reference including a statement of his/her willingness to supervise the proposed research and to provide needed space, equipment and supplies above those requested in the proposal. The sponsor is encouraged to assist the student in presenting his/her results at a regional Weed Science Meeting.

HOW TO APPLY

The completed proposal, academic transcripts, cover letter and faculty letter of support should be forwarded to: Dr. John Jachetta, Dow AgroSciences, 9330 Zionsville Road, Indianapolis, IN 46268-1054; Phone: (317) 337-4686, Fax (317) 337-4649, E-mail: jjjachetta@dow.com. Proposals should be received no later than November 10, 2006. Funding decisions will be made by January 26, 2007 and presented at the 2007 WSSA National Meeting General Session.

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Turning Green into Yellow

Improving Plants for Use as Homegrown Fuels

ASPB Past President **Ken Keegstra** spoke in the U.S. Capitol May 8, 2006, on research that could lead to increased biofuels production from plants. Keegstra's congressional seminar presentation was titled "Turning Green into Yellow: Improving Plants for Use as Home-Grown Biofuels." The seminar was sponsored by the National Coalition for Food & Agricultural Research. ASPB was a contributing sponsor and nominated Keegstra for participation in the seminar series.

Keegstra's talk demonstrated how goals stated by President Bush in his State of the Union Address for the Advanced Energy Initiative (AEI) are achievable related to biofuels. The president has called for breaking the nation's "addiction to oil." Keegstra discussed opportunities in plant research that will help in meeting AEI goals for increased biomass and related biofuels production.

There was a good turnout of more than 40 attendees at the workshop, including congressional staff, federal agency officials, and others. Agency officials in attendance were from the Department of Energy Office (DOE) of Science, the National Science Foundation Plant Genome Research Program, and the Department of Agriculture (USDA) National Research Initiative. Keegstra and ASPB staff also met with DOE officials after the seminar.

Keegstra showed how every state in the nation could become a producer of more biomass for biofuels. Biofuels production also will increase in the corn belt, but won't be limited to that area as advances are made leading to use of cellulose-based ethanol. Recognition of this point could further broaden interest in Congress in research on plants for increased biofuels and biochemicals production.



Ken Keegstra (left and above, second from left) meets with DOE officials following his presentation on bioenergy research in the Capitol. From left are Michael Kahn, Ken Keegstra, Pin-Ching Maness, Richard Greene, and Sharlene Weatherwax.

Several other relevant points showing opportunities in plant cell wall research for increased ethanol production were addressed by Keegstra, including findings from a DOE workshop and a jointly produced DOE/USDA report on the potential for biomass production. Keegstra is director of the Michigan State University-Department of Energy Plant Research Laboratory.

Keegstra's talk was presented at a time when high gasoline prices have been prompting more constituent contacts of Congress than any other issue. There was clearly much interest in the subject by people in attendance as reflected by their many questions. One or two questioners had challenging questions with inaccurate facts, such as the question that asserted that ethanol takes cars only half the number of miles per gallon that gasoline does. Keegstra was prepared, howev-

er, and politely corrected questioners on inaccuracies. Keegstra's presentation helped to place more emphasis on the need for plant research, such as plant cell wall research, to meet demands for increased biofuels production. This is especially timely as more congressional offices are taking an interest in alternative fuels such as biofuels.

The PowerPoint slides from Keegstra's presentation, beginning with Henry Ford's prediction in 1925 that ethanol is "the fuel of the future," are on the ASPB website at <http://www.aspb.org/publicaffairs/news/greenyellowfuel.cfm>.



Schnable, Nguyen Present Plant Genome Research Exhibits at CNSF Congressional Exhibition

Professor **Patrick Schnable** of Iowa State University explained opportunities offered by the National Science Foundation (NSF)-sponsored “Corn Genome Project” at the 12th Annual Congressional Exhibition and Reception, sponsored by the Coalition for National Science Funding (CNSF), on June 7, 2006.

The exhibition featured research poster presentations from a broad array of science disciplines at 34 exhibit booths. The ASPB booth featured Schnable’s full-color poster on the corn genome project, brochures, interactive laptop displays, potted corn plant, and handout tattoos. There were many interested visitors during the two-hour exhibition.

NSF Director **Arden Bement** visited ASPB’s exhibit and discussed with ASPB member Schnable this major genome research project. As he has in the past, Bement came early and stayed throughout the exhibition, talking with exhibitors.

Like Bement, NSF Directorate for Biological Sciences officials **Machi Dilworth** and **Anita Klein** interacted with Schnable, **Henry Nguyen**, and other exhibitors.

Tom Horgan and **Karla Klingner** of Senator **Christopher Bond’s** (R-MO) office and **Tali Bar-Shalom** and **James Wilson** of the House Science Committee were among the congressional staff who visited. Bond continues to champion support for plant genome research in the Senate. In recent years, the House Science Committee has included the plant genome research program in authorization legislation for the NSF. Congressman **Sherwood Boehlert** (R-NY) chairs, the Science Committee, and Congressman **Bart Gordon** (D-TN) is the ranking member of committee.

A topic that has been generating the most constituent calls to congressional offices recently has been the high cost of gasoline.



(top) NSF Director Arden Bement (center) visits with Patrick Schnable (right) and James Wilson (left) to discuss Pat's poster presentation on maize genome research.

(above) Tom Horgan (left), Karla Klingner (right), and Tali Bar-Shalom (second from right) meet with Patrick Schnable at the ASPB exhibit booth.

(right) Henry Nguyen confers with Machi Dilworth on genomics of root growth under drought.



Visitors to the ASPB booth expressed particular interest in the portion of Schnable’s poster that explained research on the plant cell wall that could lead to corn varieties that would facilitate separation and breakdown of sugars from cellulose and hemicellulose. Advances like this could help transition American motorists from using gasoline to cellulosic ethanol.

An April 2005 report by the Department of Energy and the Department of Agriculture said advances in research could help biofuels production increase from meeting just one-fiftieth of America’s transportation fuel needs to supplying one-third of all U.S. motorists’ fuel—a historic shift.

Sporting a tattoo on maize genome research, Schnable appeared to spark the interest of many visitors in corn genome research opportunities. The tattoo depicted the logo of Maize Assembled Genomic Island. Visitors readily accepted samples of the tattoo to take home to their children.

Neighboring the ASPB exhibit was the “Functional Genomics of Root Growth and Root Signaling Under Drought” exhibit prepared by Professor Henry T. Nguyen of the University of Missouri. His exhibit was in the Tri-Societies booth. Nguyen is director of the National Center for Soybean Technology at the University of Missouri. Like Schnable, Nguyen interacted with a number of visitors from congressional offices and the NSF.

Both Schnable and Nguyen conducted separate visits with their congressional offices from Iowa and Missouri, respectively. Schnable, ASPB staff, and the Iowa State University’s representative in Washington, DC, discussed the importance of NSF-sponsored research with the staffs of Congressman **Jim Nussle** (R-IA), **Jim Leach** (R-IA), **Leonard Boswell** (D-IA), **Tom Latham** (R-IA), Senator **Tom Harkin** (D-IA), and Senator **Charles**

Grassley (R-IA). Nguyen met with staff in his Missouri delegation, including Senator Bond and Senator **Jim Talent** (R-MO).

More than 300 people attended this exhibition. ASPB, a member of the CNSF steering committee for more than 12 years, helped initiate the annual CNSF sponsorship of this congressional exhibition/reception, which is the only event of its type highlighting NSF-sponsored research. 🌱

Natural Science Included Among NSF Priority Treatment Areas

On May 18, the Senate Committee on Commerce, Science and Transportation approved the Innovation bill (Senate Bill 2802) that includes authorization of funds for the National Science Foundation (NSF).

A proposed amendment would have excluded “natural science,” which includes biology, from being listed among priority treatment areas in the NSF authorization section of the bill. A manager’s amendment was offered and approved containing compromise language that fortunately included priority treatment for “natural science.”

Senators **Frank Lautenberg** (D-NJ) and **Kay Bailey Hutchison** (R-TX) and their col-

leagues on the committee recognized the importance of natural science, including biology, with approval of the compromise language.

As reported by the committee, the amended “Meeting Critical National Science Needs” section of the bill and its “Priority Treatment” subsection states, “The Director [of NSF] shall give priority in the selection of awards and the allocation of Foundation resources to proposed research activities, and grants funded under the Foundation’s Research and Related Activities Account, that can be expected to make contributions in physical or natural science, technology, engineering, or

mathematics, or that enhance competitiveness or innovation in the United States.”

We appreciate the important work by ASPB campus contacts and their colleagues who contacted their members of the Senate committee to oppose the earlier draft amendment, which subsequently was not offered. Key assistance for biology also was received in the Senate from members outside the committee. Senator **Christopher (Kit) Bond’s** (R-MO) staff worked with ASPB and the committee seeking a balanced approach to science support that includes natural science as a priority. The improved compromise language was approved without objection. 🌱

House Subcommittee Recommends 8 Percent Increase for NSF

In FY2007, the National Science Foundation will receive an increase of \$439 million, or 8 percent under the recommendation approved June 14 by the House Science, State, Justice and Commerce Subcommittee on Appropriations. This increase to \$6 billion is at the level of the NSF budget request.

Here are the preliminary details on the subcommittee recommendations that were available at the time of *ASPB News* publication:

For NSF Research and Related Activities: The increase is \$334.5 million, to \$4,665,950,000. The bill language will include the language from the House Science

Committee bills on new authority to receive donations for prize authority.

Education and Human Resources will receive an increase of \$35.74 million over the current year and \$16.2 million above the NSF request to total \$832,432,000 in FY2007.

The full Committee on Appropriations is scheduled to mark up the bill next week. The bill is expected to be on the House floor the week of June 26.

If the subcommittee’s recommendation is eventually enacted, it will mark a welcome turnaround for NSF funding. Last year, the administration had been planning to include

research programs along with other non-security, domestic programs as areas to address to cut the annual budget deficit in half over five years. The president’s proposal this year for the American Competitiveness Initiative reverses that trend and would double research funding for NSF, DOE, the Office of Science, and NIST over 10 years.

The subcommittee’s recommendation for NSF is for the same amount as requested in the president’s American Competitiveness Initiative. 🌱

House Approves \$189 Million for NRI in Fiscal Year 2007

Spending recommendations for fiscal year 2007 for the U.S. Department of Agriculture, including its research programs, were made by the House Appropriations Committee on May 9. The recommendations are in H.R. 5384 and House Report 109-463. The report can be found at <http://thomas.loc.gov/cgi-bin/cpquery/T?&report=hr463&dbname=109&>.

The committee recommended \$190 million for the National Research Initiative (NRI), an increase of \$8,830,000 above the amount available for FY2006. The indirect-cost cap on competitively awarded research, education, and extension grants would be increased to 22 percent in the FY2007 recommendation, compared to the current-year cap of 20 percent. When the House subsequently considered the bill, it approved an

amendment reducing the increase for the NRI by \$1 million.

The committee decided to keep Section 406 Integrated Programs in a separate account from the NRI. (The Department of Agriculture had sought to move Section 406 programs into the NRI.) These Section 406 integrated activities would receive \$38,589,000 in FY2007 under the recommendation. Funding is at \$42,286,000 in the current year for Section 406 programs. Section 406 Integrated programs are water quality, food safety, regional pest management centers, crops at risk from Food Quality Protection Act (FQPA) implementation, FQPA risk mitigation program for major food crop systems, methyl bromide transition program, and organic transition program.

The recommendation provides a 3 percent increase for research funded under the Hatch Act, 3 percent increase for cooperative forestry research, and 3 percent increase for the Evans-Allen Program (payments to the 1890 land-grant colleges, Tuskegee University, and West Virginia State University). The recommendation maintains the current formula used to determine distribution of funds under the Hatch Act and McIntire-Stennis Cooperative Forestry funds.

The committee recommendation for Agricultural Research Service (ARS) salaries and expenses in FY2007 is \$1,057,603,000. This is a decrease of \$66 million from the current-year level and an increase of \$56 million above the department's FY2007 budget request. 

ASPB Supports National Institute of Food and Agriculture for Competitive Research

On June 5, ASPB sent a letter to sponsors June 5 supporting the National Institute of Food and Agriculture Act of 2006, S. 2782. The bill is sponsored by Senators **Jim Talent** (R-MO), **Tom Harkin** (D-IA), **Christopher Bond** (R-MO), and **Richard Lugar** (R-IN).

The bill would create a National Institute of Food and Agriculture (NIFA) within the U.S. Department of Agriculture. Sponsors are expected to seek inclusion of S. 2782 in the Farm Bill next year. If enacted, the bill would authorize \$245 million in competitive, peer-reviewed research project grants in FY2007. The authorization calls for yearly increases in funding reaching \$966 million in FY2011, including project grants and multidisciplinary grants.

Authorization bills authorize funding. For the authorized funds to be spent, a subsequent appropriations bill providing fund-

ing would be needed. Recent introduction of the bill is the major first step in a path that some predict will lead to enactment of this research authorization measure.

NIFA would be composed of a standing council of advisers with 25 members, including the director. The director for NIFA, who report to the secretary of agriculture, would be appointed by the president and confirmed by the Senate. Twelve members would be scientists, as determined by the secretary, and 12 would be members of the public.

The ASPB letter of support was signed by ASPB President **Mike Thomashow**, Committee on Public Affairs Chair **Pamela Ronald**, Committee on Public Affairs member **Gary Stacey**, past chair of the ASPB Board of Trustees **Douglas Randall**, ASPB Past President **Ralph Quatrano**, and ASPB

member **Roger Beachy** of the Donald Danforth Plant Science Center.

Following are major portions of the letter of support:

As noted in the bill, the opportunities to advance fundamental knowledge of benefit to agriculture in the United States have never been greater. Many of these new opportunities are the result of extraordinary progress in the life sciences during recent decades. We fully agree that new technologies and concepts have expedited advances in the fields of genetics, cell and molecular biology and proteomics. We acknowledge with you the importance to agriculture of research to understand ways in which cells and organisms function.

As the bill notes, the capability of the nation to be internationally competitive in

agriculture is threatened by inadequate investment in research. S. 2782 provides additional funds for basic research contributing to agriculture that will help America's farmers become more competitive in the global market.

The legislation would make possible further research to develop foods that improve health; would decrease U.S. dependence on foreign oil by developing fuels and materials from plants, thereby boosting rural economies, reducing U.S. trade deficits and contributing to national security; create new and more useful products from plants and animals; improve food safety and security by protecting plants and animals from insects, diseases and the threat of bioterrorism;

enhance agricultural sustainability and competitiveness; improve the environment; strengthen national security through improving agricultural productivity in poor nations now vulnerable to destabilizing effects of hunger; and revitalize agricultural research facilities.

Major causes of widespread crops losses include abiotic stresses, such as drought, heat, cold and freezing, and biotic stresses caused by pathogens and insects. We therefore encourage you to include in S. 2782 the goal of understanding basic mechanisms of abiotic and biotic stress tolerance in plants. In addition, continued furthering of our understanding of plant genomes, and support for research making use of genome dis-

coveries, will be critical for achieving a number of the fundamental and applied goals now listed in the proposed legislation.

We appreciate that the bill calls for the Institute to conduct research that enhances and does not replace research conducted by other agencies and programs of the Department of Agriculture, National Science Foundation or National Institutes of Health...

This essential need to preserve funding for existing research agencies is included in the bill and strongly supported by the sponsors. ASPB and other stakeholder groups supporting NIFA join with the sponsors in emphasizing the importance of continued support for existing research agencies. 🌱

ACI and AEI Research Initiatives Supported in House

On May 11 the House Appropriations Subcommittee on Energy and Water Development recommended fully funding the president's American Competitiveness Initiative (ACI) and the Advanced Energy Initiative (AEI). There is support for plant research within both of these presidential initiatives. The full Appropriations Committee

approved the recommendation on May 17. The House approved the bill on May 24.

The American Competitiveness Initiative includes funding for the Department of Energy Office of Science, including the Office of Basic Energy Sciences and its Energy Biosciences program, and for the Office of Biological and Environmental Research. The sub-

committee's recommendation for the Office of Science is \$4.132 billion. The initiative would double funds for basic research supported by the Office of Science over 10 years.

The Advanced Energy Initiative increases funding for clean energy technologies, including biomass, hydrogen, solar, wind, and clean coal. 🌱

Deitzer Participates in Coalition Visits to Capitol Hill

ASPB member **Jerry Deitzer**, University of Maryland, and ASPB staff participated in a science coalition Congressional Visits Day (CVD) March 15. CoFARM and the Biological and Ecological Sciences Coalition (BESC) sponsored the CVD.

Deitzer met with the staff in the offices of Senator **Barbara Mikulski** (D-MD) and Congressman **Steny Hoyer** (D-MD). He joined with other scientists in urging support

for the National Science Foundation and USDA National Research Initiative. Deitzer said the visit with Department of Agriculture officials was very informative in terms of evaluating future directions of research programs such as the NRI. He noted that participating in Capitol Hill visits, such as this coalition effort, is important to influence legislative policy and to educate members of Congress about the importance of basic bio-

logical research, especially in areas such as plant science. He encouraged increased participation in future CVDs.

ASPB is a member of both CoFARM and BESC. The Society also participates in several other science coalitions conducting education outreach efforts with Congress. (Please see story on page 20 on Coalition for National Science Funding exhibition.) 🌱

Committee on Public Affairs Meets with 17 Congressional Offices

Support for research programs sought in ASPB testimony to congressional committees and in congressional office visits by ASPB members, including those on the Committee on Public Affairs and in the leadership, is now contained in House appropriations bills.

ASPB has strongly been advocating support for the president's American Competitiveness Initiative and Advanced Energy Initiative. The ACI would double funding over 10 years for the National Science Foundation, Department of Energy Office of Science, and National Institute of Standards and Technology. The Advanced Energy Initiative increases support for bioenergy research within the Department of Energy. Both initiatives are on track in recommendations by

the House Appropriations Committee in their FY2007 spending bills.

ASPB comments and ASPB visits to Capitol Hill also have sought increased support for research supported by the Department of Agriculture, including the National Research Initiative and Agricultural Research Service. The NRI is increased to \$189 million in the House. Further support is needed to encourage the NRI increase and to gain increases for ARS in the Senate.

Committee Chair **Pamela Ronald**; ASPB President **Michael Thomashow**; ASPB Immediate Past President **Roger Hangarter**; committee members **Gary Stacey**, **Roger Innes**, **James Siedow**, **Stephen Howell**, and **Rob Last**; and student participant **Jeffrey**

Gordon met with their congressional staffers on February 28 to explain the importance of supporting ACI, AEI, and agricultural research programs. Among the 17 congressional offices visited were those of members on key appropriations and authorization committees.

On February 27, the Committee on Public Affairs met at ASPB headquarters and determined actions to be taken in many areas on behalf of plant science. **Sharlene Weatherwax** of the Department of Energy Office of Science met with the committee and explained research directions and opportunities within the department. 

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Amasino, Bartel, and Wessler Named HHMI Professors

The innovative teaching abilities of three ASPB members have been recognized by the Howard Hughes Medical Institute (HHMI), which has awarded them each \$1 million. ASPB President-Elect **Rick Amasino**, **Bonnie Bartel**, and **Susan Wessler** are three of the 20 researchers who have been named 2006 HHMI Professors.

The awards are intended to give professors free rein in creating programs that get undergraduates excited about the world of science. To that end, professors may use the money however they choose—from broadening the scope of hands-on experiments to adding classes for students who may have little interest in science.

At the University of Wisconsin, Professor Rick Amasino is developing a course for nonscience majors to build an understanding of the nature of science, including public perception of the field and the theory of evolution. Additionally, he has developed rapid-cycling *Brassica rapa* lines to provide students practical insight into the mechanisms of genetics. This work is a spin-off of Wisconsin professor emeritus **Paul Williams's** Fast Plants. Williams is also on the ASPB Education Foundation Board.



Rick Amasino



Bonnie Bartel

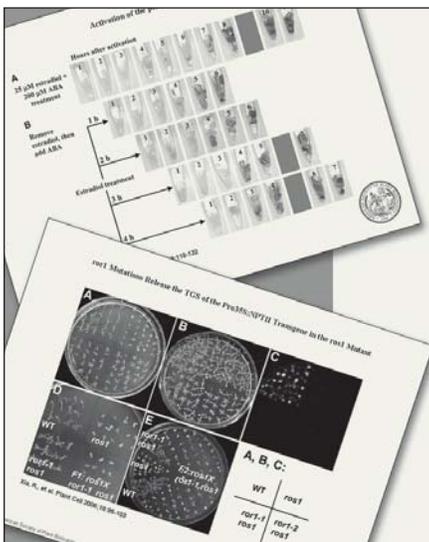


Susan Wessler

To delve deeper into the mechanisms of evolution, University of Georgia Regents Professor Susan Wessler will be leading students through genetic analyses of transposable elements in plant genomes. Her goal is to make students aware of the changes that occur within a genome and how these variations can provide a record of the organism's adaptation through time.

Bonnie Bartel, the Ralph and Dorothy Looney Professor of Biochemistry and Cell Biology at Rice University, plans to stem the

loss of potential science majors who are turned off by impersonal introductory lecture classes. Small groups of freshmen will tour labs, meet with researchers, and review experimental data. Sophomores in a new lab module will analyze unknown plant enzymes and produce preliminary data that can be expanded upon in more extensive research in faculty labs. Each student will then be given the opportunity to work alongside the researcher to track progress in the lab. 🌱



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We hope that you enjoy this feature and that it enhances the teaching of plant biology in your classroom.

Foundation-Supported Education Projects Reach Teachers, Gardeners, County Fairs

Thousands of educators and students have been introduced to ASPB and the principles of genetically modified foods through two-time Grant Award Program (GAP) winner **Dr. Peggy Lemaux**. Her project, first funded in 2004 by ASPB's Education Foundation GAP, is a mobile exhibit of displays, baseball card-type handouts, and an educational game aimed at explaining the importance of plants and biotechnology to the general public. The project involves three components: two displays, *Foods: Past and Present* and *Genes, Genomics, and Diversity*, and the game *Tic Tac Grow*.

The exhibit traveled to the 2006 National Science Teachers' Association (NSTA) annual meeting, where it was received enthusiastically. "All of the cards went out, and we got many questions from teachers about how to get more," said **Mary Williams**, ASPB Educa-

tion Committee chair. Lemaux also confirmed that NSTA is considering running an article on her exhibit in its *Reports* magazine.

Seventeen organizations, from the Master Gardener Club to the Monterey County (California) Fair, have used the exhibit in the past year. Additionally, the Biotechnology Institute, an organization dedicated to teaching educators, students, and the public about the promise and challenges of genetic modification, has requested the cards for their many workshops throughout the year.

The project's widespread distribution has created additional funding opportunities as well. The USDA Coordinated Agricultural



Peggy Lemaux

Project (CAP) has asked Lemaux and her associate, **Barbara Alonso**, to develop outreach materials for Rice-CAP and BarleyCAP. These programs are working to develop biotechnology tools to improve quality, yield, and disease resistance in these important food crops. USDA awarded BarleyCAP \$5 million in March.

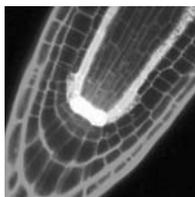
Federal recognition of the program was not an initial goal. "This project has succeeded well beyond our expectations, and without the support of ASPB, we would not have been able to complete the project," Lemaux said. 🌱

The Arabidopsis Book



The American Society of Plant Biologists is pleased to publish *The Arabidopsis Book (TAB)*, a dynamic,

fully electronic compilation of chapters co-edited by Chris Somerville, Elliot Meyerowitz, Jeff Dangl, and Mark Stitt and available free of charge on the Internet.



TAB offers a new model for scientific publishing. Each of the chapters in the book reviews in detail an important aspect of the plant *Arabidopsis thaliana*, and the content continually evolves as new information becomes available, making *TAB* the most comprehensive and current work on Arabidopsis.

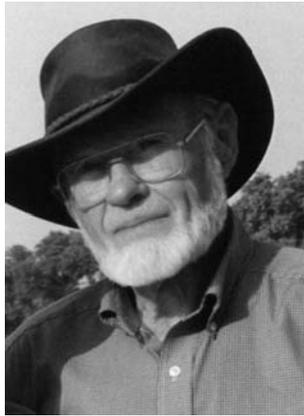
ASPB is providing funds for the posting and maintenance of *TAB* on the Internet as a public service. All chapters and updates are hosted in partnership with BioOne (<http://www.bioone.org>) in both HTML and PDF formats.





Jerry W. McClure

Long-time ASPB member Jerry W. McClure, professor emeritus of botany at Miami University, died Thursday, April 25, at Fort Hamilton Hospital. He was 72. He joined the Miami faculty in 1964, attaining full professorship in 1973. In 1972, he was the first recipient of the Sigma Xi Outstanding Researcher of the Year award.



Throughout his career, he received numerous National Science Foundation and U.S. Department of Agriculture grants to fund his research. McClure retired in 2001. He received the Alexander von Humboldt Foundation Senior U.S. Scientist Award from the government of West Germany and simultaneously received a Fulbright Foundation Honorary Research Fellowship award. He was a visiting professor at Ruhr-Universität, Bochum, Germany, and he gave more than 30 invited lectures in the United Kingdom, Belgium, Netherlands, Poland, the USSR, and East Germany. In 1982, he was named distinguished visiting scientist, Texas Tech University; in 1983, he received the Heinrich-Hertz research award in Dusseldorf, West Germany, and the Gordon Research Conferences organizing award. In 1987, he was an invited visiting scholar, University of Nairobi, Kenya, and at the same time worked with the Richard Leakey group and National Museums of Kenya. Before returning to Miami University in the fall of 1987, he presented

invited lectures in Addis Ababa, Ethiopia; Asmara, Eritrea; and Nanning and Guilin, Peoples Republic of China.

Jerry was born May 3, 1933, in Floydada, Texas, and took pride in having gone from a Depression-era cotton farm and one-room school to become an internationally recognized scientist. He enjoyed traveling

the world, laughter, and people; he never met a stranger and he always had a great story to tell. Literature and music were important to him; he often quoted from Shakespeare to the writings of Heinlein. Barely 16 years old when he graduated from Crosbyton, Texas, high school, he entered Wayland Baptist College on a music scholarship in voice; the next year, however, he transferred to Texas Tech University, where he earned a degree in agronomy in 1954. He served in the U.S. Air Force from 1955 to 1959. Returning to Texas Tech, he received an M.S. in agronomy. He received his Ph.D. in botany from the University of Texas, Austin, in 1964, publishing his research results in the journal *Nature* while still working on his degree. He was treasurer and later president of the Phytochemical Society of North America; chair of the physiological section, Botanical Society of North America; member of the Council for International Exchange of Scholars, Life Sciences; member of the screening committee

for Fulbright Awards and the screening committee of the Woodrow Wilson National Fellowships Foundation, Ohio and Michigan region; and more. He and his wife Frances were Danforth Faculty Associates; presidents of the McGuffey Laboratory School Parent-Teacher Organization and the Community Service Program for Foreign Students (COSEP), Oxford, Ohio; and regular helpers for Meals on Wheels. He was president of the Society of Miami Emeriti, 2005–2006; a member of the Oxford Men's Club and the Oxford United Methodist Church. In addition to his wife Frances, his friend and partner for more than 52 years, he is survived by two daughters, Rachel (David) Pierce, Houston, Texas, and Martha (Mark) Gibbins, Monroe, Ohio; his sister, Margaret (Wayland) Jones, of Texas; three grandsons, aunts and uncles, numerous cousins, colleagues, friends, and five students who received support from or lived with the McClures as they pursued their education. According to his wishes, his ashes will be scattered in the pasture on the family farm where he grew up and where he developed his first interests in the natural world. A memorial service will be held in Kumler Chapel, Oxford, Ohio, on September 9, at 11:00 a.m. The family suggests donations in his memory to a food bank, the Salvation Army, Doctors Without Borders, or a charity of one's choice.

This article was first published in the Oxford Press on May 10, 2006. It has been slightly modified to conform to ASPB News style.



Otto L. Hoffmann

ASPB member Otto L. Hoffmann, 87, died June 15, 2006. Dr. Hoffmann was a research scientist for Spencer Chemical Company, retiring from Gulf Chemical Company and later from DuPont Chemical Company. He earned his B.S. degree in plant physiology from the University of Wisconsin, where he was a member of Delta Theta Sigma Fraternity. He received his M.S. degree in soil microbiology and plant physiology from

Rutgers University and his Ph.D. in plant physiology from Iowa State University. He founded the field of herbicide antidotes and was issued 17 patents for plant growth regulators and herbicides. His wife, Mary (Washko), whom he married in 1941, preceded him in death. Survivors include four daughters, five grandchildren, and seven great-grandchildren. Online condolences can be recorded at www.amosfamily.com.

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