

# Phytopathology News

December 2004 • Volume 38 • Number 12

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## APS Annual Meeting Abstract Notice

Online submission of abstracts for the 2005 APS Annual Meeting in Austin, TX, July 30–August 3, will be available in January on *APSnet*. The announcement will be included in the January APS News Capsule. **The deadline for submission of both oral and poster presentations is April 1, 2005.**

Remember to fully edit and proof your abstract before submitting. You are encouraged to submit before the last day to avoid delays due to high system usage. ■



## APS Foundation Announces New Pioneer Hi-Bred International, Inc. Fellowship in Plant Pathology



**PIONEER**  
A DUPONT COMPANY

A new graduate student fellowship has been established through the APS Foundation, with gifts from Pioneer Hi-Bred International, Inc., to help attract students to careers in plant pathology, emphasizing disease resistance, host–pathogen interactions, and disease etiology. The Pioneer Fellowship in Plant Pathology provides a \$20,000 annual stipend to the student for up to four years, as well as APS membership and an online subscription to one of the APS journals for the duration of the fellowship. Don Mathre, Chair of the APS Foundation, indicates that this type of fellowship is unique and is another way that the Foundation is working to insure the future of the discipline of plant pathology.

Applicants must have applied to become a doctoral student in plant pathology or closely related discipline with a research emphasis on plant disease. Continuing doctoral students may also apply. Further details on eligibility, application procedures, and selection criteria are described at [www.apsnet.org/foundation/ApplyFunding.asp](http://www.apsnet.org/foundation/ApplyFunding.asp).

**Applications are due February 1, 2005.** The recipient of the fellowship is to be notified in April and invited to attend the APS Annual Meeting, where the recipient will be recognized. ■



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## APS Seeks Member Input for Officer Candidates

It is time to begin thinking about members to serve in the offices of vice president and councilor-at-large and to talk with those people about their willingness to run for office. During the first week of January 2005, a web-based form soliciting nominations will be sent to APS members. The persons receiving the largest number of nominations for each office will automatically become candidates. The Nominating Committee selects a second candidate, usually with your nominations in mind. Your contributions are essential to the success of this process. A link to the web-based nomination form will be sent by e-mail to members with an e-mail address in the APS database maintained at headquarters. A form will be mailed by U.S. postal service to members without an e-mail address in the database. Contact **Allison Tally** (chair Nominations Committee) at +1.336.632.7231 or by e-mail at [allison.tally@syngenta.com](mailto:allison.tally@syngenta.com) if you need additional information. ■



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*Phytopathology News* (ISSN 0278-0267) is published monthly by The American Phytopathological Society (APS) at 3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A. Phone: +1.651.454.7250, Fax: +1.651.454.0766, E-mail: [aps@scisoc.org](mailto:aps@scisoc.org), Web: [www.apsnet.org](http://www.apsnet.org). *Phytopathology News* is distributed to all APS members. Subscription price to nonmembers is \$50 U.S./\$60 Elsewhere. Periodicals paid at St. Paul, MN. CPC Intl Pub Mail #0969249. Postmaster: Send address changes to *Phytopathology News*, 3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.

#### Submission Guidelines

Address all editorial correspondence to: Margery Daughtrey, LI Hort Research & Extension Center, 3059 Sound Avenue, Riverhead, NY 11901-1115, Phone: +1.631.727.3595, Fax: +1.631.727.3611, E-mail: [PhytoNewsEditor@scisoc.org](mailto:PhytoNewsEditor@scisoc.org). In order to ensure timely publication of your news items and announcements, please send in material 6 weeks prior to the date of publication. Material should be no more than 6 months old when submitted. Submission of materials as electronic files, via e-mail, will speed processing. For information on submitting electronic images contact Agnes Walker at [awalker@scisoc.org](mailto:awalker@scisoc.org). Deadline for submitting items for the March, 2005 issue is January 15, 2005.

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# Letter to the Editor

## A Proven Model for Working with Exotic Plant Pathogens with Biological Security and Low Cost

*John S. Hartung, USDA-ARS, Beltsville, Maryland*

Agriculture in the United States today is under increasing threat from exotic pathogens, defined as pathogens that do not exist in a particular location. Consequently, there is increasing interest in research on exotic plant pathogens. Naturally, political and economic support for such research may be strongest in regions where the crop at risk is grown. This could lead to the construction of containment facilities around the country in regions where the targeted pathogens could potentially cause epiphytotic if released. Such facilities are hugely expensive to build and operate because they require air-tight construction, very large air-handling and -conditioning systems, and extensive backup power supplies to keep the facility running in emergencies. This approach is especially problematic for greenhouses. Because of the constraints of design, and construction and operating costs, the amount of usable space is severely limited, and the projects may encounter significant construction delays.

How can research on exotic plant pathogens be accomplished with biological security and reasonable cost? Apart from the fundamental fact that pathogens cause disease, the most important concept in plant pathology is illustrated by the well-known plant disease triangle. In order to have an outbreak of a plant disease, three components must be simultaneously present: a pathogen, a susceptible host, and a conducive environment. The Exotic Pathogens of Citrus Collection (EPCC) was begun by USDA ARS in Beltsville, MD, in 1979 based on this fundamental premise: since there is no citrus in the region, and the climate is not conducive to the host, two components of the disease triangle are lacking. Research that could not be contemplated in citrus-growing regions of the United States can be carried out at Beltsville with confidence that an epiphytotic will not be initiated.

What kinds of research projects can be carried out in a region far removed from the centers of production? The approach has been to build up an extensive collection of strains of important exotic pathogens, all under permit from USDA APHIS. The culture collection facilitates at least three objectives: (i) it provides the basis for the development and validation of advanced diagnostic methods; (ii) it forms the basis for collaborations with the foreign scientists who donate the pathogen accessions, as well as colleagues in the United States; and (iii) it makes possible comparative biological characterization of pathogen accessions collected worldwide under a single environmental condition.

What kind of facilities and operating procedures are required to work with exotic pathogens at a facility where an incomplete disease triangle facilitates biological containment? The EPCC is maintained in a standard, well-built greenhouse and standard laboratory facilities. Insect-grade screening covers all external openings of the greenhouse to facilitate a strict insect control program. All plant and microbial materials are autoclaved before they leave the greenhouse or laboratory. The facility can otherwise be operated as any other plant pathology research facility, without resort to expensive containment modifications.

How safe is the containment approach used for 25 years at the EPCC, an approach that works with nature instead of against it? On September 24, 2001, an F3 tornado touched down on the BARC-West campus and demolished the greenhouse that housed the in planta components of the EPCC. Although the research programs were greatly disrupted, none of the pathogens was able to establish in the environment and cause disease problems. If the facility had been located in a citrus-producing area and demolished by a catastrophic event, the consequences would have been far reaching. No facility is immune to catastrophic events.

Instead of building expensive, inefficient, and risky facilities to work with exotic pathogens, would it not be better to conduct the necessary research at locations where the pathogens pose less risk? The United States is a very large country, with existing agricultural research infrastructures in all climatic zones, from tropical to subarctic and desert, and with facilities on both islands and in urban centers far removed from agricultural production. When properly located, research with exotic pathogens can be conducted safely at reasonable cost, without the construction of expensive new facilities.

The EPCC is a proven model upon which research programs with exotic plant pathogens can be based. Because such projects are inherently national and international in scope and require sustained, long-term funding, USDA ARS is uniquely suited to establish and lead them. APS can serve a valuable role in encouraging and promoting the state, federal, and international interactions required to establish and maintain such projects. ■

## Plant Management Network International

*A not-for-profit resource made possible by many of the most highly respected organizations in agriculture.*

### Welcome CropLife America!



The PLANT MANAGEMENT NETWORK welcomes its newest partner, CropLife America (CLA). Established in 1933, CropLife America (formerly the American Crop Protection Association) represents the developers, manufacturers, formulators, and distributors of plant science solutions for agriculture and pest management in the United States. CropLife America member companies produce, sell, and distribute virtually all of the crop protection and biotechnology products used by American farmers.

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View the entire list of PMN Partners at [www.plantmanagementnetwork.org/partners/profile](http://www.plantmanagementnetwork.org/partners/profile).

Contact **Joan Grudem** ([jgrudem@scisoc.org](mailto:jgrudem@scisoc.org)) or **Miles Wimer** ([mwimer@scisoc.org](mailto:mwimer@scisoc.org)) for information on joining the PMN Partners Program. ■

## Call for Applications for 2005 Storkan- Hanes-McCaslin Foundation Awards

The Storkan-Hanes-McCaslin Foundation Awards are named in honor of **Richard C. Storkan**, **Gerald L. Hanes**, and **Robert L. McCaslin**. Each has a long history of cooperation with the scientific community, and they were pioneers in developing effective soil fumigation through experimental research.

The foundation was established in 1987 to support research. To date, more than \$286,000 has been awarded to 49 promising scientists. In addition to cash awards, new awardees receive round-trip fares to the APS Annual Meeting and are presented their awards at a luncheon attended by their research advisors, previous awardees, and members of the foundation committee. The research for which the award is given is expected to be performed by the applicant during the academic year 2005–2006.

A major aim of the foundation is to encourage research by offering financial assistance to graduate students who are working on soilborne diseases of plants. Applications from postdoctoral candidates also are considered. The research must be done in the United States. Foundation policy is to contribute to the education of the student. Grants are made on a yearly basis and may be renewed upon review by the committee.

**Applications must be received before May 1, 2005**, for funding to begin September 1, 2005. Please submit six copies each of a short, 2–3 page research proposal with a clear statement of the objectives of the research, a biography of the researcher (including telephone number and e-mail address for follow-up contact), and a letter (six copies) from the applicant's major professor or research director. Send applications to **A. Paulus**, Chair Selection Committee, Storkan-Hanes-McCaslin Foundation, Department of Plant Pathology, University of California, Riverside, CA 92521-0122. If further details are desired, e-mail Paulus at [albert.paulus@ucr.edu](mailto:albert.paulus@ucr.edu), phone +1.951.827.3431 or fax +1.951.827.4294. ■

## Important Dates to Remember

### December 2004

- 12 F&N/B&C submission of reports to section editors for review and approval

### January 2005

- 15 International Travel Award applications due. [www.apsnet.org/members/oip/travel.asp](http://www.apsnet.org/members/oip/travel.asp)
- 15 5th I.E. Melhus Graduate Student Speaker Symposium applications due. [www.apsnet.org/foundation/melhus05.asp](http://www.apsnet.org/foundation/melhus05.asp)
- 24 Frank L. Howard Undergraduate Fellowship applications due. [www.apsnet.org/foundation/apsundergrad.asp](http://www.apsnet.org/foundation/apsundergrad.asp)

### February 2005

- 1 Pioneer Fellowship in Plant Pathology application and materials due. [www.apsnet.org/foundation/pioneerfellowship.asp](http://www.apsnet.org/foundation/pioneerfellowship.asp)
- 15 Early career Latin American plant pathologists' applications due for Registration Fee Awards to attend the Latin American Phytopathology Congress
- 25 Deadline for final submission of F&N/B&C reports, which involves completion of the online submission form and mailing of materials and payment to APS headquarters

### April 2005

- 1 2005 APS Annual Meeting oral and poster abstracts due.

## Time to Renew Your APS Membership?

APS members can now renew their membership dues and subscriptions online at <http://interactive.apsnet.org>



## First International Workshop for the Morphological and Molecular Identification of the Stramenopiles *Phytophthora* and *Pythium* Held in North Carolina

Forty-seven scientists from the United States, Canada, Colombia, Ecuador, France, Guam, Italy, Japan, Mexico, Peru, Scotland, and United Kingdom participated in the First International Workshop for the Morphological and Molecular Identification of the Stramenopiles: *Phytophthora* and *Pythium*, which was held at the Department of Plant Pathology, North Carolina State University (NCSU), July 23–27, 2004. **Gloria Abad** and staff **Jennifer Phillips** and **Greta Roach** at the NCSU Plant Pathogen Identification Laboratory (PPIL) were the organizers.

The five-day workshop was an opportunity for leading plant pathologists from around the world to learn advanced techniques from nine expert instructors. In all, the instructors led 25 hands-on, molecular and morphological laboratory sessions. Most of the sessions were offered concurrently in adjoining classrooms: one dedicated to *Phytophthora* and the other to *Pythium*. Additionally, a computer-assisted molecular identification session was run in four state-of-the-art computer laboratories, and demonstrations on the use of identification kits were presented. Instructors from NCSU included Gloria Abad, **Mike Benson**, and **Tom Creswell**. Instructors from other institutions included **Mike Coffey**, University of California; **David Cooke**, Scottish Crop Research Institute; **Manon Gallegly**, West Virginia University; **Frank Martin**, U.S. Department of Agriculture (USDA), Salinas, CA; **Mark Spencer**, The Royal Natural History Museum, United Kingdom; and **Paul Tooley**, USDA, Beltsville, MD.

The workshop began with a reception dinner at the NCSU Club for participants, instructors, faculty, and staff of the Department of Plant Pathology, as well as for representatives of workshop sponsors Bayer Crop Science, Fisher, Gentra, Leica-Vashaw, Qiagen, Staples, Syngenta, USA Scientific, and Wheaton, who graciously donated supplies essential to the laboratory sessions.

Lectures covered aspects of the taxonomy, ecology, diseases, isolation, storage, pathogenicity, morphological features, identification keys, molecular tools for identification of species, and phylogeny of the stramenopiles *Phytophthora* and *Pythium*. Hands-on morphological laboratories were enhanced with a set of 48 different *Phytophthora* species and 77 *Pythium* species from the collections of Mike Coffey, Manon Gallegly, Gloria Abad, and **Bernard Paul** (Université de Bourgogne, France). The acquisition of 25 *Pythium* isolates by the PPIL from the Centraalbureau Voor Schimmelcultures was among this important material.

Molecular identification laboratories included DNA extraction, PCR amplification, DNA fingerprinting, restriction fragment length polymorphism, and the use of different tools for molecular identification. The Computer Assisted Molecular Identification Laboratory included analysis of *Phytophthora* and *Pythium*, DNA digest and sequence data with demonstrations of gelcompare/bionumerics, restriction digest patterns (**D. Cooke**, PhyID website), sequence



Scientists from Canada, Colombia, Ecuador, France, Guam, Italy, Japan, Mexico, Peru, Scotland, United Kingdom and the USA participated at the *Phytophthora* and *Pythium* first international workshop held at the Dept. of Plant Pathology, North Carolina State University.

BLAST analysis, download from GenBank, multiple alignments, and tree drawings. Additional sessions included the use of diagnostic kits from Agdia and Neogen for the identification of *Phytophthora* and *Pythium*.

The day following the workshop, the PPIL hosted a minisymposium "Establishing the Basis for a SURVEY of the Oomycetes *Phytophthora* and *Pythium* in the Americas."

Gloria Abad led a discussion among scientists from Latin and Central America, **G.**

**Chacon, L. Aragon, H. Silva,**

**S. Fernandez, and R. French,** which explored aspects of the occurrence of the stramenopiles in the Americas and laid the groundwork for future interinstitutional cooperative research.

The PPIL thanks the instructors, participants, sponsors, and coordinators, as well as faculty in the NCSU Department of Plant Pathology, for their contributions to the workshop. Thanks also go to departmental technical and support staff, particularly those in the Plant Disease and Insect Clinic. Above all, thanks are due to **James Moyer**, department head, who provided invaluable support and encouragement from beginning to end.

In order to provide an opportunity for those who couldn't join us this year due to constraints of available space and accommodation, plans are already beginning for the "Second International Workshop for the Morphological and Molecular Identification of the Stramenopiles: *Phytophthora* and *Pythium*" during the summer of 2006. For more information contact Gloria Abad, gloria\_abad@ncsu.edu. ■



*Phytophthora and Pythium first international workshop instructors (Left to right: Mike Benson, Frank Martin, Gloria Abad, Mark Spencer, Manon Gallegly, David Cooke, Paul Tooley, Mike Coffey. Not pictured: Tom Creswell.)*

## Fourteenth Annual Symposium of the Soilborne Plant Diseases Interest Group of South Africa Held

The Soilborne Plant Diseases Unit of the Agricultural Research Council's Plant Protection Research Institute hosted the 14th interdisciplinary symposium on soilborne plant diseases on September 15–16, 2004, at the Vredenburg Research Centre of the ARC-PPRI in Stellenbosch, South Africa. The topic for this year's symposium was "Crop Rotation and Soilborne Plant Diseases." Sixty representatives of research councils, national and provincial departments of agriculture, private companies, and universities attended. Participants represented a wide range of disciplines such as agronomy, botany, entomology, horticulture, microbiology, nematology, plant pathology, and soil science.

**Andre Nel** of the ARC-Grain Crops Institute delivered the keynote address, in which he presented a short historical background on crop rotation and discussed the causes of the observed

"rotational effect." The delegates to the symposium concluded that crop rotation, practiced correctly, has significant ecological and economical benefits and, therefore, is a prerequisite for sustainable agriculture.

For further conclusions from the meeting, see the website of the Southern African Society for Plant Pathology at [www.saspp.co.za](http://www.saspp.co.za). ■



*Participants in the 14th Annual Symposium of the Soilborne Plant Diseases Interest Group represented research councils, national and provincial departments of agriculture, private companies, and universities.*

## Scientific Programs Board News

The Scientific Programs Board (SPB) was created in 2001 with the mission of coordinating and enhancing the scientific programs offered by APS. This includes planning of the annual meeting, as well as developing ideas for short courses and workshops. The SPB facilitates the realization of ideas brought forth by the membership in addition to originating new programs. The board is composed of a director, APS president-elect, APS vice president, senior councilor-at-large, editor-in-chief *APSnet* Education Center, workshop and short courses committees chair, six section chairs, and members of APS staff. The SPB is happy to welcome **Dilantha Fernando**, University of Manitoba, as the chair of the Workshops Committee. We are excited to have Dilantha involved with the board and know that his creativity will add to our future programs. Several new workshops are planned for the upcoming meeting, and the SPB is investigating new ways to conduct workshops, including online events. If you have an idea for a workshop, feel free to contact the SPB. Forms for submitting online event or workshop ideas are available through the SPB webpage at [www.apsnet.org/members/spb/](http://www.apsnet.org/members/spb/). The SPB recently had a great follow-up meeting to the APS Annual Meeting in Anaheim, CA. The board has done some brainstorming on reorganizing the annual meeting to make sessions more accessible and give the poster session the time it deserves. In addition, the SPB is interested in strengthening outreach activities in the places that we hold our meetings. We can do this through creating one-day concentrations in a particular area that might be of interest to members of the communities where we meet, or we might consider a field trip, workshop, or tour to be held in conjunction with the meeting. Members should feel free to contact the following SPB members with ideas for 2006 special sessions or with outreach activities that we can incorporate into our meeting in Austin, TX; SPB Director, **Erin Roskopf**, [erosskopf@ushrl.ars.usda.gov](mailto:erosskopf@ushrl.ars.usda.gov); Chair Workshops Committee, **Dilantha Fernando**, [fernando@Ms.UManitoba.CA](mailto:fernando@Ms.UManitoba.CA); Section Chairs: Biology of Pathogens, **Scott Adkins**, [sadkins@ushrl.ars.usda.gov](mailto:sadkins@ushrl.ars.usda.gov); Diseases of Plants, **Sharon Douglas**, [sharon.douglas@po.state.ct.us](mailto:sharon.douglas@po.state.ct.us); Epidemiology/Ecology/Environmental Biology, **John Lundquist**, [jlundquist@f.s.fed.us](mailto:jlundquist@f.s.fed.us); Molecular/Cellular Plant-Microbe Interactions, **Rick Bostock**, [rmbostock@ucdavis.edu](mailto:rmbostock@ucdavis.edu); Plant Disease Management, **Monica Elliott**, [melliott@ufl.edu](mailto:melliott@ufl.edu); and Professionalism/Service/Outreach, **Carolee Bull**, [cbull@pw.ars.usda.gov](mailto:cbull@pw.ars.usda.gov). ■

## Planting the Seeds of Knowledge at a Texas-sized Meeting



**2005 APS  
Annual Meeting  
July 30 - August 3  
Austin, Texas U.S.A.**



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

*Photos courtesy of the Austin CVB.*

## Public Policy Update

### National Center for Plant Biosecurity: Meeting the Challenge of HSPD-9

*Jacque Fletcher, Oklahoma State University (jaf2394@okstate.edu) and Kellye Eversole, Eversole Associates (eversole@eversole.biz)*



*Jacque Fletcher*



*Kellye Eversole*

APS has long recognized that agriculture and other plant resources in the United States are vulnerable to biological attack. Crops are grown and forests and rangelands are distributed over very large areas with little possibility and feasibility for surveillance or monitoring. Our extensive national borders provide many opportunities for accidental or intentional introductions.

With leadership from the ARS, APHIS, and CSREES, the USDA and the Department of Homeland Security (DHS) have been working to bolster the current surveillance infrastructure, develop additional biosecurity capabilities, and ensure that the United States has the ability to anticipate, prevent, respond to, and recover from acts of bioterrorism. In addition to USDA and DHS agencies, many other organizations have been involved in efforts to improve our infrastructure. These organizations have included state and local government organizations, land-grant universities, agricultural producers and industry, and other for-profit and not-for-profit entities.

Despite the stellar efforts of many individuals and organizations over the past few years, we still have no mechanism for organized coordination across all entities. The effectiveness of the various programs continues to be hampered by the lack of coordination among the various programs and activities, inadequate means of assessing the contributions of each organization toward the overall goals, and insufficient financial resources to maintain an effective plant biosecurity program in the current disparate system.

Since 2001, APS has called for the establishment of a National Center for Plant Biosecurity to provide a nexus for all plant biosecurity activities. During the past two years, the APS Public Policy Board, Council,

Crop Biosecurity Committee, Washington, DC, liaison **Kellye Eversole**, and other APS groups and members have worked to develop a concept for enhancing our nation's capabilities to prevent and respond to events related to plant (crop, forest, and rangeland) security. That concept led to the development of a proposal for the establishment of a USDA in-house National Center for Plant Biosecurity (NCPB) that would be administered at the level of the Office of the Secretary of Agriculture and staffed by USDA employees. The USDA Center would build on existing resources and capabilities to ensure that we have a strong national infrastructure for documenting, monitoring, and protecting U.S. agriculture against new or emerging plant diseases and pests. A strong, responsive infrastructure is needed whether the threat is from unintentional introduction, an act of bioterrorism, or any other intentional human introduction. The NCPB would provide a focal point to enhance, expand, and coordinate current efforts to defend against terrorist attacks, major disasters, and other emergencies.

Last year, APS members were invited to comment on a draft of the proposal for a NCPB, and input has been collected from federal agencies, other scientific societies, and commodity groups. An APS workshop, held in Washington, DC, in July 2003 and funded by a grant from the Department of Homeland Security, brought together participants and stakeholders for in-depth discussion and shaping of the proposal. As these inputs from APS members and others were being incorporated, President **George Bush** issued Homeland Security Presidential Directive #9 (HSPD-9), which called for the establishment of a national policy to defend the United States' agriculture and food system against terrorist attacks, major disasters, and other emergencies. HSPD-9 found that the U.S. agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism. It further indicated that there is a need to provide the best protection possible against a successful attack on the United States agriculture and food system, because such an attack could have catastrophic health and economic effects. The proposed NCPB would provide a strong framework and leadership for detecting,

responding to, managing, and recovering from such events, as mandated in HSPD-9. A key component of HSPD-9 was the development of a National Plant Disease Recovery System that would ensure our ability to recover from any intentional or unintentional outbreaks of a high-consequence plant disease. HSPD-9 directed the Secretary of Agriculture to accelerate and expand agricultural biosecurity efforts in cooperation with other federal agencies and entities. We believe that a USDA National Center for Plant Biosecurity would facilitate this cooperation and would ensure that the United States has the ability to anticipate, prevent, respond to, and recover from intentional or unintentional introductions of catastrophic plant diseases.

## USDA Center Roles and Responsibilities

Many of the critical functions necessary for a strong plant biodefense capability are the responsibility of existing federal and non-government agencies and programs. The proposed USDA Center will not duplicate those efforts, but will function as a visionary, strategic planning, and coordinating entity. It will be one component of the family of critical agencies and entities that provides information to and receives guidance from the Secretary of Agriculture as the responsibilities of this sector-specific agency are fulfilled. In addition, the USDA Center will be staffed by federal employees and will not be a university-based or other nongovernment or quasi-government entity. The center will be linked closely with DHS offices responsible for biosecurity, such as the Directorate for Research and Technology and the National Biosecurity and Countermeasures Center (NBACC). The center will be the ultimate coordinating and communication nexus for these efforts, a nexus for the nation's plant resource protection and a one-stop shop for contact and information on this subject. The center also will ensure that the nation's plant biosecurity efforts are applied effectively to the enhancement of U.S. agricultural systems during natural or accidental disease or pest outbreaks.

Specifically, the USDA Center, among other things, will

- Serve as an overarching entity with responsibility for coordination of all plant biosecurity activities by all federal agencies.
- Provide leadership during specific breaches of biosecurity related to plants.
- Provide a focal point to help clarify which federal agency has jurisdiction over different aspects of an event.
- Identify resources to address needs for surge capacity in reacting to suspected events.
- Foster communication and synergies between and among government, public, private, and professional entities.

- Ensure that the goals and objectives of the various plant biosecurity programs are implemented by the agency (or agencies) charged with programmatic responsibility.
- Provide a "one-stop shop" for initial contact with the federal government on matters related to plant bioterrorism.

These center activities will be developed and administered in a manner consistent with, and supportive of, the responsibilities set out in HSPD-9, including the following:

### 1. Awareness and Warning Activities

- A. Support of Facilities and Capabilities.** Support of existing and new facilities and capabilities for detection, diagnosis, and communication with respect to incidents of threats to plant security.
- B. Coordination of Plant Biosecurity Efforts and Enhancement of Intelligence Capabilities.** Procedures to ensure that plant biosecurity activities are coordinated.

### 2. Vulnerability Assessments Activities

Systematic and regular vulnerability assessments; strategies for addressing vulnerabilities.

### 3. Mitigation Strategies Activities

Work closely with all agencies charged to protect critical nodes of agricultural commodity production and processing and develop long-term strategic plans for enhancing and expanding activities for effective mitigation of biological threats.

### 4. Response Planning and Recovery Activities

- A. Response and Recovery Plans.** In concert with existing agencies and entities, serve as a nexus for the development of response and recovery plans for plant biosecurity.
- B. Development of a Database of Expertise.** Maintain a multi-level database of U.S. and international scientists from government, universities, and the private sector having expertise on priority pathogens and pests and laboratories able to respond to a biosecurity event.

### 5. Outreach and Professional Development Activities

Develop educational and training programs and materials; ensure the availability of long-term education and training and post-graduate training and development.

- A. Development of Educational and Training Programs and Materials.** Coordinate development and use of educational materials for first responders, government officials, university personnel, and others.
- B. Long-term Education and Training.** Coordinate and prioritize efforts to revitalize, repopulate, and enhance

relevancy of applied plant science graduate programs to fill new positions in applied research, teaching, and extension/outreach in federal and state laboratories, universities, and private companies.

### C. Post-graduate Training and Development.

Retrain current researchers, educators, and other professionals in plant pathology, entomology, weed science, and related fields through sabbaticals, internships, fellowships, and other post-graduate development opportunities in homeland security.

### D. Creation of a Public Relations Program.

Work with the Department of Homeland Security, which has primary responsibility for public relations with respect to terrorist and other threats to the nation.

### 6. Research and Development Activities

- A. Targeted Research Initiatives.** Support targeted new research initiatives that will enhance our ability to prevent, detect, respond to, and recover from the introduction of a threat agent.
- B. Establishment of Pathogen and Pest Collections.** Ensure the availability of a central database on culture collections of plant pathogens and arthropods held by U.S. and other investigators.
- C. Assessment and Support of U.S. Research Facilities.** Oversee the assessment of our nation's research facilities with respect to plant biosecurity.
- D. Assessment of Research Needs Related to Plant Biosecurity.** In cooperation with ARS, APHIS, CSREES, land-grant institutions, and other universities, take an active role in identifying research needs and the mechanisms for meeting them.

## Implementation Efforts

The PPB will continue to work with officials from the USDA, DHS, and other federal agencies to try to secure the implementation of the USDA-based center. APS has invited and continues to seek proposal coauthorship and support from other scientific societies, commodity groups, companies, and other stakeholder groups. The Entomological Society of America has joined APS as coauthor of the proposal, and other agencies and entities have pledged support. Still other groups are actively discussing a potential role in supporting the center concept. In 2005, we will initiate conversations with key congressional staff members and will present the final proposal to Congress. ■



# Outreach

## Plant Pathology in the News

The Office of Public Affairs and Education (OPAE) distributes press releases featuring plant pathology-related activities regularly. Below is a list of the releases published in 2004. To review the releases visit [www.apsnet.org/media/press/top.asp](http://www.apsnet.org/media/press/top.asp). If you have ideas for future releases contact OPAE's Communications Coordinator **John Damicone**, +1.405.744.9962 or [jpd3898@okstate.edu](mailto:jpd3898@okstate.edu).

California Pistachio Industry Threatened by Potentially Devastating Disease  
American Phytopathological Society Accepting Technical Submissions for 2004 Annual Meeting  
Stop and Smell the Roses, then Thank a Plant Pathologist  
Plant Pathologists: Rust Disease Impacting Ornamental Plant Production  
Protect Your Trees from Winter Weather  
Ornamental Palms Vulnerable to Disease  
The Plant Doctor Is In—Top Gardening Tips for 2004  
Disease Threatens Cucumbers, Pumpkins, and Other Vine Crops  
Plant Pathologists to Meet in Anaheim, CA, to Discuss Agricultural Security, Plant Disease Management, Food Safety, and More  
Keeping Your Peas and Carrots Safe to Eat—Plant Pathologists Present Research on Food Safety at APS Annual Meeting in Anaheim, California  
Plant Pathologists to Discuss the Future of Organic Farming  
Plant Pathologists Look to Forensics to Aid in Biosecurity  
Plant Pathologists to Discuss Freedom of Information in a Post 9-11 World  
From Orchards and Fields to Townhouses and Offices—Plant Pathologists Seek Ways to Preserve Farms and Protect Crops in Midst of California's Expanding Population  
Thousands of Plant Pathologists Meeting in Anaheim, CA, to Discuss Agricultural Security, Food Safety, and More  
Disease-Resistant Papaya Saves Hawaiian Papaya Industry  
The American Phytopathological Society Installs New Officers  
APS Foundation Names Student Travel Award Recipients  
The American Phytopathological Society Announces 2004 Awards  
Plant Doctors Keep Mazes of Maize Healthy  
Hurricane Damage Creates Pecan Shortage ■

## Historical APS Chemical Control and Fungicide Reports Posted on CropLife Foundation Website



The CropLife Foundation's Crop Protection Research Institute has recently posted two historical American Phytopathological Society reports within the archives sections of its website ([www.croplife-foundation.org/cpri\\_archives.htm](http://www.croplife-foundation.org/cpri_archives.htm)). These reports, one published in 1950 and the other in 1979, were written with funding from federal agencies to provide comprehensive analyses of the state of chemical plant disease control and the fungicide regulatory environment. The studies were intended to serve as historical benchmarks and reference materials for federal regulators, pesticide industry leaders, farmers, phytopathologists, and the general public.

After initial federal inquiries into pesticide spray-residue tolerances by the Food and Drug Administration (FDA) in the 1940s, APS phytopathologists "decided that the profession was obliged...to make the best possible authoritative information available" to the administration. In 1950, "The Present Status of Chemicals Used to Control Diseases of Edible Fruits and Vegetables in the United States" was written to satisfy the demand for proof of the necessity of using fungicides in crop production that resulted from the FDA hearings. The report "clearly demonstrates that many of our fruit and vegetable crops cannot be produced economically, efficiently and in reliable volume without chemical protection from fungus, bacterial, and nematode parasites."

Responding to similar, though more general concerns "for the future prospects of chemical control of plant diseases," phytopathologists on the APS Chemical Control Committee undertook the writing of "Contemporary Control of Plant Diseases with Chemicals: Present Status, Future Prospects, and Proposals for Action" in 1979. With funding from the Environmental Protection Agency, APS set out to analyze the need for agricultural fungicides, the impact of regulations on the availability of fungicides, and fungicide research, development, education, and use implementation programs. After conducting this analysis, the committee concluded that the "crippling of our chemical control technology by over-regulation is a question of genuine concern."

To view or download these reports, please visit the CropLife Foundation archives at [www.croplife-foundation.org/cpri\\_archives.htm](http://www.croplife-foundation.org/cpri_archives.htm). ■

## Report Deadline is December 10, 2004, for *F&N Tests*, Volume 60, and *B&C Tests*, Volume 20

December 10, 2004, is the deadline for submission of reports for review and approval to section editors for *F&N Tests*, volume 60, as well as *B&C Tests*, volume 20. February 25, 2005, is the deadline for final submission, which involves completion of the online submission form and mailing of materials and payment to APS headquarters. The second submission period for *F&N Tests* will be late-spring or early-summer 2005. An exact date will be announced in the instructions and in *Phytopathology News* when finalized. *B&C Tests* is allowing only one submission deadline for this volume.

Report charges remain at \$25 per report for both publications. Please refer to the instructions for preparation and submission of reports at:

*B&C Tests*: [www.apsnet.org/online/BCTests/Guidelines](http://www.apsnet.org/online/BCTests/Guidelines)

*F&N Tests*: [www.apsnet.org/online/FNTests/Guidelines](http://www.apsnet.org/online/FNTests/Guidelines) ■



# Industry Perspective

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## Fungicides Are an Integral Component of Crop Production

Chris Becker, Research Scientist; BAAR Scientific LLC, Immediate Past Director of the Office of Industry Relations.

(Note: This is the first in a series of articles from the APS Office of Industry Relations that outline and document the benefits provided by fungicides in production agriculture.)



Chris Becker

Fungicides are pesticides used to protect seeds, roots, foliage, or fruit from infection by disease-causing fungi. Just as medicines are critical to maintain human and animal health, fungicides, as agricultural medicines, are necessary to maintain, and sometimes restore, the health of agricultural crops.

The APS position statement on fungicides recognizes their value and develops the argument that (i) fungicides provide many benefits; (ii) regulation must be science based; (iii) improved plant health management systems must be developed; and (iv) education is critical to safe pesticide use. (For the entire position statement go to [www.apsnet.org/media/ps/MedicinesforPlantHealth.pdf](http://www.apsnet.org/media/ps/MedicinesforPlantHealth.pdf))

Fungicides have been an integral component of disease management in crop production for more than 100 years. A survey taken in

the 1990s (Dave Ouimette, Dow AgroSciences) estimated that without fungicides, average attainable yields globally would be 25% lower. Plant diseases were estimated as causing annual global losses of \$101 billion.

Examples of losses due to plant diseases were observed by BAAR Scientific LLC in 2003 and 2004. In 2003, abundant spring wetting events allowed severe development of powdery mildew in *Vitis vinifera* and French hybrid grapevines; without fungicides, crop losses were 100%. In addition, some commercial blocks experienced coverage issues and suspected fungicide resistance, so that even after seven to nine applications of fungicides, sufficient powdery mildew developed in the grape clusters to prevent those blocks from being harvested. Lost value of the crop was easily \$4,500/acre. In 2004, blocks of New York grapevines received about 7 in. of rain in May, with an additional 10+ inches in July. Again, following full-season fungicide programs, grape clusters developed high levels of powdery mildew, with additional infestations of downy mildew and botrytis bunch rot. As a result, numerous blocks were passed over for harvest.

Research scientists conduct valuable research

within production systems and develop practices that favor the crop while minimizing plant diseases. Additional research is aimed at improving the knowledge base on pathogen biology. In addition, breeding programs in the United States and worldwide have active goals of incorporating into crops resistance against major and minor plant diseases. As a result of these applied disease management research and breeding programs, growers today have vigorous crops available and more information at their fingertips for improved management of plant diseases. However, despite host resistance, cultural practices, and the addition of quarantines, the reality is that conducive weather exists that favors plant diseases within crops produced for commercial markets.

The fungicides used to manage plant diseases caused by fungi have been categorized into 38 categories, according to target site mode of action, by the Fungicide Resistance Action Committee (FRAC). All fungicides available to growers in the United States must be approved by the EPA. During the review process, the EPA utilizes data from approxi-

*Industry Perspective continued on page 170*



you search for **Agro Diagnostics** enter:  
**www.bioreba.com**

## Applications Invited for Latin American Phytopathology Congress Registration Fee Awards

The APS Foundation, furthering the goals of the French-Monar Latin American Fund, is announcing the availability of 10 awards to early career Latin American plant pathologists. Each award will be for US\$160. The awards will be given as payment for the registration fee when attending the Latin American Phytopathology Congress, which will take place in Cordoba, Argentina, April 19–22, 2005. The guidelines and criteria for the awards follow.

### Guidelines and Criteria

- This is a competitive award to early career plant pathologists in Latin American countries who obtained their highest degree in the last 10 years. The criteria for the award will be the scientific achievements of the applicant and the quality of the work (abstract) submitted to this congress.
- The award, consisting of US\$160, is given to each of 10 plant pathologists and is aimed to pay the registration fee for attending the April 19–22, 2005 XIII Congress of the Latin American Phytopathology Association and the III Workshop of the Argentina Association of Plant Pathologists to be held in Ciudad de Villa Carlos Paz, Province of Cordoba, Argentina.
- Applicants must have an ingeniero agronomo degree or equivalent or an advanced degree obtained within the last 10 years. The applicant must currently be employed at an established institution.
- Applications must include the following information: complete name and name and date of highest degree received and name of institution granting it; institution or agency where presently employed; department address, including, without exception, an e-mail address.
- Applications must be in English or Spanish and must include: (i) a brief resume no more than two pages long, describing the main duties and accomplishments of the applicant, and (ii) a copy of an abstract of a paper to be presented at the congress.
- Applications will be first evaluated by a committee of Spanish-speaking members, which will include one or two Spanish-speaking members of the APS French-Monar Fund Awards Committee.
- The applicants selected by the Spanish-speaking committee as deserving an award will be recommended to the APS French-Monar Fund Awards Committee, which will approve and notify by e-mail the 10 awardees.

### Application Process

Submit application by e-mail to **Dra Laura Giorda**, chair of Spanish-speaking Committee, at [Imgiorda@argentina.com](mailto:Imgiorda@argentina.com) and copied to **Daniel Ducasse** ([dducasse@correo.inta.gov.ar](mailto:dducasse@correo.inta.gov.ar)), **H. Jesse Dubin** ([hjdubin@erols.com](mailto:hjdubin@erols.com)), and **George Agrios**, Chair of APS French-Monar Fund Awards Committee ([gna@ifas.ufl.edu](mailto:gna@ifas.ufl.edu)), **by February 15, 2005**.

- All applications will be evaluated by a Spanish-speaking Committee appointed by the president of the Latin American Phytopathology Congress, which will select all those deserving an award.
- An English version of the applications of those selected by the previous committee will be needed for evaluation and final selection.
- The applicants selected by the Spanish-speaking committee as deserving an award will be recommended to the APS French-Monar Fund Awards Committee, which will approve the 10 awardees.
- Those who will receive the awards will be notified by the chair of the APS French-Monar Fund Awards Committee by e-mail shortly afterward, and no later than March 15, 2005.
- Applicants should provide an e-mail address so they can be contacted whenever necessary. ■

### Together We Make a Difference!

Through contributions from more than 1,400 donors, the APS Foundation has been able to support students and researchers, as well as special programs and projects, in plant pathology. By working together and pooling our resources, we are creating a self-sustaining treasury of funds for advancing the study and practice of plant pathology.

#### Thank you!

For a cumulative list of contributors visit [www.apsnet.org/foundation/donors.asp](http://www.apsnet.org/foundation/donors.asp).

mately 107 different studies to understand the chemical and physical properties of each product, as well as to determine mutagenicity, teratogenicity, metabolism in plants and mammals, degradation pathways in the environment, and acute effects on various “target organisms.” Many new products are currently under development, with many active at lower rates or possessing characteristics with “softer” impacts on the environment or human health. Total costs to develop and finally register a new product are estimated at between \$120 and \$150 million. Not only do these costs cover the chemical synthesis and screening programs, they include the substantial costs associated with the approximately 107 studies required by the EPA for the registration of a single active ingredient.

The 15 top fungicide active ingredients used globally in 2003 (as measured in U.S. dollars) were mancozeb, azoxystrobin, copper-based products, tebuconazole, epoxyconazole, chlorothalonil, carbendazim, difenoconazole, pyraclostrobin, propiconazole, kresoxim-methyl, probenazole, thiofanate-methyl, trifloxystrobin, and sulfur. The market is currently dominated by two classes of fungicides: the strobilurins and the triazoles. Growers use these and other available fungicides to manage diseases based on weather patterns, previous disease history, economics, and other integrated crop management practices. Measuring the benefit of a fungicide application is difficult within farmers’ fields, where no portions remains unsprayed. Documenting product efficacy against certain diseases is currently best achieved from comparative efficacy trials, as summarized in *Fungicide and Nematicide Tests*. In addition, relative comparisons among products can be determined from such trials. Optimum timing and rate selection has typically been the key to obtaining optimum benefits from individual products. However, because the market is dominated by fungicides with a single mode of action, resistance management strategies must be implemented, such as effective tank mixes or alternation programs, for the realization of the short-term benefits, as well as the long-term availability of these fungicides. Organic production of crops is currently an increasing market opportunity for growers. Commercial growers who choose to grow fruits and vegetables organically still rely on fungicides to manage plant diseases, especially in eastern U.S. climates. Fungicides used by organic growers must be OMRI approved, and while effective in many situations, recent studies have shown for that for certain diseases, OMRI-approved fungicides provided wide ranges in level of control. For instance, during 2004 apple trees that were sprayed with a full season of OMRI-

approved fungicides resulted in 43 and 48% incidence of apple scab on leaves in Virginia and West Virginia trials, respectively. Comparably, foliage that received fungicide programs typical for the region had 8 and 3% incidence of apple scab, respectively, whereas nontreated foliage had 86 and 54% incidence of scab in the respective studies. (K. Yoder and A. Biggs, unpublished data to be submitted to F&N tests.)

Due to the high costs of bringing new active ingredients into the market, corporations clearly wish to market fungicides beyond the duration of each product's patent life to recoup the significant cost of development. The top five fungicide companies (Syngenta Crop Protection, BAYER CropScience, BASF, E.I. duPont deNemours, and Dow AgroSciences) each maintains diverse portfolios of agricultural fungicides. Therefore, communication of the benefits and optimum use strategies to growers, university extension faculty, and consultants is important for long-term availability of products and the maintenance of company portfolios. At the same time, regulators must assure consumers, workers, handlers, and the environment that there is a positive benefit-to-risk ratio for each product. The EPA constantly evaluates the benefits of all crop protectants within the BEAD program, which can assist growers within individual regions or states. At the user level, growers must use products according to the label, and they must be aware of the reality that the development of fungal resistance will reduce the length of time key fungicides remain effective.

This article, as well as future industry perspectives, will be published in the PLANT MANAGEMENT NETWORK'S *Plant Health Progress* at [www.plantmanagementnetwork.org/php/](http://www.plantmanagementnetwork.org/php/). ■



Spreading the G-Gnome magic! Mycro and Phyto welcome staff member Michelle Bjerknæs's new daughter Hanna Marie into the world.

## Division News

### 2004 Annual Meeting of the APS-Caribbean Division Held in Cuba

More than 120 participants attended the 44th Annual Meeting of the Caribbean Division of The American Phytopathological Society (APS-CD) held in Havana, Cuba, May 23–28, 2004. The meeting was presided over by President **Esther Lilia Peralta** (Cuba), Vice President **Carlos Araya** (Costa Rica), and Past-President **Jose Amador** (Texas, USA). Three pre-congress short courses were offered: "Molecular Diagnosis of *Citrus tristeza* and Other RNA Viruses" (**Richard Lee**), "Theoretical and Practical Microscopy Methods for Viruses and Bacteria" (**Ron Brlansky** and **Debbie Howard**), and "Molecular Detection of Phytoplasmas" (**Michel Dollet** and **Phil Jones**). Oral talks and posters were presented in the areas of bacteriology, mycology, phytoplasmas, and virology/viroids, as well as on disease diagnostics, disease management, phytosanitary regulations and epidemiology, biological control, and bioproducts. Workshops were held on timely and regionally important topics, including: Citrus leprosis disease; *Citrus tristeza virus*; taxonomy, physiology, and ecology of plant pathogenic fungi; phytosanitary control in plant micropropagation systems; sugarcane production problems in the Caribbean; and plant-pathogen interactions. Field trips included visits to the Bt Biofactory and Center for the Production of Entomophagous Fungi, the Tobacco Research Institute, the National Center for Agricultural Health (CENSA), the Plant Protection Research Institute (INISAV), and the Orchid National Garden of Soroa, Tourist Complex Las Terrazas. The Orchid Garden of Soroa is located in the Biosphere Reservation "Sierra del Rosario." The garden contains more than 700 species of orchids from many sources throughout the world. Two student travel awards were supported by APS-CD, and prizes were presented for best oral (3) and poster (1) presentations by students. The Wellman Award was presented to **Richard Lee** (Florida, USA).

Next year, the Caribbean Division will meet in San José, Costa Rica, June 27–July 1, 2005. Check the Caribbean Division website for details ([www.apsnet.org/members/div/caribbean/](http://www.apsnet.org/members/div/caribbean/)).

### Richard Lee Receives the 2004 Frederick L. Wellman Award from the APS-CD



Richard Lee

**Richard Lee** is the ninth recipient of the Frederick L. Wellman Award, the most prestigious award an active member can receive from The American Phytopathological Society Caribbean Division (APS-CD). It is given to members who have made outstanding contributions to the science of plant pathology in the Caribbean-Latin America area, as well as contributions to APS, in general, and in particular to the Caribbean Division. The announcement of the recipient of the award was made during the Annual Meeting of the Caribbean Division, recently held in Havana, Cuba. Lee is well deserving of this award, having spent his entire professional career doing research on important citrus diseases, particularly viruses, that pose serious threats to this industry in Latin America. He began his work as a plant pathologist after graduation with the University of Florida Citrus Experiment Station in Lake Alfred,

where he stayed until his recent appointment to USDA-ARS National Clonal Germplasm Repository for Citrus and Dates in Riverside, CA. Through his association with the University of Florida, he served as the major professor of many students from the Caribbean area who later became important teachers and researchers in their respective countries. His research has taken him to almost all countries in Latin America where citrus is grown. He has presented his research not only at many meetings of the Caribbean Division, but at numerous symposia, congresses, and meetings dealing with citrus diseases. His publication list is extensive, having published in peer-reviewed journals, peer-reviewed proceedings, non-refereed journals, popular publications, symposium proceedings, three books, and several book chapters. Lee was instrumental in getting extramural funding to sponsor three international workshops to raise awareness of the movement of the brown citrus aphid, vector of the *Citrus tristeza virus* (CTV), into Central America and Caribbean Basin countries. In addition to the workshops, he helped organize a survey to determine the incidence of CTV in Central America and provided training for personnel from each Central America country in methods of survey using ELISA. He was also very helpful, because of his relationship and later appointment to a position with the Food and Agricultural Organization of the UN, in establishing certification programs in Belize and Jamaica. He is in constant demand from researchers, teachers, and students from Latin America to provide advice, training, and resources to develop their capacity to detect and diagnose graft-transmissible pathogens of citrus. ■

# People

## APS Gnome Travels

Phyto finishes off his year of travels at the USDA...

Phyto was excited to meet plant pathologists in the Vegetable Laboratory at USDA-ARS in Beltsville, MD. He learned about current research on host-parasite interactions, disease resistance, epidemiology, and biocontrol, as well as about the historic, landmark research discoveries from Beltsville. Phyto also visited nearby Washington, DC, where he met a group of gnomes considering marching on Washington to raise awareness for the need for research on diseases of dwarf crops. While in Washington, Phyto visited the native plants garden outside the new National Museum of the American Indian and learned about the Three Sisters of agriculture—an interplanting of maize, climbing beans, and squash.

— Deborah Fravel, Vegetable Laboratory, USDA-ARS



## Classifieds

### Classified Placement Policy

You can process your job listing directly through the APS online job placement service at [www.apsnet.org](http://www.apsnet.org). Select "Careers and Placement" from the menu on the left, then select "Post a Job." Your posting will go live within 3-5 business days and will remain on the website for up to three months or until a listed closing date, at which point it will drop off the listing. Fees for posting online are \$25 member/\$50 nonmember for graduate or post-doc positions and \$200 member/\$250 nonmember for all other positions. To publish in *Phytopathology News*, as well as online, there is an additional \$30 fee. Jobs will print in the next available issue after posting.

### Assistant to Full Professor

The University of California Department of Plant Pathology invites applicants for a 9-month, 50% research, 50% teaching, tenure-track position at the rank of assistant to full professor. A Ph.D. degree in plant pathology, experience with soilborne diseases, and the proven ability to conduct innovative research are required. The focus of the position is on the management of soil- and waterborne pathogens of subtropical crops, with an emphasis on avocado and citrus. The successful applicant will be expected to develop a competitive, innovative, problem-solving research program,

using both modern and classic methods. Additionally, the successful candidate will direct the well-funded avocado rootstock development program. Evaluation of applications will begin January 10, 2005, but the position will remain open until filled. The University of California is an affirmative action/equal opportunity employer. **Salary:** Negotiable. **Closing Date:** January 1, 2005 (This closing date is open until the position is filled.) Applicants should send CV, college transcripts, statements of research and teaching interests, a complete list and selected reprints of publications, and three letters of reference to: Dr. John A. Menge, Chair, Search Committee, c/o Cheryl Brusuelas. **Contact:** Cheryl Brusuelas, University of California, Department of Plant Pathology, College of Natural and Agricultural Sciences, Riverside, CA 92521 USA. **Fax:** +1.951.827.4294; **E-mail:** [cherylfb@ucr.edu](mailto:cherylfb@ucr.edu); **Phone:** +1.951.827.4117. **For more information on this position visit:** [www.plantpathology.ucr.edu](http://www.plantpathology.ucr.edu).

### Postdoctoral Research Associate (Plant Pathology)

The USDA, Agricultural Research Service, Foreign Disease Weed Science Research Unit in Frederick, MD, is seeking an 18-month postdoctoral research associate, research molecular biologist (plant pathologist). The incumbent will be part of a multi-institute project of researchers who will study soybean rust caused by the obligate fungal pathogen

*Phakopsora pachyrhizi*. The incumbent will use microarray techniques to monitor gene expression in soybean lines exhibiting resistance to *P. pachyrhizi*. Requirements include a recent Ph.D. degree in plant molecular biology, biochemistry, microbiology, or plant pathology, knowledge of plant pathology and/or microbiology, and experience with recombinant DNA techniques, construction of cDNA libraries, and gene expression studies using microarrays. Portions of the research will be performed in a BSL3 biocontainment facility. Appointment is contingent upon the applicant's successful completion of a preemployment suitability determination. A Limited Background Investigation (LBI) clearance will be required for this position. **Salary:** \$50,593 – \$78,826 per annum. **Closing Date:** January 31, 2005 (This closing date is open until the position is filled.) Send CV, transcripts, and contact information for three references. For further information, contact Yolanda Wilson, USDA/ARS/Human Resources Division; Phone: +1.301.504.1385; E-mail: [ywilson@ars.usda.gov](mailto:ywilson@ars.usda.gov). **Contact:** Reid Frederick, USDA, ARS Foreign Disease-Weed Science Research Unit, 1301 Ditto Ave., Ft. Detrick, MD 21702 USA. **Fax:** +1.301.619.2880; **E-mail:** [rfrederick@fdwsr.ars.usda.gov](mailto:rfrederick@fdwsr.ars.usda.gov); **Phone:** +1.301.619.7386. **For more information on this position visit:** [www.ars.usda.gov](http://www.ars.usda.gov).

### Senior Plant Pathologist

Large, growing, southwestern Florida produce operation seeking an experienced professional to organize and oversee all research and production plant pathology-related activities to support breeding program. Responsibilities include planning all screening and diagnostic activities, including growth environments, coordinating pathogen testing with related marker activities, developing plant/seed health and sanitation protocols, and obtaining pure cultures of all pathogens. A Ph.D. degree in pathology plus five years of experience in a plant pathology laboratory that supports both screening and diagnostic work for breeding and/or production and experience executing bacterial, fungal, and viral disease assays for solanaceous crops in multiple settings is required. Strong applied background in molecular pathology techniques like PCR and/or diagnosis and isolation of solanaceous plant diseases is highly desirable. **Closing Date:** January 1, 2005 (This closing date is open until the position is filled.) Send resume. **Contact:** Susan Merris, Six L's Packing Co., 315 E. New Market Rd., P.O. Box 3088, Immokalee, FL 34142 USA. **Fax:** +1.239.657.9764; **E-mail:** [susanm@sixls.com](mailto:susanm@sixls.com); **Phone:** +1.239.657.4421. **For more information on this position visit:** [www.sixls.com](http://www.sixls.com). ■

# Science, People, Progress...

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## 2005 Application for Membership

### Personal Data

2006

I'm a former member of APS

The address listed is my:  Business  Home

Mr.  Mrs.  Ms.  Dr.

Name \_\_\_\_\_  
First M.I. Last

Title \_\_\_\_\_

Institution/Company \_\_\_\_\_

Department \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip/Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Daytime Phone \_\_\_\_\_

(include country, city, and/or area codes)

Fax Number \_\_\_\_\_

E-mail \_\_\_\_\_

Personal Website \_\_\_\_\_

*This information will remain confidential:*

Date of Birth \_\_\_\_/\_\_\_\_/\_\_\_\_ Gender:  Male  Female  
Month Day Year

### APS Member Dues (Must choose one.)

Regular \$69  Student \$26\*  Post-Doc \$47\*  
 \$ \_\_\_\_\_

\*Faculty Endorsement \_\_\_\_\_  
*(Students and Post Docs must be in a degree-seeking accredited institution verified with a faculty signature).*

Estimated Date of Graduation \_\_\_\_\_

Scientists in Developing Countries: Please download a special application at [www.apsnet.org/visitors/GroupMbrApp2005.pdf](http://www.apsnet.org/visitors/GroupMbrApp2005.pdf).

### Newsletter Options

Membership includes 12 issues of *Phytopathology News*.

How would you like to receive your issues?

Online (PDF with e-mail notice)  Print (mailed via U.S.P.S.)

### Division Options

- Caribbean \$10
- North Central \$5
- Northeastern \$10
- Northeastern ST/PD† \$5
- Pacific \$5
- Pacific ST/PD† \$1
- Potomac \$10
- Potomac ST/PD† \$5
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## Phytopathology

December 2004, Volume 94,  
Number 12

- Dual Activity of a Viral Lysozyme with High Efficiency for Growth Inhibition of *Erwinia amylovora*
- Systemic Acquired Resistance Delays Race Shifts to Major Resistance Genes in Bell Pepper.
- Postharvest Biological Control of *Botrytis cinerea* on Kiwifruit by Volatiles of 'Isabella' Grapes.
- Bioavailability of Iron to *Pseudomonas fluorescens* Strain A506 on Flowers of Pear and Apple.
- Effect of Timing of Application of the Biological Control Agent *Microsphaeropsis ochracea* on the Production and Ejection Pattern of Ascospores by *Venturia inaequalis*.
- Use of Green Fluorescent Protein and Image Analysis to Quantify Proliferation of *Trichoderma harzianum* in Nonsterile Soil.
- Rain Splash Dispersal of *Gibberella zeae* Within Wheat Canopies in Ohio.
- A Model-Based Approach to Preplanting Risk Assessment for Gray Leaf Spot of Maize.
- Factors Affecting the Spread of *Plum pox virus* Strain M in Peach Orchards Subjected to Roguing in France.
- Structural Modifications and Programmed Cell Death of Chili Pepper Fruit Related to Resistance Responses to *Colletotrichum gloeosporioides* Infection.
- Polygenic Inheritance of Partial Resistance to *Fusarium oxysporum* f. sp. *melonis* Race 1.2 in Melon.
- Characterization of Two Major Genetic Factors Controlling Quantitative Resistance to *Melampsora larici-populina* Leaf Rust in Hybrid Poplars: Strain Specificity, Field Expression, Combined Effects, and Relationship with a Defeated Qualitative Resistance Gene.
- Genetic Variability and Structure of Canadian Populations of the Sapstain Fungus *Ceratocystis resinifera*.
- Natural Incidence of Mixed Infections and Experimental Cross Protection Between Two Genotypes of *Tobacco mild green mosaic virus*.
- Diversity Among *Potato virus Y* Isolates Obtained from Potatoes Grown in the United States.

## Plant Disease

December 2004, Volume 88,  
Number 12

- Phytophthora capsici* on Vegetable Crops: Research Progress and Management Challenges.
- Histopathology of Red Stripe of Rice.

- Causal Agent of Red Stripe Disease of Rice.
- Association of *Enterobacter cloacae* with Rhizome Rot of Edible Ginger in Hawaii.
- Efficacy of Bioindexing for Graft-Transmissible Citrus Pathogens in Mixed Infections.
- Population Diversity within Isolates of *Colletotrichum* spp. Causing Glomerella Leaf Spot and Bitter Rot of Apples in Three Orchards in North Carolina.
- Genetic Diversity and Aggressiveness of *Ophiostroma korrae*, a Cause of Spring Dead Spot of Bermudagrass.
- Detection of Geminiviruses in Sweetpotato by Polymerase Chain Reaction.
- Impact of White Mold Incidence on Dry Bean Yield Under Nonirrigated Conditions.
- Suppression of Fusarium Wilt of Watermelon by Soil Amendment with Hairy Vetch.
- Aspergillus flavus* in Soils and Corncobs in South Texas: Implications for Management of Aflatoxins in Corn–Cotton Rotations.
- Detection and Quantification of *Fusarium solani* f. sp. *glycines* in Soybean Roots with Real-Time Quantitative Polymerase Chain Reaction.
- First Report of Species of *Colletotrichum* Causing Leaf Blotch of *Liriodendron tulipifera* in Argentina.
- First Report of *Cucumber leaf spot virus* in Poland.
- First Report of *Peronospora parasitica* on Wild Rocket (*Diplotaxis tenuifolia*) in Italy.
- First Report of Leaf Spot Caused by a *Cercospora* sp. on *Centaurea solstitialis* in Greece.
- First Report of *Pythium tracheiphilum* Causing Wilt and Leaf Blight on Lettuce (*Lactuca sativa*) in Spain.
- First Report of the Causal Agent of Huanglongbing ("Candidatus Liberibacter asiaticus") in Brazil.
- Lasiodiplodia theobromae* as a Causal Agent of Kumquat Dieback in Taiwan.
- Alternaria Leaf Spot, Twig Blight, and Fruit Rot of Highbush Blueberry in Argentina.
- Detection of *Fusarium oxysporum* f. sp. *melonis* Race 1 in Soil in Colima State, Mexico.
- Bacterial Blight on Arugula, a New Disease Caused by *Pseudomonas syringae* pv. *alisalensis* in California.
- First Report of Dollar Spot Caused by *Sclerotinia homoeocarpa* on *Agrostis stolonifera* in Argentina.
- First Report of *Cucumber mosaic virus* in *Eryngium yuccifolium* (Rattlesnake Master) in Ohio.

## MPMI

December 2004, Volume 17, Number 12

- Induction and Spatial Organization of Polyamine Biosynthesis During Nodule Development in *Lotus japonicus*.

- Localization of Superoxide Dismutases and Hydrogen Peroxide in Legume Root Nodules.
- Apoplastic Extracts from a Transgenic Wheat Line Exhibiting Lesion-Mimic Phenotype Have Multiple Pathogenesis-Related Proteins That Are Antifungal.
- Insertion of Transposon Tn5tac1 in the *Sinorhizobium meliloti* Malate Dehydrogenase (*mdh*) Gene Results in Conditional Polar Effects on Downstream TCA Cycle Genes.
- Pseudomonas* Type III Effector AvrPto Suppresses the Programmed Cell Death Induced by Two Nonhost Pathogens in *Nicotiana benthamiana* and Tomato.
- Gene Discovery and Gene Expression in the Rice Blast Fungus, *Magnaporthe grisea*: Analysis of Expressed Sequence Tags.
- The Rice Bacterial Blight Resistance Gene *xa5* Encodes a Novel Form of Disease Resistance.
- cAMP-PKA Signaling Regulates Multiple Steps of Fungal Infection Cooperatively with Cmk1 MAP Kinase in *Colletotrichum lagenarium*.
- Identification and Characterization of Nip, Necrosis-Inducing Virulence Protein of *Erwinia carotovora* subsp. *carotovora*.
- Relationship Between Avirulence Gene (*avrA*) Diversity in *Ralstonia solanacearum* and Bacterial Wilt Incidence.
- Fungal Elicitation of Signal Transduction-Related Plant Genes Precedes Mycorrhiza Establishment and Requires the *dm13* Gene in *Medicago truncatula*.
- Induction of Phytohormones and Differential Gene Expression in Citrus Flowers Infected by the Fungus *Colletotrichum acutatum*.
- Relationships Among Endo-Polygalacturonase, Oxalate, pH, and Plant Polygalacturonase-Inhibiting Protein (PGIP) in the Interaction Between *Sclerotinia sclerotiorum* and Soybean.

## Plant Health Progress

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

- Spread of Wheat Curl Mite and Wheat Streak Mosaic Virus is Influenced by Volunteer Wheat Control Methods
- Bacteria Take on Late Blight, Sprouting, and Dry Rot in Potatoes

## The Plant Health Instructor

[www.apsnet.org/education](http://www.apsnet.org/education)

- Pythium blight disease lesson ■

# Calendar of Events

## APS Sponsored Events

### February 2005

6-8 — **Southern Division Meeting.**  
Little Rock, AR

### March 2005

16-18 — **Potomac Division Meeting.**  
Ocean City, MD

### June 2005

27-July 1 — **Caribbean Division Meeting.**  
San Jose, Costa Rica. [www.apsnet.org/members/div/caribbean](http://www.apsnet.org/members/div/caribbean)

28-July 1 — **Pacific Division Meeting (in conjunction with the Annual Western Soil Fungus Conference).** Portland, Oregon.  
[www.apsnet.org/members/div/pacific/](http://www.apsnet.org/members/div/pacific/)

29-July 1 — **North Central Division Meeting.** (Joint with Canadian Phytopathological Society—Ontario Region)  
Windsor, Ontario

### October 2005

5-7 — **Northeastern Division Meeting.**  
Geneva, NY

## Upcoming APS Annual Meetings

July 30-August 3, 2005 — Austin, TX

July 29-August 2, 2006 — Québec City, Québec, Canada

July 28-August 1, 2007 — San Diego, CA

July 26-30, 2008 — Minneapolis, MN  
(Centennial Meeting)

August 1-5, 2009 — Portland, OR  
August 7-11, 2010 — Nashville, TN

## Other Upcoming Events

### December 2004

4-11 — **Nematode Identification Short Course.** Clemson University, Clemson, SC.  
<http://pppweb.clemson.edu/Nematode.htm>

9-10 — **National Allium Research Conference.** Grand Junction, CO.  
[www.NARC2004.org](http://www.NARC2004.org)

11-15 — **2nd International Symposium of Fusarium Head Blight.** Orlando, FL.  
[www.scabusa.org/fhb\\_symposium.html](http://www.scabusa.org/fhb_symposium.html)

### January 2005

18-21 — **Sudden Oak Death Science Symposium II.** Monterey, California.  
<http://natur.berkeley.edu/forestry/sodsymposium>

10-13 — **Southwide Forest Disease Workshop.** Louisiana State University, Baton Rouge, LA. [www.forestry.auburn.edu/enebak/swfdw/swfdw.html](http://www.forestry.auburn.edu/enebak/swfdw/swfdw.html)

30-February 1 — **Association of Applied IPM Ecologists 2005 Annual Conference.** Fish Camp, CA. [www.aaie.net](http://www.aaie.net)

### April 2005

4-7 — **International Plant Virus Epidemiology Symposium.** Lima, Peru.  
[www.cipotato.org/training/PlantVirusEpidemSymp05](http://www.cipotato.org/training/PlantVirusEpidemSymp05)

10-15 — **9th International Workshop on Plant Disease Epidemiology.** Rennes, France.  
[www.rennes.inra.fr/epidemio2005/](http://www.rennes.inra.fr/epidemio2005/)

10-14 — **International Working Groups on Legume and Vegetable Viruses.** Fort Lauderdale, Florida. <http://conference.ifas.ufl.edu/vegleg>

17-21 — **International Edible Legume Conference in conjunction with the IV World Cowpea Congress.** Durban, South Africa. [www.up.ac.za/conferences/ielc](http://www.up.ac.za/conferences/ielc)

18-22 — **1st International Conference on Plant-Microbe Interactions: Endophytes and Biocontrol Agents.** Lapland, Saariselkä, Finland. [www.bioweb.fi/](http://www.bioweb.fi/)

19-22 — **XIII Latin American Phytopathological Congress/Argentine Phytopathological Association Workshop.** Cordoba, Argentina. [slenard@infovia.com.ar](mailto:slenard@infovia.com.ar)

### May 2005

10-13 — **5th ISTA—SHC Seed Health.** Angers, France. [www.seedtest.org](http://www.seedtest.org)

### June 2005

12-16 — **XII International Sclerotinia Workshop.** Monterey, CA.  
<http://entopl.okstate.edu/iswg/index.html>

17-21 — **9th Verticillium Symposium.** Monterey, CA

25-28 — **Second Asian Conference on Plant Pathology.** National University of Singapore, Singapore. <http://2ndACPP.org>

### July 2005

17-22 — **International Congress on Molecular Plant-Microbe Interactions.** Cancún, México. [www.ismpminet.org/](http://www.ismpminet.org/)

### August 2005

11-15 — **International Congress of Auchenorrhyncha and Concurrent Workshop on Leafhoppers and Planthoppers of Economic Significance.** Berkeley, California.  
[www.cnr.berkeley.edu/hoppercongress/index](http://www.cnr.berkeley.edu/hoppercongress/index)

### September 2005

5-11 — **The VIII International Symposium on Thysanoptera and Tospoviruses.** Pacific Grove, CA. [www.istt2005.net](http://www.istt2005.net)

### November 2005

7-10 — **ASA-CSSA-SSSA International Annual Meetings.** Salt Lake City, UT

### December 2005

8-10 — **Asian Conference on Emerging Trends in Plant-Microbe Interactions.** Chennai, India. [gmanick@vsnl.com](mailto:gmanick@vsnl.com) or [anandalgae@hotmail.com](mailto:anandalgae@hotmail.com) ■

For the most current listing, check out the APSnet event calendar at [www.apsnet.org/meetings/calendar.asp](http://www.apsnet.org/meetings/calendar.asp).

## Phytopathology News

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