Thank You, APS Volunteers

APS has had an amazing year, and we couldn’t have done it without our volunteers! Your dedication to our society has been crucial to our success. By serving as committee and board members, as well as editors, planners, and reviewers, you’ve helped support the society and the field of plant pathology, and for that we thank you!

If you are looking to get involved with APS, contact us at apsheadquarters@scisoc.org. There are many more ways to engage with APS!

Announcing the 2018 APS Webinars

Free for APS members, $49 for nonmembers

Resolve to sign up for the full roster of APS webinars on offer in 2018! APS has worked with plant pathology experts to bring to you timely and useful information that you may put into practice in the field, lab, or classroom. And don’t forget! Webinars are free to APS members!

2018 APS webinars will cover a broad range of topics. From creating collaborations between researchers and STEM teachers to gaining insight into how to get your manuscript published in APS journals to learning how to explain the nature of genetically engineered crops to the public, everyone is sure to gain valuable takeaways as a part of one’s professional development. Check out the first couple for 2018 and sign up today.

Beyond the Ad Hoc Science Talk: Strategies for Creating and Maintaining Meaningful Collaborations with Middle School and High School STEM Teachers

• Learn strategies to initiate and maintain meaningful, bidirectional collaborations between researchers and STEM teachers.
• Create standards-based, grade-band appropriate curricula models.
• Develop and apply assessment tools that analyze program efficacy to demonstrate tangible broader impacts for researchers and student comprehension for STEM teachers.

Lou Hirsch, Department of Plant Pathology, University of Kentucky
January 24, 2018 11:30 a.m. CDT

Getting Your Manuscript Accepted by APS Journals (Even If English Is Your Second Language)

• Understand how APS journals evaluate manuscripts.
• Learn tips on how to make manuscript submission evaluation a positive experience.
• Find out how to know whether the English in your manuscript will meet APS journal standards.
• Get your questions about the review process answered.

Mark Gleason, Department of Plant Pathology and Microbiology, Iowa State University, former editor in chief of Plant Disease (2013–2015)
Alison Robertson, Department of Plant Pathology and Microbiology, Iowa State University, current editor in chief of Plant Disease (2016–2018)
February 21, 2018 11:30 a.m. CDT

Approachable Science on Genetically Engineered Crops

• Learn how to use everyday objects and experiences to explain the nature of genetically engineered (GE) crops.
• Learn how to utilize wisdom from the social sciences to engage the public in discussions on GE crops.

Paul Vincelli, Department of Plant Pathology, University of Kentucky
April 18, 2018 11:30 a.m. CDT

Resolve to sign up for the full roster of APS webinars on offer in 2018! APS has worked with plant pathology experts to bring to you timely and useful information that you may put into practice in the field, lab, or classroom. And don’t forget! Webinars are free to APS members!

2018 APS webinars will cover a broad range of topics. From creating collaborations between researchers and STEM teachers to gaining insight into how to get your manuscript published in APS journals to learning how to explain the nature of genetically engineered crops to the public, everyone is sure to gain valuable takeaways as a part of one’s professional development. Check out the first couple for 2018 and sign up today.

Thank You, APS Volunteers

APS has had an amazing year, and we couldn’t have done it without our volunteers! Your dedication to our society has been crucial to our success. By serving as committee and board members, as well as editors, planners, and reviewers, you’ve helped support the society and the field of plant pathology, and for that we thank you!

If you are looking to get involved with APS, contact us at apsheadquarters@scisoc.org. There are many more ways to engage with APS!

PLANT PATHOLOGY’S PERPLEXING PAST—THE REST OF THE STORY

Lewis David von Schweinitz—the First American Mycologist

Robert M. Harveson, University of Nebraska, rharveson2@unl.edu

Have any of you mycologists ever wondered about the authority of any of the numerous fungi labeled as “Schwein” following its scientific name? Several examples include Puccinia helianthi Schwein (1822), cause of sunflower rust, and Uncinula necator (Schwein.) Burrill (1892), pathogen of grape powdery mildew.

This authority refers to Lewis David von Schweinitz, an ordained minister and bishop in the Moravian Church. He also had a passion for mycology and developed an extensive botanical herbarium with both plants and fungi he had collected primarily from North Carolina and Pennsylvania. In the early 19th century, he was commonly recognized as the authority and founder of mycology in the United States and was called the first American mycologist by William Farlow, Harvard’s renowned professor of cryptogamic botany. Schweinitz’s name, life, and work in mycology are likely little known to most plant pathologists today. That is the rest of the story.

Schweinitz was born in Bethlehem, PA, in 1780. His parents and both sets of grandparents were early pioneers and administrators in the Moravian Church and founded the Moravian colony at Bethlehem. For example, his maternal great-grandfather, Count Nicolas Ludwig von Zinzendorf, established the first Moravian colony in 1722 at Herrnhut in the Görlitz district in Saxony, Germany.

His affection for mycology first began after viewing a lichen in high school. He showed such enthusiasm and aptitude for the subject, he later taught at the school prior to graduation in 1798. His father was the treasurer for the Moravian Church in America but was called to Germany to keep books for the church. After arrival, Schweinitz entered the Moravian Theological Seminary at Nisy, it was there that he met and interacted with J. B. d’Albertini, a professor who shared his interest in fungi and inspired and encouraged him to continue mycological studies.

After graduating from the seminary in 1801, he began teaching at the Moravian school in Nisy, while also studying mycology with d’Albertini. In 1805 they jointly published a 400-page treatise on new genera and species of fungi in that region of eastern Germany. After his ordination as deacon in 1808, he was called to pastor a congregation in Gnadau. He returned to the United States in 1812, after being appointed as the administrator for the entire Moravian Southern Province of America in Salem, NC.

Schweinitz remained in Salem for most of the next decade, continuing his devotion to fungal studies and collecting botanical specimens while still maintaining his administrative duties within the church. He published seminal papers in mycology (all written in Latin, as was the practice of the day), collaborating and exchanging specimens with some of the prominent botanists of the day. His two landmark publications (Synopsis Fungorum Caroliniae Superioris and Synopsis Fungorum in American Borealis) established him as the authority on fungi in North America. In fact, he was so well known, respected, and trusted that he was also offered the presidency of the University of North Carolina but declined.

At the end of 1817, Schweinitz traveled with his family to Germany as an elected representative to the General Synod of the Moravian Church at Herrnhut and spent most of the following year in Europe. Schweinitz returned to Salem but in 1821 was appointed as senior pastor at the Bethlehem, PA, settlement where he had been born. His official duties forced him to travel extensively on church business. The trips enabled him to collect botanical specimens from new areas but also apparently weakened his health and well-being. He died on February 8, 1834, after a prolonged period of fading health.

At the time of his death, his personal herbarium was the largest in the New World, consisting of 23,000 specimens, and it was donated to the Academy of Natural Sciences in Philadelphia. He is now credited with the description of more than 3,000 fungal species from 246 genera. More than 1,200 of these species and seven genera were new to science.

These figures, combined with another 200 new plant species, total more than 1,400 species described by this single individual—Schweinitz, the first American mycologist. Now you know the rest of the story.

Harveson, continued on page 155
Grapevine Viruses: Molecular Biology, Diagnostics and Management builds upon the last handbook written more than 20 years ago on the part of diagnostics. This new title extensively expands its scope by inclusion of molecular biology aspects of select grapevine viruses that are widespread and economically most important, including two newly recognized disease syndromes: Syrah decline and red blotch. Providing the most current information on the biology, transmission, genome replication, transcription, subcellular localization, and virus-host interactions, the volume also touches on several novel areas of scientific inquiry and contains suggested directions for future research in the field of grapevine virology.

Grapevine Yellows Diseases and Their Phytoplasma Agents compiles current knowledge on grapevine yellows (GY) diseases phytoplasma biology at the genomic, transcriptomics, proteomics, and metabolomics levels and summarizes the approaches for their detection. In recent years, new biostatistics and bioinformatics approaches have improved the understanding of phytoplasma biology and interactions with host grapevines and a great improvement has been made toward their molecular detection, both in laboratories and on site. This book explores a number of taxonomically unrelated phytoplasmas that have been associated with GY, which have great economic impact on viticulture worldwide.

Visit [http://shopapspress.org](http://shopapspress.org) to order this new resource and other valuable titles from APS PRESS.

---

New Webcasts Published in the Plant Management Network

In support of its nonprofit publishing mission to enhance the health, management, and production of crops through quality, science-based information, the Plant Management Network (PMN) produces various webcasts for the benefit of applied researchers, extension agents, and agricultural/horticultural professionals. All of these webcasts are authored by some of the world’s foremost experts in plant pathology, entomology, agronomy, and other crop science disciplines. View these talks, plus search for more than 350 others by keyword, at [www.plantmanagementnetwork.org/edcenter](http://www.plantmanagementnetwork.org/edcenter).

**CORN**
- Tactics to Manage Herbicide-Resistant Weeds, Jared Goplen, University of Minnesota
- Tank Cleaning, Fred Whitford, Purdue University

**COTTON**
- Plant Parasitic Nematodes Management Options in Cotton Production, Kathy S. Lawrence, Auburn University
- Identification and Management of Foliar Diseases of Cotton in the United States, Heather M. Kelly, University of Tennessee
- Herbicide-Resistant Common Ragweed Management in Cotton, Charlie Cahoon, Virginia Polytechnic Institute and State University

**POTATO**
- Stubby-Root Nematodes and Corky Ring Spot of Potato, George W. Bird, Michigan State University
- Enlarged Lenticels, Andy Robinson, North Dakota State University and University of Minnesota
- Seed Potato Certification, Robert D. Davidson, Colorado State University

**SOYBEAN**
- Effect of Glyphosate Application on Sudden Death Syndrome of Glyphosate-Resistant Soybean, Yuba R. Kandel, Iowa State University
- Row Spacing and Seeding Rate and Effects on Weed Management, Shawn P. Conley, University of Wisconsin-Madison
- A Review of the Effects of Various Cover Crop Species on Winter and Summer Annual Weed Emergence, Kevin Bradley, University of Missouri

**STRAWBERRY**
- Botrytis Gray Mold of Strawberry, Scott Cosseboom, California Polytechnic State University

Help support PMN’s nonprofit publishing efforts as a partner or a webcast sponsor. To learn more, contact Phil Bogdan at pbogdan@scisoc.org.
Novel Transdisciplinary Study Uncovers Microbes That May One Day Deter Major Grape Disease

To date, scientists have increasingly been studying the structure of microbial communities and their composition associated with plants, but few have been doing so in the context of vascular diseases.

Such studies, though, can have a big impact on protecting crops through the development of bioinoculants and biopesticides, particularly for woody crops like grapes, which are generally associated with heavier chemical pesticide use.

This is particularly true for a bacterial pathogen named *Xylella fastidiosa*. When it multiplies in the stems of grapes and other woody crops, it impairs the movement of water and nutrients within the plant. This phenomenon, identified as Pierce’s disease, is a well known and economically important issue in the wine, raisin, and table grape industries in California.

Pierce’s disease has no cure and can kill vines in as little as 2 years. Finding a natural microbial deterrent to *X. fastidiosa*, the pathogen that causes Pierce’s disease, can have a tremendous positive impact for grape growers and on the environment.

Enter Elizabeth Deyett, M. Caroline Roper, Philippe E. Rolshausen, and several other researchers at the University of California-Riverside (UCR). They studied the microbial communities in grapevines and their connections with Pierce’s disease of grape.


As reported in their paper, they used next-generation sequencing and modern bioinformatics tools to characterize the bacterial and fungal microbiomes living in the grapevines. They analyzed vine samples with mild symptoms of Pierce’s disease, samples with severe symptoms, and finally samples that showed no symptoms at all. Results showed that the microbial communities inside the grapevines studied were mainly composed of bacteria and fungi—particularly Proteobacteria and Ascomycota—with *Pseudomonadales* and *Pleosporales*, respectively, as the main bacterial and fungal orders.

Their data also suggested that the clustering of bacterial communities appeared to be driven by the abundance of the bacterium *Pseudomonas fluorescens* and *X. fastidiosa*.

“Interestingly, we found that when the *Pseudomonas* and *Achromobacter* species were present, *Xylella fastidiosa* was in lower abundance, and Pierce’s disease symptoms were less severe,” said Rolshausen. “This suggests that these organisms may contribute to vine health and have potential use as beneficial microbes that either promote plant health or directly compete with the pathogen.”

“This research is highly interdisciplinary, involving microbiology, microbial ecology, plant pathology, and bioinformatics. And through this research, we are just now beginning to understand what microbes are there,” said Rolshausen.

Other fully open access articles in issue three of *Phytobiomes* include:

- Impact of Insecticide Applications on Arthropod Predators and Plant Feeders in Cambodian Rice Fields
- Microbiome Alterations Are Correlated with Occurrence of Postharvest Stem-End Rot in Mango Fruit

---

*Phytobiomes* Journal

Read them all at [http://phytobiomesjournal.org](http://phytobiomesjournal.org)!
Nearly 20,000 Full-Text Downloads Logged for First Two Issues of *Phytobiomes*

Just a few short months after the APS Annual Meeting, when the second issue of *Phytobiomes* was launched, all 10 articles published in the first two issues logged 18,900 full-text downloads, bringing the average download rate per article to 1,890.

Some of this success can be attributed to full open accessibility of all *Phytobiomes* articles and their promotion in the science media. It is also due to other important factors, such as an editorial board that ensures only high-quality content is published, an increase in the number of libraries indexing *Phytobiomes* into their collections, and an increase in discoverability.

“Building this journal was just part of the story. Knowing we have continued readership shows the real value of *Phytobiomes*,” said Carolyn Young, *Phytobiomes* editor-in-chief. “It is exciting to see these readership numbers after such a short time.”

Interested in authoring or learning more about *Phytobiomes*? Visit www.phytobiomesjournal.org or contact Young at PhytobiomesEIC@scisoc.org.

---

Call for Applications for 2018 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 had a long history of cooperation with the scientific community, and all were pioneers in developing effective soil fumigation through experimental research.

The foundation was established in 1987 to support graduate student research. To date, more than $513,000 has been awarded to 80 promising scientists. In addition to unrestricted cash awards (which range from $5,000 to $10,000 and can be used for any purpose that will benefit the education of the student, including personal expenses), new awardees will also receive round-trip fares to the 2018 ICPP Meeting, “Plant Health in a Global Economy” (hosted by APS) in Boston, MA, and be presented their awards at a luncheon attended by their research advisors, previous awardees, and members of the Foundation Committee.

2017 Award Winners

- **Homa Askarian-Khanaman**, University of Alberta, Genetic structure and virulence of *Plasmopara brassicae* single-spore isolates and field populations from western Canada
- **Kenton Sena**, University of Kentucky, Tracking a tree-killer: Modeling *Phytophthora cinnamomi* distribution in eastern Kentucky

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. The research must be done in the United States, Canada, or Mexico. 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. Since the award is highly competitive, we encourage unsuccessful applicants to update their proposals for future consideration. The research for which the award is given is expected to be performed by the applicant during the academic year 2018–2019, and a one-page progress report is due 1 year from the date of the award. It would be appreciated if the foundation were acknowledged in research publications stemming from this award.

To be considered for funding, each proposal should be carefully prepared in accordance with the instructions given below and submitted electronically no later than May 1, 2018, to Michael Stanghellini, chair of the Selection Committee, michael.stanghellini@ucr.edu.

Please submit a combined file containing a short, two- or three-page research proposal containing a concise statement of the objectives, methods and materials, and projected impact of the proposed research (note: a budget is not required); a one-page resume (i.e., a brief education and research background, including a telephone number and e-mail address); and a letter of recommendation from the applicant’s major professor or research director.

Preference will be given to those proposals containing innovative, creative, and/or novel research approaches to the stated objective(s) and to the overall quality (organization and correct English grammar and spelling) of the written proposal. Funding will begin September 1, 2018.
It’s Never Too Early to Renew!

Don’t wait to renew your membership! Renewing keeps your membership current into the new year. Make it your resolution to renew early, and check it off before 2018! It’s easy to renew online at www.apsnet.org/renew. Before you check out, be sure to enroll in Auto Renew to ensure your membership never expires.

Don’t get caught with your plants down. Renew today!

APS Foundation

APS Members
Generously Donate More Than $96K

Thank you to those donors whose combined donations totaled more than $96,000 to the APS Foundation in 2017. These donations have a lasting impact on the many individuals receiving support—for every dollar you give, more than 90% goes directly back to stimulate the field of plant pathology. We encourage all of our members to donate and contribute to the future of plant pathology; any amount has a significant impact. Please visit www.apsnet.org/give for more information.

Apply for an APS Foundation Award Today!

The APS Foundation is now accepting applications for several 2018 awards. Applications for the following awards must be submitted on or before February 16, 2018, at www.apsnet.org/members/foundation/apply:

- Plant Pathology Experiential Award: Funds for a graduate student or postdoc to facilitate career and research development experiences with organizations outside academia ($500)
- JANE Research Award: Research funding for cooperation between U.S. and developing country scientists ($3,000)
- International Travel Award: Support for early and midcareer scientists from developing countries to attend the annual meeting ($1,500)

Now is the time to support your passions. Apply today!

2017 APS OIP GLOBAL EXPERIENCE

Awardees Focus on Bioprospecting Beneficial Microbes for Increasing Stress Tolerance and Disease Control

Michael D. Jochum, Texas A&M University (TAMU), jochum00@tamu.edu, Luis Moncayo, Instituto Nacional de Investigaciones Agropecuarias, email, Young-Ki Jo, TAMU, ykjo@tamu.edu

With financial support from the APS Office of International Programs (OIP) Global Experience Award, Michael Jochum, a graduate student at Texas A&M University (TAMU), was able to travel to Joya del Sachas, Ecuador, and conduct a two-day classroom and field workshop at the Estación Experimental Central de la Amazonía, Instituto Nacional de Investigaciones Agropecuarias (INIAP).

On the first morning, Jochum instructed a classroom-based lecture in Spanish focusing on the following topics: the fundamentals of plant-microbe interactions, defining and understanding the phytobiome, an introduction to bioprospecting plant growth-promoting microorganisms (PGPM), different methods for isolation and screening PGPM for biocontrol applications, and providing examples of commercially inoculating PGPM in the field.

The second day consisted of a field workshop in which the scientists at INIAP conducted a field day demonstration of their experiments in conventional and organic agricultural production of various tropical crops, including cacao, coffee, and banana. Jochum demonstrated proper sampling of different leaf, root, and soil samples from these various crops for disease diagnosis. During the afternoon, INIAP technicians transported the samples back to the lab for the microbial isolation hands-on workshop. Jochum demonstrated and supervised INIAP technicians on the proper methods for conducting a serial dilutions series, microbial isolation of bacteria and fungi, in vitro identification of antibiosis by bacteria and fungi, and seed coating with beneficial microbes for greenhouse and field trials.

This collaborative workshop and exchange of information set a precedent and laid the foundation for fostering a future international collaboration between TAMU and INIAP for research on the discovery of new technology for microbiome biocontrol, future exchange of students, and pursuit of international collaborative funding opportunities. Most of all, this experience fostered Jochum’s interest in his future career toward plant pathology and disease management.

We would like to thank Young-Ki Jo in the Department of Plant Pathology and Microbiology at TAMU, APS, OIP, and INIAP for their support of this incredible international experience.
Student Degrees

Jati Adiputra recently completed requirements for a Ph.D. degree in plant pathology at Washington State University (WSU). His committee consisted of Naidu Rayapati (chair), Dennis Johnson, and Doug Walsh (WSU Department of Entomology), and Alex Karasev (University of Idaho). Adiputra’s dissertation was entitled “Studies on viruses associated with red leaf symptoms in Washington vineyards.” His graduate program was funded, in part, by the U.S. Agency for International Development (USAID) Indonesia Mission under the cooperative project “A Smart Strategic Coalition for Sustainable Agriculture and Economic Development in Indonesia.” Adiputra also received the Walter J. Clore scholarship from the Washington Wine Industry Foundation during 2015 and 2016. He returned to Indonesia in late September to rejoin the Indonesian Agricultural Quarantine Agency, the Ministry of Agriculture of Republic of Indonesia.

Shannon Carmody completed her M.S. degree in plant pathology from Washington State University (WSU). Her thesis was entitled “Light leaf spot and white leaf spot of Brassicaceae in Washington State.” Carmody’s committee members included Lindsey du Toit (chair), Lori Carris (WSU), Tim Paulitz (USDA ARS), and Cynthia Ocamb (Oregon State University). Carmody grew up in Rock Island, IL, and graduated with a double major in environmental studies and international relations from Beloit College in Beloit, WI. She worked for 5 years as the director of public programs at Seed Savers Ex change in Iowa and 1 year as the operation director for Viva Farms, a land-based farm business incubator in the Skagit Valley of northwestern Washington that helps beginning farmers and farm workers transition to farm ownership. Carmody came to WSU in January 2015. At WSU, Carmody received the Alexander A. Smick Scholarship in Rural Community Service and Development in 2015. She is moving to coastal California, where she will seek employment in seed pathology and seed production.

Doug Walsh (WSU Department of Entomology), and Alex Karasev (University of Idaho). Adiputra’s dissertation was entitled “Studies on viruses associated with red leaf symptoms in Washington vineyards.” His graduate program was funded, in part, by the U.S. Agency for International Development (USAID) Indonesia Mission under the cooperative project “A Smart Strategic Coalition for Sustainable Agriculture and Economic Development in Indonesia.” Adiputra also received the Walter J. Clore scholarship from the Washington Wine Industry Foundation during 2015 and 2016. He returned to Indonesia in late September to rejoin the Indonesian Agricultural Quarantine Agency, the Ministry of Agriculture of Republic of Indonesia.

Shannon Carmody completed her M.S. degree in plant pathology from Washington State University (WSU). Her thesis was entitled “Light leaf spot and white leaf spot of Brassicaceae in Washington State.” Carmody’s committee members included Lindsey du Toit (chair), Lori Carris (WSU), Tim Paulitz (USDA ARS), and Cynthia Ocamb (Oregon State University). Carmody grew up in Rock Island, IL, and graduated with a double major in environmental studies and international relations from Beloit College in Beloit, WI. She worked for 5 years as the director of public programs at Seed Savers Ex change in Iowa and 1 year as the operation director for Viva Farms, a land-based farm business incubator in the Skagit Valley of northwestern Washington that helps beginning farmers and farm workers transition to farm ownership. Carmody came to WSU in January 2015. At WSU, Carmody received the Alexander A. Smick Scholarship in Rural Community Service and Development in 2015. She is moving to coastal California, where she will seek employment in seed pathology and seed production.

Award

Kira Bowen, president-elect of APS, was given an Outstanding Alumni Award for the College of Agricultural Sciences of The Pennsylvania State University (PSU) and was inducted into the Armsby Honor Society in a ceremony at PSU on October 25, 2017. The Department of Plant Pathology and Environmental Microbiology (PPEM) nominated Bowen for distinguishing herself through her professional accomplishments, scholarship, and service. Graduate and undergraduate students and faculty, including former PPEM department heads Elwin Stewart and Barbara Christ, joined Bowen and her spouse for the ceremony.

In speaking about service, Bowen said, “I do it because it is the right thing to do as a member of my profession.” Bowen is a 1980 PSU plant sciences alumna whose adviser was PPEM’s William (Bill) Merrill, Jr., a forest pathologist. Merrill, PPEM facilities staff member Leona Price, and Richard D. Schein, who taught Bowen’s epidemiology class, were influential in Bowen’s decision to pursue graduate degrees in plant pathology, obtaining her master’s degree from the University of Minnesota (Merrill’s alma mater) and Ph.D. from the University of Illinois. After a 1-year post doctoral position with USDA ARS in the Department of Plant Pathology at North Carolina State University, Bowen has spent the past nearly 30 years as a member of Auburn University’s entomology and plant pathology faculty. As president-elect of APS, Bowen will become president after the 2018 annual meeting as part of a 4-year cycle of service. Bowen met with graduate students and shared with them the benefits of APS membership, how to get involved, and how to make a difference in our society. A donor provided funding for graduate student memberships to APS for those students who attended. Additionally, she had lunch and a roundtable discussion with graduate and undergraduate students on professional development. Bowen’s spouse, John Torbert, joined her for a tour of the PSU Arboretum and woodland. They joined Carolee Bull, PPEM head, and spouse Jean-Philippe Filletaz for a visit to the Happy Valley Winery, where they reminisced with owners Carolee Bull and Christ, who served as APS president as well as acting and associate dean for the College of Agricultural Sciences.

Collaboration

James M. Bradeen, professor and department head of the Department of Plant Pathology and codirector of the Stakman-Borlaug Center at the University of Minnesota, visited the Department of Plant Pathology and Environmental Microbiology (@PSUPPEM) at The Pennsylvania State University (PSU) as a College of Agricultural Sciences Multicultural Diversity Fellow on September 23–26, 2017. Bradeen began his visit with croquet and dinner with Students for Cultivating Change. The PSU club is the first student chapter of the Cultivating Change Foundation, which values and elevates LGBT agriculturists through advocacy, education, and community. Bradeen delivered the PPATH 590 Colloquium, entitled “Borrowing from neighbors: Leveraging comparative genomics for improved plant disease resistance,” on September 25. In addition to meeting with faculty and students during his stay, Bradeen enjoyed a tour of Frank Lloyd Wright’s Fallingwater in Mill Run, PA, with Carolee Bull.
New Position

Kanokporn Trivitayakorn. Fulbright Visiting Scholar from the Institute of Molecular Biosciences, Mahidol University, Thailand, recently joined Deven See's lab of USDA ARS Wheat Health, Genetics, and Quality Research Unit and the Department of Plant Pathology, Washington State University. In See's lab, Trivitayakorn will work on a project entitled “Genomic-assisted approaches for cassava breeding program in Thailand.” With the importance of cassava for the world population, as well as the Thai economy, breeding of cassava with high yield, starch, resistance to diseases, and other important traits is essential for the cassava breeding program in Thailand. The Fulbright Program in Thailand has emphasized the importance of cassava to the country and annually awards scientists under the Thai Visiting Scholar (TVS) Program to study and research abroad in labs with technologies not available in Thailand. Working in See's lab, Trivitayakorn will develop molecular markers generated from next-generation sequencing and apply the markers for the construction of a high-density genetic linkage map of cassava based on 250 individuals of Thai cassava germplasm as well as 250 F1 samples derived from three different crosses. Phenotypic data that have been collected in Thailand for at least 2 years will be used together with molecular markers for quantitative trait loci (QTL) analysis. After obtaining the QTL map, physical mapping will be performed and the regions containing QTL associated with important traits will be focused on for gene annotation and identification. The information and knowledge obtained from this collaborative project will serve as the basis to formulate an economic and sustainable strategy to enhance cassava productivity. Furthermore, the collaboration will provide various opportunities for providing global, cutting-edge plant science education to young researchers.

In Memory

Samuel W. “Sam” Braverman. 87, of Cynthia Drive, passed away on October 6, 2017, in his home. Sam was born on February 19, 1930, in Boston, MA, to A. Harry Braverman and Edith Gleckman Braverman. He received his B.A. degree from Clark University in 1952, his M.S. degree in plant pathology and botany in 1954, and his Ph.D. degree in plant pathology and entomology in 1957 from The Pennsylvania State University. He was employed by the USDA at the NYSAES, Geneva, as a research plant pathologist from 1957 to 1972. He was appointed as director of Plant Quarantine Services, Nairobi, Kenya, for the East African Community of Kenya, Tanzania, and Uganda from 1972 to 1974. He was a member of the Inter-African Phyto-Sanitary Commission. He represented the EAC International Symposiums in Eastern Europe. Dr. Braverman authored more than 100 scientific papers in domestic and foreign journals. He served as an external examiner for Ph.D. students at the University of Nairobi. Upon his return to NYSAES, he was appointed associate director for agriculture research for the Northeast, working out of the USDA Ithaca office. Sam was a member of Temple Beth-El, Geneva, since 1957, serving in many capacities: president, treasurer, and board of trustees. He was a member and past president of the Finger Lakes Stamp Club, an avid bridge player, and a member of the Men’s Bridge Club, Seneca Falls. He spent 23 winters with his wife in the Golden Isles of southeast Georgia, making Jekyll Island and St. Simons Island their winter home, where he was a member of Temple Beth Tfillo. He and his wife would have celebrated 60 years of marriage on November 24, 2017.

He is survived by his wife, Sandra Epstein Braverman; his sons, Allan J. Braverman of Beaverton, Oregon, and Daniel (Lorrie) Braverman of Geneva; grandsons Paul Braverman of Fresno, California, and Jason (Lindsey) Braverman of Farmington; along with great-granddaughter Leah Josephine Braverman of Farmington. Also he is survived by several cousins, nieces, nephews, and many friends. He was predeceased by his sister, Judith Braverman Burg. For those wishing to write a note of condolence, please visit www.devaneybennettfh.com. Arrangements have been entrusted to the DeVaney-Bennett Funeral Home.

Bobby Renfro began college at N.E. Oklahoma A&M College in 1950 and then transferred for his baccalaureate in biology and chemistry at Central Oklahoma University. Following a year and a half (1953–1954) teaching sciences in Hennessy High School, he completed a master’s degree in plant pathology and genetics at Oklahoma State University (1955) under the direction of Harry Young, Jr. He completed his doctorate at the University of Minnesota (1956–1960), where he worked briefly with J. J. Christensen on cereal diseases but assumed the rank as a research fellow in coordinating a five-state regional project on the epidemiology of black stem of alfalfa with Milton Kernkamp and Roy Wilcoxson. Following his graduation, he began what turned out to be a life-long career with the Rockefeller Foundation (RF). He began with the RF Agricultural Program in India, first as an associate corn breeder and research geneticist in cooperation with the Indian Council of Agricultural Research’s Coordinated Maize Improvement Scheme (1960–1964); later as a plant pathologist on maize, sorghum, millets, and wheat (1964–1970); director/coordinator of the Inter Asian Corn Improvement Program (1967–1971); and a plant pathologist with the RF Agricultural Program in Thailand (in cooperation with Kasetsart University (KU), Bangkok, 1971–1983). He was coordinator of CYMMYT’s (Centro Internacional de Mejoramiento de Maiz Y Trigo) Asian Maize Program (1984–1999) and a plant pathologist at CYMMY in Mexico, continuing collaborative research on breeding, plant pathology, and entomology.

By working jointly to enhance the progress in maize improvement in Asian countries, such as Thailand, the Philippines, Indonesia, and particularly India, his carefully coordinated research led to a rapid development of higher-yielding disease-resistant maize composites and hybrids. While in India, he became aware of a rapid international spread of tropical downy mildews in maize, sorghum, and millets. Renfro organized all of the first five global conferences on tropical downy mildews of maize and other grasses as well as the publication of their proceedings. As others have noted, this collaborative work quickly led to a better understanding of management and control of these diseases. He assisted in the development of a maize cultivar, Suwan-1, One of the most admired maize pathologists who worked throughout the world on managing diseases of maize, sorghum, millet, and other cereals, Bob Renfro, an international leader on maize research, died August 24, 2017, in Bartlesville, OK. Bob was raised in Big Cabin, OK. After completing his service with the U.S. Army (1946–1948), he married Wilma M. King (1950) from Cherryvale, KS. They had two sons, Ray and Bob, and two grandchildren, Ambreen and Shawn.
with Sijun Jinahyon from KU. Sources of resistance in maize to these downy mildew diseases were known to exist in several locations but most commonly from Mindanao Island in the Philippines. Unfortunately, these downy mildew-resistant cultivars had low yields. By developing an “off season, in-field” technique to screen for higher levels of resistance to downy mildew in Thailand, progenies with the highest disease resistance were selected and intercrossed for several generations of selection for higher yield. This recycling of and joint selection for disease resistance with superior yield gave rise to Suwan-1. This cultivar was released in Asia, South America, and Africa as a maize synthetic population with sources of downy mildew resistance with much improved yield. In so far as known, Suwan-1 represents the best source of downy mildew resistance for maize.

As part of the program in India, he served on committees of several graduate students and chaired others. In Thailand, he was assigned to the Thai National Corn and Sorghum Program as well as a professor at KU, where he taught graduate classes and directed the research of several graduate students in plant pathology and served on committees of several graduate students. Bob served on the six-person external review panel of the International Sorghum and Millets Program, USAID, from initiation in 1979 to February 1986. He served as an adjunct professor at Texas A&M University (TAMU) (1998–1990) as he assisted in the education of international graduate students in plant pathology and finally as a visiting professor at TAMU (1991–1992) before he and Wilma retired to their home in Bartlesville, OK. With the passing of Wilma in 1996, Dr. Renfro maintained his home in Bartlesville; later he met and married a colleague from KU, Penphit Prakhongchit, on June 28, 2014.

In recognition of his work, he was elected Fellow of the National Academy of Sciences in India and a member and Fellow of the Indian Society of Genetics and Plant Breeding. He also was a member of the American Phytopathological Society, the Indian Society of Plant Pathology and councilor of the Northern Zone, the American Society of Agronomy/Plant Science, and the International Society of Plant Pathology, where he was chair of the working group on graminaceous downy mildew diseases (1978–1984). Additionally, he proudly received the Norman E. Borlaug Silver Medal for his role in the Green Revolution in India. He was credited with 125 publications in book chapters, refereed journals, and proceedings of international downy mildew conferences.

He will be missed for his wise counsel and assistance and remembered as a kind and dynamic international leader.

Submitted by Richard A. Frederiksen, Professor Emeritus, Texas A&M University

What’s Going On?
Have you recently graduated, received an award, or been promoted? Is something noteworthy happening in your department? We want to hear from you! Share your news with the APS community! Submit your news online at www.apsnet.org/publications/phytopathologynews/_layouts/apsforms/phytosubform.aspx.

Mark Your Calendars for Upcoming APS Division Meetings in 2018

Participating in APS Divisions is one of the best ways to stay connected with your colleagues in plant pathology. Divisions hold annual meetings, which are the perfect opportunity for networking and learning the latest about regional issues and efforts. They also offer the perfect setting for graduate students to obtain presentation experience at a professional meeting. Check out these upcoming meetings, and stay tuned for updates from the other divisions at www.apsnet.org/meetings/divisionmeetings/.

SOUTHERN DIVISION MEETING
February 16–18, 2018
The Chancellor Hotel in Fayetteville, Arkansas
Abstract Deadline: December 15
Early Registration Deadline: February 5
http://www.apsnet.org/members/divisions/south/

POTOMAC DIVISION MEETING
March 21–23, 2018
Princess Royale in Ocean City, Maryland
http://www.apsnet.org/members/divisions/pot/

PACIFIC DIVISION MEETING
June 25–27, 2018
Tenure-Track Faculty Position on Plant-Microbe Interactions

The Department of Molecular Biology at the University of Wyoming invites applications for an assistant professor studying plant-microbe interactions. Candidates whose research interests and expertise focus on the molecular basis of plant-microbe interactions and incorporates a variety of approaches, such as genomics, genetics, molecular biology, biochemistry, cell biology, molecular ecology and evolution, computational biology, and high-throughput phenotype screening, are particularly sought. The Department of Molecular Biology is a research-intensive academic unit with broad expertise including biochemistry, genetics, cell biology, microbiology, immunology, biotechnology, and genomics (www.uwyo.edu/molecbio/). Molecular Biology Faculty participate in interdisciplinary and departmental graduate programs. Once hired, the candidate is expected to develop a productive extramurally funded research program and to participate in teaching in the core Molecular Biology curriculum. This search is one of four in a cluster in the Program in Ecology (aquatic ecosystem ecologist, biogeochemist, computational biologist, and plant-microbe interactions), and candidates may also participate in the interdisciplinary Ph.D. programs in Molecular and Cellular Life Sciences and Hydrologic Science. The cluster hire is supported in part by a new 5-year, $20 million NSF EPSCoR RII Track-1 grant to the university. In this project, we will study microbial life and its ecological consequences. Faculty hired in these searches will benefit from the project’s infrastructure and scientific outcomes and will contribute to the project’s institutional capacity building in the candidate’s area of expertise. Additional details are available: http://www.uwyo.edu/epscor/microbial-ecology/facsearches.html.

Applicants must have the following: Ph.D. or equivalent degree in relevant field. At least 2 years of postdoctoral experience. Evidence of excellent research productivity and written communication skills. Preference will be given to candidates who use molecular approaches described above. Applicants should: 1) Complete the online application, including uploading as one, single PDF file: a letter of intent, curriculum vitae, a statement describing research interests, and a statement describing teaching interests and philosophies. 2) Email up to three digital reprints of papers to mbiology@uwyo.edu with “Plant-microbe interaction” in the subject line. 3) Candidates contacted for interview may be requested to have three letters of recommendation submitted on their behalf. The review of applications will begin November 27, 2017, and continue until an appropriate candidate is identified.

Postdoctoral Fellow

The selected candidate will work on mechanisms of action of antifungal proteins defensins and defense-like peptides. The project also involves protein engineering to increase the antifungal activity of these peptides and expressing these peptides in transgenic plants for enhanced resistance to fungal and oomycete pathogens. Experience with fungal pathogens is highly desirable but not essential. Candidates with expertise in biochemistry, molecular plant pathology, and plant molecular biology are encouraged to apply. This is a great opportunity to participate in an interdisciplinary and collaborative research program at a not-for-profit research center with state-of-the-art equipment. Salary range for the position is $45,000-50,000 per year. Applicants should send a cover letter, statement of research interests, and CV including the names of three references to: Dr. Dilip Shah, Donald Danforth Plant Science Center, 975 North Warson Road, St. Louis, MO 63132. Email: dshah@danforthcenter.org

Scientist I

The primary responsibilities of this role, Scientist I, are to: plan and coordinate innovative and robust in vitro and in planta methods to differentiate samples for project and product support questions; develop and optimize assays in the lab and greenhouse and other experimental techniques that characterize innovative microbial technologies for disease control potential; integrate computational and statistical methods in experimental design and data analysis; conduct lab and greenhouse experiments, including collecting, graphing and reporting of data; Provide concise analysis and feedback about experimental results to supervisors, highlighting important results and defining next step experiments; Coordinate, cooperate, and collaborate on these research activities with peers, supervisors, subordinates, and external parties; Communicate effectively by listening, documenting, presentation, and gathering relevant stakeholder feedback; Identify, develop, assess, and implement new and innovative disease management tools for departmental and project advancement; Survey scientific activities in academia and competitor research activities relative to this objective. Ph.D. in plant pathology or related field with no minimum years relevant experience; or M.S. in plant pathology or related field with a minimum of 2 years relevant experience; or B.S. in plant pathology or related field with minimum of 5 years relevant experience is required. Research experience in field of plant pathology as it relates to industrially important crops, especially with soil diseases; experience with sterile technique, plant cultivation, and pathogen acquisition, cultivation, and storage; broad understanding of scientific principles and biostatistics; proficient computer skills in MS Office, including Outlook, PowerPoint, and Excel; an understanding of agronomic approaches and cropping production systems; ability to connect with an already established network of external scientific experts on relevant topics (i.e., extension specialists, growers, and academics); ability to conceptualize, design, and execute lab and greenhouse experiments that address research questions; excellent interpersonal, communication, and presentation skills; ability to work independently with minimum supervision and as a member of a multidisciplinary research team; prior experience working in a team environment and ability to adapt to the atmosphere of a dynamic research organization; and proven track record of driving initiatives and improving processes also required. For full details visit: https://jobs.bayer.com/job/West-Sacramento-Scientist-I-California/437790401/?locale=en_US.

Find the Latest Jobs in Plant Pathology

Don’t forget, members can search online for new job opportunities in the field of plant pathology using the APS Job Center. View the latest postings online in the APS Job Center at www.apnet.org/careers/jobcenter/Pages/FindaJob.aspx.
A Risk Assessment Model for Bacterial Leaf Spot (BLS) of Pepper, caused by Xanthomonas euvesicatoria

B. Dutta, D. B. Langston, X. Luo, S. Carlson, J. Kichler, and R. Gitaitis

Krishna Subbarao, Phytopathology, editor-in-chief

Age-Related Resistance in Arabidopsis thaliana Involves the MADS-Domain Transcription Factor Short Vegetative Phase and Direct Action of Salicylic Acid on Pseudomonas syringae

Daniel C. Wilson, Christine J. Kemphorne, Philip Cella, David K. Liscombe, and Robin K. Cameron

John McDowell, MPMI, editor-in-chief

Associations Between Armillaria Species and Host Plants in U.K. Gardens

Jassy Drakulic, Caroline Gorton, Ana Perez-Sierra, Gerard Clover, and Liz Beal

Alison Robertson, Plant Disease, editor-in-chief

Prevalence of Postharvest Diseases of Mandarin Fruit in California

S. Saito and C. L. Xiao

Pamela D. Roberts, Plant Health Progress, editor-in-chief

Phytopathology

• Epidemic Network Analysis for Mitigation of Invasive Pathogens in Seed Systems: Potato in Ecuador
  OPEN ACCESS

• Large-Scale Atmospheric Dispersion Simulations Identify Likely Airborne Incursion Routes of Wheat Stem Rust into Ethiopia
  OPEN ACCESS

• A White Paper on Global Wheat Health Based on Scenario Development and Analysis

Plant Disease

• First Detection of Xylella fastidiosa Infecting Cherry (Prunus avium) and Polygala myrtifolia Plants in Mallorca Island, Spain
  OPEN ACCESS

• Occurrence of Cowpea mild mottle virus in Common Bean and Associated Weeds in Northeastern Brazil
  OPEN ACCESS

• Sources of Primary Inoculum of Botrytis cinerea and Their Impact on Fungicide Resistance Development in Commercial Strawberry Fields

MPMI

• Whole Genome Sequences of the Raspberry and Strawberry Pathogens Phytophthora rubi and P. fragariae
  OPEN ACCESS

• Pathogen and Pest Responses Are Altered Due to RNAi-Mediated Knockdown of Glycoalkaloid Metabolism 4 in Solanum tuberosum
  OPEN ACCESS

• Dynamic Changes in the Rice Blast Population in the United States over Six Decades

Phytopathomes

• Microbiome Alterations Are Correlated with Occurrence of Postharvest Stem-End Rot in Mango Fruit
  OPEN ACCESS

• Impact of Insecticide Applications on Arthropod Predators and Plant Feeders in Cambodian Rice Fields
  OPEN ACCESS

• Microbial Landscape of the Grapevine Endosphere in the Context of Pierce’s Disease
  OPEN ACCESS

Plant Health Progress

• Fungicide Selection and Nozzle Arrangement Impact Target Spot Control and Yield of Cotton

• Occurrence of a Citrus Canker Strain with Limited Host Specificity in South Texas

apsjournals.apsnet.org
### Calendar of Events

#### APS-Sponsored Events

**FEBRUARY 2018**

16–18 **Southern Division Meeting.** Fayetteville, AR. [www.apsnet.org/members/divisions/south](http://www.apsnet.org/members/divisions/south)

**MARCH 2018**

21–23 **Potomac Division Meeting.** Ocean City, MD. [www.apsnet.org/members/divisions/pot](http://www.apsnet.org/members/divisions/pot)

**JUNE 2018**

25–27 **Pacific Division Meeting.** Portland, OR. [www.apsnet.org/members/divisions/pac](http://www.apsnet.org/members/divisions/pac)

**JULY 2018**


#### Important APS Dates to Remember

**NOVEMBER 2017**

6 **PDMR Volume 12** submission form open

**DECEMBER 2017**

1 APS Foundation Award applications due
1 Vice President and Councilor-at-Large nominations due
8 Abstracts due for ICPP2018
11 **PDMR Volume 12** submission form closed

**JANUARY 2018**

16 OIP Global Experience Program applications due

**FEBRUARY 2018**

16 Final reports for **PDMR Volume 12** due

#### Other Upcoming Events

**DECEMBER 2017**

4–7 **miCROPe 2017—Microbe-Assisted Crop Production: Opportunities, Challenges, and Needs.** Vienna, Austria. [www.micrope.org](http://www.micrope.org)

5–7 **International Soilborne Oomycete Conference.** Islamorada, FL. [http://oomyceteconference.org](http://oomyceteconference.org)

**MARCH 2018**

7–8 **Southern Soybean Disease Workers Meeting.** Pensacola Beach, FL. [http://ssdw.net](http://ssdw.net)

7–8 **European Agrochemical Adjuvants Innovation Meeting.** Germany. [www.eaa-innovations.eu](http://www.eaa-innovations.eu)


**SEPTEMBER 2018**


**JULY 2019**

14–18 **IS-PMPI XVIII Congress.** Glasgow, Scotland. [www.ispmpi.org/congress/2019](http://www.ispmpi.org/congress/2019)