

## Plant Health 2021 Online Preview: A Conversation with Plenary Speaker Professor Marin Talbot Brewer

Jim Bradeen, APS Internal Communications Officer



A plant pathologist, a fungal cell biologist, and a medical mycologist walk into a conference room. Nope, it wasn't the start of a joke, it was a meeting of the University of Georgia's Fungal Group—a multi-

disciplinary weekly meeting of mycophiles. On this particular day, **Prof. Marin Talbot Brewer's** student was presenting their

research on gummy stem blight, a fungal disease of cucurbits. When the student presented data on the emergence of triazole resistance in one of the *Stagonosporopsis* species responsible for this disease, one audience member, a medical mycologist, perked up. Azole resistance was also on the rise in *Aspergillus fumigatus*, causal agent of aspergillosis, which is a serious human medical condition with high mortality rates, especially in those with compromised immune systems. Intellectual sparks flew as the scientists discussed the implications and their newfound common ground. That moment changed the course of Marin's research. Today, she leads a project focused on the role of fungicide use in agriculture in the emergence of drug resistance in human

pathogens. We will hear about her exciting research during Plant Health 2021 Online—you won't want to miss her plenary address on Monday, August 2.

Recently, I talked with Marin about her career, her research, and her advice for early-career professionals. I never grow tired of learning how others get involved in our field; for so many us, serendipity plays a key role. In Marin's case, an unfamiliar word, "phytopathology", caught her eye in a job advertisement. She had just graduated with a B.S. degree from the University of Cincinnati and was applying for a research staff position with USDA-ARS. A visit to her local library

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## Voting Is Now Open for Vice President and Councilor-at-Large

The APS Nominations Committee is pleased to announce that **Niklaus Grünwald**, USDA-ARS-Horticultural Crops Research Unit, and **Jeffrey B. Jones**, University of Florida, are running for vice president. Following a term as vice president, the elected candidate will serve successive terms as president-elect, president, and past presi-

dent. Candidates for councilor-at-large are **Leonardo de la Fuente**, Auburn University, and **Sydney Everhart**, University of Nebraska-Lincoln. Candidate information begins on page 4 of this issue.

Eligible voting APS members will receive an electronic ballot. Voting is open from May 5 through May 31, 2021. Please con-

tact APS headquarters ([apshq@scisoc.org](mailto:apshq@scisoc.org)) if you do not receive your electronic ballot.

Results of the 2021 election will be announced in the July issue of *Phytopathology News* and on the APS website. ■



Niklaus Grünwald



Jeffrey B. Jones



Leonardo de la Fuente



Sydney Everhart

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## PLANT PATHOLOGY'S PERPLEXING PAST: THE REST OF THE STORY

# Bacterial Mosaic of Wheat

Robert M. Harveson, University of Nebraska, Panhandle REC, Scottsbluff

For the last two months, I have written consecutive stories of diseases caused by Gram-positive bacteria that have appeared in Nebraska agricultural production over the last century. This report will chronicle the arrival and departure of yet another example of this remarkable phenomenon. The resulting outcome on Nebraska's wheat production in the late 1970s is the rest of the story.

## Bacterial Mosaic

Bacterial mosaic, caused by another distinct subspecies of *Clavibacter michiganensis* (*C. michiganensis* subsp. *tessellarius*) was first identified as a new disease of wheat in the spring of 1976 and was almost immediately demonstrated to be distributed widely throughout Nebraska and one county in western Iowa. Incidence and severity of the disease varied greatly among affected wheat fields, with no apparent association with any specific cultivar. It was eventually detected from more than a dozen (at least 16) cultivars. By 1979, the disease had been documented from wheat fields representing 17 counties erratically spread over a 500-mile range, extending from far western Nebraska (Scotts Bluff County) eastward to Crawford County in western Iowa. Then, surprisingly, the disease completely disappeared from commercial wheat production by 1980.

## Symptoms and Conditions Favoring Disease

The disease was characterized by small yellow lesions with undefined margins that were densely and uniformly scattered over entire leaf surfaces. Its name was derived from the foliar mosaic pattern. It resembled viral yellowing, which occurred only on wheat. No other symptomatic hosts were ever identified from any economically important crop plant, although asymptomatic infections were successfully accomplished on numerous species of grasses after greenhouse inoculations, including barley, sweet corn, oats, wild rye, Sudan grass, and smooth brome, but not sorghum, shattercane, or the supposed progenitor of corn, teosinte.



Mosaic symptoms routinely appeared just before heading (late May) and tended to fade late in the season after senescence progressed, although the pathogen was still easily isolated from dead and dying foliage. The optimal temperature for infection and symptom development was never established; however, experimental work in the greenhouse suggested a pathogen preference for relatively cool temperatures. Symptom development occurred after artificially inoculated plants were incubated at 19–20°C (66°F), whereas no symptoms were induced at 59 or 77°F (15 or 25°C).

## Pathogen Similarities

Like the two *Clavibacter* pathogens discussed previously in this series of reports, *C. michiganensis* subsp. *nebraskensis* (Goss' wilt of corn, *Phytopathology News*, November 2019) and *C. michiganensis* subsp. *insidiosus* (bacterial wilt of alfalfa, *Phytopathology News*, April 2021), *C. michiganensis* subsp. *tessellarius* was seedborne, producing Gram-positive, coryneform rods. It also produced orange-pigmented growth in culture, as did *C. michiganensis* subsp. *nebraskensis*.

Analyses utilizing polyacrylamide gel electrophoresis (PAGE) of cellular proteins showed *C. michiganensis* subsp. *tessellarius* was closely related to the two other *Clavibacter* species. It was further demonstrated to be distinct from other known Gram-positive wheat pathogens causing gumming diseases of inflorescences (*C. tritici* and *C. iranicus*). The subspecific

*Perplexing Past, continued on page 3*

led Marin to *Plant Pathology*, the revered tome by **George Agrios**. She was hooked! Soon after, Marin started her position with the ARS New England Plant, Soil and Water Research Lab in Orono, ME, and learned she loved the field of plant pathology. She pursued an M.S. degree from University of Maine, where she took her first mycology class. Later, she earned her Ph.D. degree in plant pathology and plant-microbe biology from Cornell University. Marin credits her time at Cornell for piquing her interest in fungal evolution and developing her skills as a fungal biologist.

Today, Marin is an associate professor of mycology in the department of Plant Pathology at the University of Georgia. For the past

nine and a half years, Marin's research has focused on the impacts of emerging disease threats to plants and people. She applies a population framework to understand disease biology and how drug resistance is shaping fungal evolution. Her research is supported by numerous grants from competitive sources, including the National Science Foundation, USDA-AFRI, the Centers for Disease Control and Prevention, and commodity boards. Marin is also an award-winning educator. Her popular Fungi, Friends, and Foes course attracted 500 students this semester, and she uses the course to raise interest in fungi and the field of mycology. Marin is also the faculty coordinator for a USDA-REEU, providing research experiences for underrepresented undergraduate students.

A moment with Marin is sure to enthuse, and I can only imagine what an amazing student mentor she must be! So, what advice does Marin have for those just starting out in the field of plant pathology? "Curiosity is a must. Curiosity and personal drive will get you through those tough days. Simply put, find something you love!" It is clear that Marin has found her passion in plant pathology. Don't miss her plenary talk, "Does Agricultural Use of Triazole Fungicides Contribute to Antifungal Resistance of *Aspergillus fumigatus* in Humans?" on Monday, August 2, as part of Plant Health 2021 Online.

[Learn more about Prof. Marin Talbot Brewer and other Keynote and Plenary presenters.](#) ■

### Perplexing Past, continued from page 2

name for this pathogen, "*tessellarius*," refers to a mosaic stone maker, or someone who makes tessellae, which are small squares of ceramic tile, stone, or glass used in making mosaic designs.

## What Has Become of Bacterial Mosaic of Wheat?

The abrupt arrival and rapid exodus of bacterial mosaic after only a few years (1976–1980) was an intriguing, but baffling, development. New resistant cultivars were rapidly developed in response to this new disease, but it disappeared before they were ever widely deployed for management. The University of Nebraska–Lincoln's now retired bacteriologist, **Anne Vidaver**, humorously stated that this pathogen only remained around long enough for one of her graduate students (**Randall Carlson**) to complete his degree working on this disease.



Bacterial mosaic also has been incredibly rare in wheat production. Other than the widespread distribution throughout Nebraska in the late 1970s, the pathogen has not been reported from natural field infections since. On two occasions, my lab in Scottsbluff has isolated slow-growing, orange-colored, Gram-positive bacteria from eaves exhibiting mosaic-type symptoms from wheat variety research plots in Box Butte County, near Hemingford, NE, but they

were not formally identified as being *C. michiganensis* subsp. *tessellarius*.

Although *C. michiganensis* subsp. *tessellarius* never became a serious issue for wheat production in Nebraska, it was demonstrated to be capable of killing the infected plant's flag leaf under greenhouse conditions. Thus, if it appears again, it still poses as a potentially significant problem today. Now you know *the rest of the story*.

**Photos:** Courtesy Robert Harveson, University of Nebraska, Panhandle Research and Extension Center.

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## Candidate for Vice President / Niklaus Grünwald



Research Plant Pathologist, USDA-ARS-Horticultural Crops Research Unit

### Leadership Experience

After completing a Ph.D. degree in ecology/plant pathol-

ogy at UC Davis, I worked for 4 years in Toluca, Mexico, as a postdoc for Cornell University and associate scientist for CIMMYT, studying the evolution of potato late blight at the center of origin. In 2001, I became a research plant pathologist studying cool season food legume diseases for the USDA Agricultural Research Service (USDA-ARS) in Prosser, WA. In 2004, I relocated to Corvallis, OR, to start a new research program with the USDA-ARS on the sudden oak death pathogen *Phytophthora ramorum*. Here, I also serve as a professor (courtesy) in the Department of Botany and Plant Pathology and the Center for Genome Research and Biocomputing at Oregon State University. My recent work has focused on understanding the population structure and evolution of *Phytophthora* pathogens. This work has resulted in outreach and extension efforts that have provided the science base for management and mitigation of sudden oak death for regulatory agencies and stakeholders. Our lab has characterized migrations of the sudden oak death pathogen in North America and globally, characterized populations of the potato late blight pathogen in Mexico, and developed widely adopted computational tools for characterizing populations and microbiomes. These novel tools developed by gifted students and postdocs have given us the unique opportunity to present workshops at APS and other international meetings. Beyond research, much of my professional achievements have focused on APS journals. APS journals are a core activity within APS and sustain many APS activities. I had the honor of serving as editor-in-chief and two-term chair of the Publications Board. At the time, APS was facing stiff competition from open access journals, and submissions were declining. Furthermore, a range of new developments had not yet been adopted into the APS publishing platforms. As a result of Publications Board leadership, we successfully launched two new open access journals, transitioned *Molecular Plant-Microbe Interactions* to open access, improved turnaround, and adopted ORCID, new article content, preprint ar-

chives, altmetrics, and standardized author guidelines. This combined effort by all editors-in-chief and the APS publications staff has resulted in positioning APS journals for success in an ever more competitive world. As a result, APS is one of a very select number of societies that did not have to sell its journals to for-profit publishing houses.

### Service to APS

Editor-in-chief, *PhytoFrontiers*<sup>TM</sup>, 2019–present; Chair, APS Emerging Pathogens Initiative, Cleveland, OH, 2019; Member, APS Financial Advisory Board, 2018–2019; Chair, APS Publications Board, 2013–2016, 2016–2019; APS PMN Task Force, 2018; Editor-in-Chief, *Phytopathology*, 2009–2011; APS Strategic Exchange Forum, 2014–2015; APS Thought Leader Workgroup, 2013; Chair, APS Journals Task Force, 2012; APS Visionary Forum, 2010–2012; Member, APS Publications Board, 2009–2011, 2019–present; APS Ad Hoc Committee on Emerging Issues, 2009; APS Leadership Committee, 2009; APS Ad Hoc International Relationships Committee, 2008–2009; Senior editor, *Phytopathology*, 2006–2008; Associate editor, *Phytopathology*, 2005; Chair, Genetics Committee, 2005; Senior editor, *Plant Health Instructor*, 2002–2005; APS Office of International Programs, 2004–2007; APS Office of Electronic Communication, 2002; Chair, Epidemiology Committee, 2000.

### Other Professional Service

Founding editor-in-chief, *CABI Agriculture and Biosciences*, 2019–present; Scientific Advisory Board, Center for Genome Research and Biocomputing, Oregon State University, Corvallis, OR, 2018–2020; Advisory Board member, agriRxiv preprint server, 2020–present; Associate editor, *Mycologia*, 2015–2018; Editor, *PeerJ*, 2013–2019; Editor, *PLoS One*, 2013–2019; Advisory Committee member, World *Phytophthora* Collection, UC Riverside, 2007–2019; Steering Committee member, Oomycete Molecular Genetics Network, 2007–2010; Editor, *Plant Pathology*, 2005–2013; Committee member, *Pisum* Crop Germplasm Committee, 2001–2004; Committee member, Variety Release Committee for Cereals and Legumes, Washington State University, 2001–2004.

### Statement of Vision for APS

APS has shaped who I am today through numerous opportunities for professional development, enrichment, and networking.

APS is a remarkably nimble and adaptive organization. We live in some of the most challenging times, facing major social, economic, environmental, and scientific challenges. Plant pathologists play a major role in solving critical societal threats posed by climate change, energy and food insecurity, and environmental degradation. APS is a visionary and global leader in plant health and will play a major role in addressing the grand challenges facing our society. APS needs to provide the moral courage and science base to address plant health issues in the coming decades to feed over 9 billion people by 2050.

Our discipline is changing, and the pace of change is accelerating. When I did my Ph.D. research, my work used classical microbiological and plant pathological methods. Today, we can sequence a pathogen genome for tens of dollars; use drones, unmanned robots, or autonomous vehicles to measure plant performance in real time; and genetically edit genes. IoT and AI are starting to infiltrate farms, research labs, teaching, and extension. This explosion of unprecedented ecological and genomic data and tools requires new transdisciplinary approaches to capitalize on big data and novel technologies. APS can help provide the extension, education, and knowledge resources needed to harness these new opportunities.

APS should continue to modernize our meetings and how we deliver information. For example, despite the COVID-19 pandemic, the Plant Health 2020 conference, held exclusively online, was a huge success, with over 2,400 attendees from 75 countries. Given the success of this meeting, APS should explore virtual or hybrid meetings in the future.

Our society is going through a period dominated by fake news and increasing reports of unreproducible or falsified research. APS needs to reinforce itself as a beacon of hope and integrity based on the high quality and rigor in our daily science. APS needs to expand our public presence and engage more with journalists and the general public to advocate for evidence-based approaches to improving plant health. This includes science-based evidence promoting gene editing and other controversial approaches that have the potential to provide food security and environmental stewardship.

Meanwhile, many plant pathology departments are merging into larger schools or de-

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partments or are disappearing altogether; thus, we are losing our identity as plant pathologists. Hence, it will be more important than ever to provide different venues for maintaining and growing our member base and providing opportunities for networking, outreach, extension, and education.

I grew up in Venezuela, and my family still lives there. Venezuela is now a failed state with severe poverty, repression, and instability. I had the privilege of finding a new home in the United States with my family. This experience has marked me and opened my senses to those of us who face discrimination or harsh economic or political realities. We need to continue to look out for

those less fortunate than we are. While APS has made great strides in advancing equal opportunity and inclusiveness, we are not there yet. Thus, we need to continue advancing diversity in all its various forms.

I am humbled by this nomination, and if elected, I promise to do my very best to serve our members with integrity, dedication, and vision. ■

## Candidates for APS Office

# Candidate for Vice President / Jeffrey B. Jones



*Distinguished Professor, University of Florida*

### Leadership Experience

#### Jeffrey B. Jones

has been an active member of The American Phyto-

pathological Society since 1980. He has served on a number of committees, including the Bacteriology Committee (1992–1994 and 1983–1985 [chair, 1994; vice-chair, 1993]), Tropical Plant Pathology Committee (chair, 1996), and the Germplasm and Culture Collections Committee. He has served as a senior editor for *Plant Disease* (1993–1996), APS PRESS (2000–2003), and *Phytopathology* (2006–2009), and he has published extensively in all three APS journals. He has edited or co-edited two books (*Compendium of Tomato Diseases* and the 3rd edition of the *Laboratory Guide for Identification of Plant Pathogenic Bacteria*) published by APS PRESS and is in the process of updating the *Laboratory Manual for Identification of Plant Pathogenic Bacteria*. He also served as chair of the APS Task Force for Culture Collections (2005–2010) and as a councilor-at-large (2011–2014).

### Statement of Vision for APS

I consider APS to be the premier scientific society in plant pathology. APS has been an important part of my professional

life and something I have enjoyed being committed to, whether as a committee member, editor for journals, or as a councilor-at-large. I have always enjoyed attending annual and regional meetings to discuss research ideas and various issues related to the discipline. This past year has been difficult in terms of our personal lives and the ability to conduct our daily duties in our profession, as well as a challenge for our involvement with APS. APS members and staff did an incredible job of quickly developing a virtual annual meeting. Again in 2021 the annual meeting will be virtual, and we will have the opportunity to build on our experience. We found that virtual meetings can be held and can be quite effective. I can foresee future meetings being more hybrid in nature. This could increase participation by our international colleagues and students who may be unable to attend meetings in person. Although APS has members from other countries, we should be proactive and strive to make APS more inclusive in committee meetings, presentations, and virtual poster sessions so that our organization has more of an international perspective. We should strive to have diverse representation (i.e., women, minorities, graduate students, and individuals from public institutions, government agencies, and private companies). APS continues to develop diverse mechanisms for delivering information. Coupled with its existing journals (i.e., *Plant Disease*, *Phytopathology*, *Plant Health Progress*, and *Molecular Plant-Microbe*

*Interactions*), APS recently established the open access journal *Phytobiomes* to address research relating to interactions of microbial communities and plants in ecosystems. *PhytoFrontiers*<sup>TM</sup>, another new open access journal, is focused on subjects that do not fit the mold of research published in other journals. I do believe that APS can continue to adapt in order to maintain its visibility. One way is to make some of these journals more accessible to the international community, undergraduate students, and high-school students who may develop an interest in plant pathology through exposure to recent publications. Making *MPMI* open access is a step in the right direction. Open access to the other established journals will likely improve the journal rankings. ■

## Calendar

### APS-SPONSORED EVENTS

#### JUNE 2021

[APS Pacific Division Meeting](#)  
[APS North Central Division Meeting](#)

#### AUGUST 2021

[Plant Health 2021 Online](#)

#### SEPTEMBER 2021

[APS Caribbean Division Meeting](#)

## Candidate for Councilor-at-Large / Leonardo de la Fuente



*Professor, Auburn University*

### **Leadership Experience**

As a member of APS since 2002, I have tried to help the society in any way possible. From

my first meeting in 2003 I realized that the important work of committee members is fundamental to running this society. I started by participating in the Graduate Student Committee meetings and volunteering at the APS Foundation booth. As the years went by, I became more involved in the society—first as chair of the Bacteriology Committee and later as an associate/senior editor of *Phytopathology* and APS PRESS. Recently, I joined the APS Annual Meeting Board due to my conviction that these meetings are critical for the success of the society. In addition to APS I contribute to other professional institutions, such as serving multiple times as a proposal review panel member for NIFA, BARD, CDFR, and others. In addition to being an ad hoc reviewer for proposals from the United States and other countries, I have also reviewed more than 200 manuscripts in the last 10 years. In my native Uruguay, I was a member of the leadership of the Sociedad Uruguaya de Microbiología. At my home institution of Auburn University, my service record includes graduate program officer for plant pathology, department

senator, and member of multiple committees focused on improving our department and college, such as Global Programs, Executive Committee, Graduate Student Recruitment, and others. All of these service activities take a considerable amount of time, but they are critical and worthwhile endeavors to ensure that our societies and institutions function at the highest possible level and continue to provide important services to the community as is part of their mission.

### **Statement of Vision for APS**

Agriculture is essential to sustaining humankind. APS is a critical component for the success of agriculture and should have recognition and support comparable to our counterpart medical and microbiological societies that focus on human health. Educating general audiences is paramount to developing more visibility and a high regard in the opinion of the general public. APS leaders have been making great efforts toward achieving these goals, and I hope I can contribute to these efforts myself. Increased participation by phytopathologists in the news and social media will help raise the profile of our society and our profession. Stories that are important for phytopathologists should be pushed to national news outlets to demonstrate the impact of plant diseases to the public. Moreover, improved coordination with other international phytopathological societies would be mutually beneficial. Our APS membership has representatives from

many countries who can help maintain those connections. During my participation in meetings of phytopathological societies abroad, I have been impressed by the number of young people attending, showing the power of phytopathology to inspire younger generations. Strengthening our relationships with international societies will help expand the visibility of APS and phytopathologists as fundamental players in society. Regarding the APS Annual Meeting, I wish to see a better representation of the cutting-edge research that is shaping the future of plant pathology and is being developed by members of our society. Our annual meeting must become the event of the year, where the most impactful discoveries in plant pathology are showcased. In addition, APS should develop a more structured program for professional development of early-career professionals, including activities during our annual meeting and online courses. It is also important to engage scientists across the career spectrum by offering leadership opportunities at early career stages, harnessing the energy of young professionals through meaningful projects, and sharing the expertise of mid- to late-stage career scientists. One of the things that makes me a proud member of APS is the sincere interest of its members in collaborating and helping each other. We all really care for this society, and we need to keep promoting APS so it will gain the recognition it deserves. ■

## Candidate for Councilor-at-Large / Sydney Everhart



*Associate Professor, University of Nebraska-Lincoln*

### **Leadership Experience**

One of the things I enjoy most about APS is that the content is driven by the

members, so the more you are involved, the more you gain in return. This is something I've learned over my past 12 years of active membership in APS, which includes experience organizing Special Sessions, teaching R workshops, hosting an APS webinar,

chairing subject matter committees, and, currently, serving on the APS Annual Meeting Board (AMB). Below are two examples of this service and how they have impacted my views on the importance of APS and its volunteers.

One example of my professional service is creating and teaching workshops at APS. My first experience was teaching a workshop in R for population genetics, and a persistent observation was that many students in the workshop lacked basic skills in R, making it difficult for them to participate. To address this, I led development of the Intro to R for Plant Pathologists Workshop, which has since been taught at the APS North Central

Division meeting (2017), APS/ICPP meeting (2018), Plant Health 2019, and as an APS webinar (2020). Teaching this as a webinar was a huge success, with around 150 people registered each day, and although challenging, this material will now be able to be accessed “on demand” in the future. The most fulfilling part of this experience was how easy it was to take a new idea and transform it into content that became part of an APS meeting. Unlike some organizations that covet these opportunities for insiders, APS strives for trans-

*Candidates, continued on page 7*



parency and to make these opportunities open to all members.

The most significant leadership contribution I have made in APS is serving as a member of AMB. I joined the AMB in 2016, and on an annual basis, I am responsible for critical review of >60 abstracts and ~10 Special Sessions. Through the AMB, I have also been involved in the development of new activities featured at our annual meetings, such as the One-to-One: Conversations with an Expert activity that I codeveloped with **Dr. J. P. Dundore-Arias** and that was featured at the APS Annual Meetings from 2017 through 2020. Participation in the AMB provided me with a unique perspective to both appreciate the breadth of activities organized and led by our volunteers and understand the magnitude of the impact that activity has for our scientific society. It would be my vision in this role to foster the participation of our

members as volunteers, so they too can shape the future of our society and make an impact in APS.

### Statement of Vision for APS

Just as meeting the demand to feed our future world population depends on plant pathologists, the future of APS depends on its members. My vision for this leadership role as APS councilor-at-large is to serve APS members by acting as an active liaison to the Executive Committee. In this role, I will formally and informally solicit, articulate, and communicate the interests of our members. This will be done using multiple communication tools and in a way that strives to receive feedback from diverse groups within our society, such as those at different career stages, from different employment sectors, serving different stakeholder groups, and with different personal or political affiliations. Obtaining input from diverse groups will allow alignment of initiatives within the APS 2020–2021 Strategic

Plan with the interests of our members. This, in turn, will allow me to identify individuals who would be ideal volunteers to pursue elements within these initiatives. In the role of APS councilor-at-large, I will provide guidance and resources to these individuals to support their efforts. Moreover, because the success of APS in achieving initiatives within the strategic plan is dependent on the volunteer efforts of members, I also will actively look for opportunities to formally recognize our members for their contributions, whether that is in the form of articles written for *Phytopathology News*, nominations for awards, or recommendations for leadership roles. Ultimately, my vision is that as a member-driven organization, all of the members in our society need to be able to see how their own research, views, and interests are represented by APS, and the success of our APS members will directly translate into the success of our society as a whole. ■

## APS Foundation

# Lafayette Frederick Diversity in Mentoring Awards Announced



Corri Hamilton

The APS Foundation is pleased to announce that two awards have been given in the inaugural Lafayette Frederick Diversity in Mentoring Award program. **Corri Hamilton**, a Ph.D. candidate at the University of Wisconsin–Madison, will mentor students from the Vincent High School of Agricultural Sciences in a project to screen plant-pathogenic bacteria for antimicrobial compounds. **Dr. Tiffany Lowe-Power**, an assistant professor at the University of California–Davis, will mentor students from Fort Valley State University and from Tuskegee University in a remote-learning bioinformatics project to identify effectors in *Ralstonia solanacearum*. Additionally, both awardees will provide career guidance and networking opportunities to their mentees.



Tiffany Lowe-Power

Please support Lafayette Frederick awardees by making a donation to the Lafayette Frederick Mentoring Award fund at [apsnet.org/GIVE](https://apsnet.org/GIVE). ■



## Public Policy Board

# NEW! Take Action Tool



Make your voice heard using the new PPB [Take Action Tool](#)! Simply enter your street address and zip code to get direct access to your representatives at the touch of a button.

Let's make our voices heard! ■

# Graduate Students: Apply to be Featured in *Phytopathology News*!

For each issue of *Phytopathology News*, the APS Graduate Student Committee chooses a graduate student to be featured in a [spotlight article](#). Applicants are chosen based on their involvement in APS as student members and their expected graduation dates. The committee strives to integrate students into society affairs and activities and recommends ways to address student concerns. Submit your application for consideration on the [submission webpage](#). ■



*Seismic Shifts in Disease Risk*  
August 2–6, 2021

**Registration is Now Open!**

Join fellow plant pathologists August 2–6 for Plant Health 2021 Online as we explore major changes in bacterial, viral, nematode, and fungal pathosystems to better anticipate and deflect future shifts in plant diseases.

Don't miss this opportunity to learn from industry leaders, share your research, and connect with your colleagues from all over the world.



Register today at [planthealth2021.org](https://planthealth2021.org)



## OPRO Meets Melissa Molho

**Melissa Molho** is a recent Ph.D. graduate student from the Department of Plant Pathology at the University of Kentucky.



Poster presented at ComSciCon-Atlanta 2021 to promote APS resources.

**Science outreach activity:** E-poster presentation at ComSciCon-Atlanta 2021.

**Type of event and intended audience:** The poster was presented within a workshop for graduate students who were interested in learning about how to effectively communicate science.

**Description of the activity:** Students shared science communication activities or community engagement outreach activities with other participants in the workshop. During the workshop, I wrote a 150-word pitch describing the activities completed by APS during the International Year of Plant Health 2020 (IYPH 2020) and why these activities were relevant to the workshop audience. My pitch was selected, so I was asked to design a poster about IYPH 2020.

**Materials/resources used to create e-poster:**

- [www.apsnet.org/planthealthisyourhealth/Pages/default.aspx](http://www.apsnet.org/planthealthisyourhealth/Pages/default.aspx)
- [www.apsnet.org/planthealthisyourhealth/Resources/Pages/default.aspx](http://www.apsnet.org/planthealthisyourhealth/Resources/Pages/default.aspx)

- [www.apsnet.org/planthealthisyourhealth/themes/Pages/default.aspx](http://www.apsnet.org/planthealthisyourhealth/themes/Pages/default.aspx)

**Information regarding this event:** ComSciCon is an annual Science Communication Workshop that is organized by graduate students in the southeastern United States and Puerto Rico.

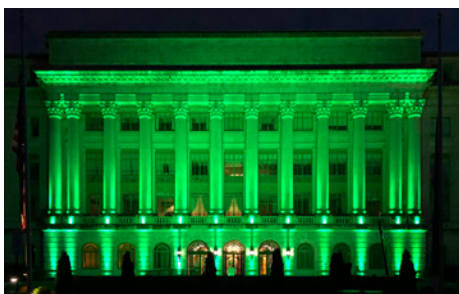
**How will you modify or improve future offerings?** There was limited time to explain the poster, and the virtual setting made it difficult to gather feedback from the attendees. In the future, I hope there will be more opportunities for interaction when in-person meetings resume.

**In total, how many participants were in attendance?** 50 graduate students.

To have your science outreach activity or event featured in the “OPRO meets...” article series, please complete [this survey](#). ■

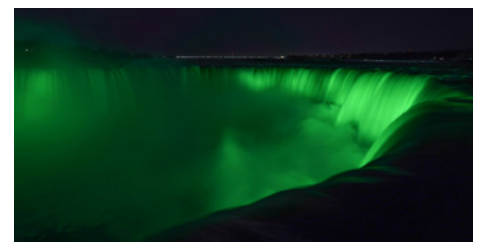
## Invasive Plant Pest Disease and Awareness Month and the International Year of Plant Health Celebrated

The U.S. Department of Agriculture (USDA) celebrated **Invasive Plant Pest and Disease Awareness Month (IPPDAM)** and the **UN International Year of Plant Health (IYPH)** by lighting in green the façade of its main headquarters, the Jamie L. Whitten building in Washington, DC, April 18–21. The event was part of a global celebration of the IYPH with its partners in the **North American Plant Protection Organization** and the **UN International Plant Protection Convention**.



“It is fitting that the first time the USDA building is illuminated in this way it is to bring awareness to the life-giving role plants play and the critical need to protect them. Plants produce the oxygen we breathe and give us 80 percent of the food we eat, so they are critical to our survival, environmental health, and economic well-being,” said **Dr. Osama El-Lissy**, deputy administrator, Plant Protection and Quarantine Program, USDA Animal and Plant Health Inspection Service (APHIS). “According to the United Nations, invasive pests destroy up to 40 percent of the world’s food crops and cause \$220 billion in trade losses each year.”

In celebration of the IYPH, APHIS also partnered with the **North American Plant Protection Organization** and the **Niagara Falls Illumination Board** to hold special illumination ceremonies on April 19 and 20. The falls glowed with green light to emphasize the need to protect plant health across North America and around the world. Other



IYPH illumination events were held by the Canadian Museum of Nature and in Mexico at government buildings in Mexico City and several monuments.

APHIS urges members of the public to take simple, specific actions to leave invasive, hungry pests behind and protect vital plant resources in the United States. Visit the **Hungry Pests website** to learn about invasive plant pests and diseases that are affecting or could affect your region and how to report them. Look for and report unusual signs of pests or diseases in trees and plants. ■

# APS Publications Board Announces Best Student Papers Published in APS Journals in 2020



Twenty-three graduate students are being honored for their research papers published in APS journals. “The Publications Board unanimously decided to institute awards recognizing exceptional research papers by graduate students in each of the APS journals beginning in 2020,” said **Krishna Subbarao**, chair of the Publications Board. “Our intent is to honor graduate students who have done a remarkable job on their papers, as a way of supporting and encouraging excellence in the early-career scientists in our field. Considering the importance of publications, the Board wishes to recognize outstanding research achievements imbued with novelty, scholarship, and lucid writing during graduate studies.”

“The editor-in-chief of each journal appointed a committee of editors to select the winners from the graduate student papers published in 2020. They did a wonderful job, and this selection process will continue for this year’s student papers. The top prize winners received a cash award and a certificate, and other top student papers received a certificate of recognition.”

All papers are freely available through the end of May.

## Phytopathology

### Best Student Paper

[Rhodopseudomonas palustris Quorum Sensing Molecule \*pC-HSL\* Induces Systemic Resistance to TMV Infection via Upregulation of \*NbSIPK/NbWIPK\* Expressions in \*Nicotiana benthamiana\*](#)  
Xiaohua Du et al.



**Xiaohua Du** is currently a Ph.D. student pursuing a degree in plant pathology at the Hunan Academy of Agricultural Science in China, where she focuses on the photosynthetic bacteria (PSB) applications in agriculture as a bio-control agent. In her recent work, she took an interest in the positive impacts of the bacterial quorum-sensing (QS) molecule *pC-HSL* on the plant defense. *pC-HSL* is produced by a PSB strain,

*Rhodopseudomonas palustris* GJ-22, and primes plants with systemic resistance against viruses. With her team, she investigated the signaling pathways involved in the *pC-HSL*-mediated plant defense response. Her next work will focus on the perception mechanism of plants for *pC-HSL* in hopes of finding the bona fide proteins in plants directly interacting with this molecule. Du also holds a master’s degree in pratacultural science from Hunan Agricultural University and spent three years working within the agriculture field for a biotechnology company.

### Honorable Mentions

[Genome-Wide Association Study in New York \*Phytophthora capsici\* Isolates Reveals Loci Involved in Mating Type and Mefenoxam Sensitivity](#)

Gregory Vogel et al.

[A Genome-Wide Association Study of Resistance to \*Puccinia striiformis\* f. sp. \*hordei\* and \*P. graminis\* f. sp. \*tritici\* in Barley and Development of Resistant Germplasm](#)

Javier Hernandez et al.

[Contact Reflectance Spectroscopy for Rapid, Accurate, and Nondestructive \*Phytophthora infestans\* Clonal Lineage Discrimination](#)

Kaitlin Gold et al.

[The \*Globodera pallida\* Effector GpPDI1 Is a Functional Thioredoxin and Triggers Defense-Related Cell Death Independent of Its Enzymatic Activity](#)

Rachel Gross et al.

## Plant Disease

### Best Student Paper

[Trichoderma Isolates Inhibit \*Fusarium virguliforme\* Growth, Reduce Root Rot, and Induce Defense-Related Genes on Soybean Seedlings](#)

Mirian Pimentel et al.



Originally from Brazil, **Mirian Filgueira Pimentel** grew up on a small vegetable farm and studied agricultural engineering at the Federal University of Viçosa. As an undergraduate student, she received a study abroad scholarship that enabled her to study at Southern Illinois University (SIU) where she volunteered to work with **Dr. Ahmad Fakhoury** after taking his plant–microbe interaction course. After

earning her bachelor’s degree, she returned to Dr. Fakhoury’s lab for her Ph.D. research, which explored the biological control of the soybean pathogens *Fusarium virguliforme* and *Pythium* spp. with beneficial fungi, including *Trichoderma* spp. and *Clonostachys rosea*. She successfully defended her dissertation at the end of March and will soon start a postdoc position at SIU, in which role she will continue to work with biological control against soilborne pathogens and exploring the effects of fungal endophytes on soybean health and protection against pathogens. (Photo: © Board of Trustees, Southern Illinois University)

### Honorable Mentions

[Occurrence and High-Throughput Sequencing of Viruses in Ohio Wheat](#)

Brian Hodge et al.

[The Efficacy of Ethaboxam as a Soybean Seed Treatment Toward \*Phytophthora\*, \*Phytophthium\*, and \*Pythium\* in Ohio](#)

Kelsey Scott et al.

[Impact of UV-C Radiation Applied during Plant Growth on Pre- and Postharvest Disease Sensitivity and Fruit Quality of Strawberry](#)

Marine Forges et al.

[Storage Root Yield of Sweetpotato as Influenced by \*Sweetpotato leaf curl virus\* and Its Interaction with \*Sweetpotato feathery mottle virus\* and \*Sweetpotato chlorotic stunt virus\* in Kenya](#)

Bramwel Wanjala et al.

Student Papers, continued on page 11

## Molecular Plant-Microbe Interactions

### Best Student Paper

#### Optimizing the PBS1 Decoy System to Confer Resistance to Potyvirus Infection in *Arabidopsis* and Soybean

Sarah Pottinger et al.



A graduate of the University of Leeds, **Sarah Pottinger's** thesis looked at the localization of PHT1 family phosphate transporters in *Serratia italica*. During this time, she also assayed a set of sucrose transporter mutants for abnormalities in circadian phenotype with **Dr. Anthony Hall** at the University of Liverpool and investigated the possible interaction of a newly discovered protein with *Arabidopsis* ELONGATION

FACTOR EF-TU RECEPTOR with **Prof. Cyril Zipfel** at the Sainsbury Laboratory. She then completed an internship at the Molecular Ecology Department of the Max Planck Institute for Chemical Ecology, researching how wild tobacco species defend themselves against insect herbivory. Pottinger is currently pursuing a Ph.D. degree at the Roger Innes lab at Indiana University in Bloomington, IN, where her research focuses on investigating the *Arabidopsis* RPS5/PBS1 decoy system to optimize plant immune responses. She is exploring the use of proximity-based labeling to identify possible signaling partners for RPS5, as well as working toward elucidating a structure for PBS1 and RPS5. She hopes to graduate in 2022 and pursue postdoctoral studies in NLR signaling and specificity.

### Honorable Mentions

[Structural Requirements of the Phytoplasma Effector Protein SAP54 for Causing Homeotic Transformation of Floral Organ](#)  
Marc Benjamin Aurin et al.

[Prediction and Characterization of RXLR Effectors in \*Pythium\* Species](#)  
Gan Ai et al.

[Chitin Triggers Calcium-Mediated Immune Response in the Plant Model \*Physcomitrella patens\*](#)  
Giulia Galotto et al.

## Plant Health Progress

### Best Student Paper

[A Rapid, Simple, Laboratory and Field-Adaptable DNA Extraction and Diagnostic Method Suitable for Insect-Transmitted Plant Pathogen and Insect Identification](#)  
Karolina Pusz-Bochenska et al.

Originally from Warsaw, Poland, **Karolina Pusz-Bochenska** graduated from the Warsaw University of Life Sciences and had opportunities to pursue additional studies in the United Kingdom, Hungary, and now Canada, where she is a doctoral student in the Department of Biology at the University of Saskatchewan and also affiliated with Agri-Food Canada, where most of her research ex-



periments are carried out under the supervision of **Dr. Tyler Wist** and **Prof. J. Gray**. Her current research focuses on developing innovative methods to forecast and rapidly detect the presence of aster yellows (AY) in canola crops grown in western Canada. Her results have important implications for the forecast of AY incidence and frequency and for the development of AY disease management tools. In the future, she hopes to be engaged in challenging research programs of both fundamental and applied importance that help tackle global problems, such as achieving sustainable food security.

### Honorable Mentions

[Rapid Detection of Fungicide Resistance Phenotypes among Populations of \*Nothopassalora personata\* in South Carolina Peanut Fields](#)  
Misbakhul Munir et al.

[Cross Infectivity of Powdery Mildew Isolates Originating from Hemp \(\*Cannabis sativa\*\) and Japanese Hop \(\*Humulus japonicus\*\) in New York](#)  
William Weldon et al.

[Determining the Profitability of Reniform Nematode Control Practices in the Mississippi Cotton Production System](#)  
Bradley Wilson et al.

## Phytobiomes Journal

### Best Student Paper

[Topography-Driven Shape, Spread, and Retention of Leaf Surface Water Impacts Microbial Dispersion and Activity in the Phyllosphere](#)  
Hung Doan et al.



**Hung Doan** earned a B.S. degree in biochemistry and molecular biology and M.S. and Ph.D. degrees in plant pathology from the University of California, Davis. He is currently volunteering for the Partners of the Americas' USAID-funded Farmer-to-Farmer Program teaching General Plant Pathology: Identification and Detection of Plant Diseases in Guyana. With the current pandemic and limited job opportunities, he is also currently working in the food service industry. He wishes to pursue a job in cooperative extension to help farmers implement more efficient growing methods and solve pest management problems.

### Honorable Mentions

[Disease-Induced Microbial Shifts in Citrus Indicate Microbiome-Derived Responses to Huanglongbing across the Disease Severity Spectrum](#)  
Nichole Ginnan et al.

[Regional Differences in the Structure of \*Juglans nigra\* Phytobiome Reflect Geographical Differences in Thousand Cankers Disease Severity](#)  
Aaron Onufrak et al. ■



## Donors of Distinction



Meet some of the amazing people who support APS Foundation. Learn more about who they are and why they give their time and resources to support others.



### Elisha Allan-Perkins

I was working in a marine biology lab, missing working with plants, when I found APS in an online search of plant science careers. I became a member before I finished applying to graduate programs. I felt at home at my first annual meeting, as I never had before at a professional conference. APS is unique in that it cultivates opportunities for students to interact with plant pathologists at all

levels: the APS president, famous researchers, and early-career scientists, as well as other students. APS Foundation is a large part of this welcoming environment; it provides opportunities for students to travel to annual meetings, visit other research institutes, and contribute to outreach programs. The foundation also provides support for international and established scientists. I have greatly benefitted from participating in APS, through professional training, presenting and publishing my research, networking, and finding lasting friendships. I was fortunate to serve as an ex-officio member of the APS Foundation and saw first-hand the enthusiasm and dedication this board has for making APS an accessible, welcoming, and supportive society for all researchers, giving them the same opportunities and benefits I have received. I am happy to donate to the APS Foundation each year and look forward to seeing what new initiatives they start in the future.

*Elisha Allan-Perkins is an independent researcher in plant pathology in Brookline, NH.*



### Peter Ojiambo

I never thought much about APS until 1998, when I was hired at the International Potato Center Regional Office in Nairobi, Kenya. My supervisor, who was a member of APS, explained to me how APS can facilitate networking with other scientists across the Atlantic and promote the exchange of research ideas to find solutions to manage plant diseases. In the past 20 years, APS has significantly impacted

my career in plant pathology, and I have gratefully realized the benefits of being a member of the society. The latter has fostered my desire to give back to the society in gratitude for what APS has given me over the years. I support the APS Foundation in the same spirit, since I see the good that has been achieved and continues to be accomplished in the advancement of the plant pathology profession.

*Peter Ojiambo is a professor of plant pathology at North Carolina State University. ■*

## People

### Degrees



**Chiti Agarwal** recently completed the requirement for a Ph.D. degree in plant pathology at Washington State University (WSU). Her dissertation was entitled “Characterizing Sources of Resistance to Premergence Damping-Off Disease Caused by Metalaxyl Resistant *Pythium ultimum*.” Her thesis committee was led by **George Vandemark** and included **Hanu Pappu, Weidong Chen, Kiwamu Tanaka,** and **Lynne Carpenter**

**Boggs.** Agarwal received her B.S. degree in biotechnology in 2009 and M.S. degree in plant science from North Dakota State University in 2014. At WSU, she was a winner of the Three-Minute Thesis Competition of the College of Agriculture, Home and Natural Resource Sciences and Martin Stoner Travel Scholarship in 2018. She will be a postdoctoral research associate in the Department of Plant Pathology at the University of Maryland.

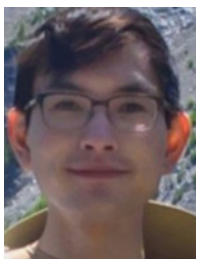


**Lederson Betancur** recently completed the requirement for his Ph.D. degree in plant pathology at Washington State University (WSU). His dissertation was entitled “Insights into the Genetic Diversity, Population Structure, and Fungicide Sensitivity of the Apple Powdery Mildew Pathogen *Podosphaera leucomitrica* in the United States.” His thesis committee was led by **Achour Amiri** and included **Tobin Peever, Kate Evans,** and **Tim Murray.**

Betancur received his B.S. degree in agronomy in 2009 and M.S. degree in plant pathology in 2014 from the Universidad de Caldas, Colombia. He was a research assistant at the Cassava Plant Pathology Laboratory, conducting research activities for the Consultative Group for International Agricultural Research (CGIAR) program on roots, tubers, and bananas from 2013 to 2016. He came to WSU

*People, continued on page 13*

in the fall of 2016 with a Fulbright Scholarship (2016–2020) awarded by the Minciencias and the Fulbright Commission in Colombia. At WSU, he received the 2018 and 2019 Hambelton Scholarship awarded by **Mike** and **Kathy Hambelton** to support WSU tree fruit research activities; a Travel Award to attend The American Phytopathological Society (APS) Pacific Division Annual Meeting; and third place in the APS Pacific Division graduate student paper competition in 2019; and a Dissertation Grant Award from the WSU Graduate and Professional Students Association in 2020. Betancur plans to apply for an academic training position before returning to Colombia.



**Ninh Khuu** recently completed the requirements for an M.S. degree in plant pathology at Washington State University (WSU). His thesis was entitled “Titer and Distribution of Hop Stunt Viroid and Hop Latent Viroid Infecting Hops.” His thesis committee was chaired by **Scott Harper** and included **Hanu Pappu** and **Michael Knoblauch**. Khuu received his B.S. degree in plant science from the University of California, Davis in 2015.

He spent summers performing botanical surveys for the California Department of Fish and Wildlife documenting rare flora that occur in the southern portion of the Snow Mountain National Monument. He specialized in micro-shoot tip culture of clonally propagated perennial crops in support of California’ grape, strawberry, fruit tree, and sweetpotato industries as part of the National Clean Plant Network. He was retained as a technician until the summer of 2018, when he briefly worked with a commercial tree nursery’s R&D tissue culture lab before he joined WSU.



**Jeannie Klein-Gordon** recently received her Ph.D. degree in plant pathology from the University of Florida, under the guidance of **Erica Goss**, **Jeff Jones**, and **Gary Vallad**. Her dissertation was entitled “*Xanthomonas perforans*: Population Shifts Over Time in Florida and Exploration of a Secret Weapon for Keeping Its Competitors at Bay.”

Klein-Gordon is originally from Oregon, where she obtained her B.S. degree with honors in botany and microbiology in 2016. She became fascinated with plant pathogens during her honor’s thesis research, for which she studied *Pantoea vagans* C9-1, a biological control agent for fire blight of apple and pear, for 3.5 years under the guidance of **Virginia Stockwell** and **Joyce Loper**.

Klein-Gordon has been an active member of APS since 2014, when she joined as a Borlaug Army member, and has attended and presented at every APS Annual Meeting since 2015. During this time, she has served as a member of the Office of Public Relations and Outreach (OPRO) (2018–2022), for which she led the Gap Analysis project, and currently oversees the “OPRO Meets...” series of *Phytopathology News* articles; is serving as vice-chair of the Bacteriology Committee, co-initiating and -leading “Pathways to and from Bacteriology” with **Jonathan Jacobs**; has served as chair of the Art in Phytopathology subcommittee (2016–2019); organized and moderated “Plant Health Kickoff: Faces of APS” at the 2020 APS Annual Meeting; is actively serving on the Leadership Institute Committee; and serves as an ad hoc reviewer for *Plant Disease*.

Klein-Gordon will join **Tim Miles**’ lab at Michigan State University as a research associate in May 2021.

## Honors



**Linda Thomashow**, research geneticist with the USDA-ARS, was recently elected a Fellow of the American Academy of Microbiology. The academy, the honorific leadership group within the American Society for Microbiology, recognizes excellence, originality, service, and leadership in the microbial sciences. Thomashow is among the 65 Fellows who were elected to the academy in 2021.

Thomashow has been with the USDA-ARS and an adjunct professor in the Department of Plant Pathology, Washington State University at Pullman since 1985. She is also a Fellow of The American Phytopathological Society and the American Association for the Advancement of Science.

## New Position



**Sung-Hwan Kang**, Ph.D., recently joined the Department of Entomology and Plant Pathology at Auburn University, Auburn, AL, as an assistant professor in plant virology. Dr. Kang is from Seoul, South Korea, where he obtained his M.S. degree in plant pathology. Dr. Kang came to the United States to further study plant responses upon virus infection in the molecular biology and microbiology program at the University of Nebraska under the

direction of **Dr. T. Jack Morris**. After completing the Ph.D. program, Dr. Kang moved to Gainesville, FL, for his postdoctoral training in the Department of Plant Pathology at the University of Florida. There, he worked to develop a practical method to save citrus trees from citrus greening disease and citrus-infecting virus. His program at Auburn University will investigate the molecular characteristics of virus infection in plants important in the state of Alabama and the Southeastern region.

## Obituary



**Dr. Melvin Newman**, retired extension plant pathologist, lost his battle with cancer and passed away peacefully on March 27, 2021. Those who knew Melvin will remember him as a dedicated scientist, a great educator, and a real gentlemen.

Melvin A. Newman began his career working with Shell Oil on a seismograph crew in East Texas, served as a squad leader in the Texas National Guard, was a Student Center supervisor at Sam Houston State, where he received his B.S. degree in agriculture and M.S. degree in agriculture education. He went on to earn his Ph.D. degree in plant pathology at Texas A&M University. He then accepted a research associate/postdoc position at Kansas State University, where he worked on a NASA satellite project before joining the University of Tennessee (UT) Department of Entomology and Plant Pathology in August 1973. He was promoted to associate professor and then to professor. He is now a professor emeritus.

Dr. Newman was named Man of the Year in Tennessee Agriculture, and he was a charter member and president of the Tennessee Agricultural Chemicals Association (later Tennessee Agricultural Production Association), where he received the Outstanding Individual Award. He also received the Corn and Soybean Research Award and the International Integrated Pest Management Award



of Excellence. He helped establish the Southern Soybean Disease Workers and served as its president. He helped organize the Mid-South Association of Wheat Scientists. He also served on many departmental and institute committees, including the UT Board of Trustees. He published well over 50 publications, collaborated with numerous professional colleagues on in-state, multistate, and national projects and programs. Many of the publications were revised annually. He holds a patent for reduced rate application of in-furrow fungicides and insecticides.

Dr. Newman was named the 2012 Corn and Soybean Researcher of the Year at the National Conservation Tillage Conference. Melvin developed the first mobile plant pest laboratory in the state and later helped to organize the plant pest lab in Nashville and the first distance digital diagnostic system in Tennessee. He, along with **Dr. Jim Brown**, spearheaded the Summer Celebration Diagnostic Clinic—a favorite among attendees of the event! Likewise, Melvin was a popular presenter at the Milan No-till Field Day and organized the Annual Soybean Disease Tour. He served on four graduate student committees.

Dr. Newman has been recognized as an exemplary cooperator by commodity groups, industry, regulatory personnel, the media, peers,

and administrators. Melvin would quickly tell you that his greatest pleasures were that he was privileged to serve the farmers that produce our food and fiber, while providing stewardship of our natural resources and working with agents and students to see them reach their potential. He built an applied plant pathology research and extension program that is nationally and internationally recognized. He built the program through hard work and commitment and grants, contracts, and gift in excess of \$2 million. In addition to all of this, he still found time to raise a family and serve his church and community. Thank you Melvin for more than 39 years of service to UT, the people of Tennessee, and the plant pathology community. You will be greatly missed.

Dr. Newman is survived by his wife of 56 years, Joyce Feldmann Newman; two daughters, Lori Newman Thompson (Chase) and Lisa Newman; two grandchildren, Joshua Graham Thompson (Reghan) and Barrett Newman Thompson (fiancé Victoria); and his sister, Jeanette Newman Schrader (John); niece, Sarah Rummel (Ryan) and children, Levi and Abigail; sister-in-law, Janet Cason (Jim); nephew, Troy Yoakum and children, Keaton and Kohen.

Donations in memory can be made to the University of Tennessee/Dr. Melvin A. Newman Scholarship Fund at UT West TN Research and Education Center, 605 Airways Blvd., Jackson, TN 38301. ■

## Classifieds

### Director, Center for Organic Production and Research

College of Agriculture, Food and Environmental Sciences (San Luis Obispo, California)

**Position:** Director, Center for Organic Production and Research.

**Location:** California Polytechnic State University, 1 Grand Ave., San Luis Obispo, CA 93407.

**Description:** The College of Agriculture, Food and Environmental Sciences at Cal Poly San Luis Obispo seeks a highly qualified scientist and manager to establish the Center for Organic Production and Research. This unique partnership between Cal Poly and private industry is designed to expand Cal Poly's emphasis on applied research in organic production and soil health by providing a unique, collaborative platform for academia, industry, and government from across California and beyond to join forces in advancing the organic agriculture industry.

The Director of the Center for Organic Production and Research is critical to the development and leadership of this new interdisciplinary, public-private partnership established between Cal Poly and Grimmway Farms. The new Center for Organic Production and Research will serve as a hub for students to work with experts from across the industry to develop solutions to the most pressing issues related to organic agriculture. The Director and Center will focus on 1) applied research to solve major issues in organic agricultural production, particularly

regarding soil health and plant nutrition, weed management, and pest management; 2) collaborative and transdisciplinary research to enhance the sustainability and competitiveness of organic agriculture in California; and 3) enriching the talent pipeline for experiential, applied internships between Cal Poly students and Grimmway Farms.

**Qualifications:** Ph.D. in plant science or related discipline (e.g., soil science, horticulture, agronomy, plant pathology, entomology, weed science, etc.).

**Salary and Benefits:** Salary will be commensurate with qualifications and experience.

**Date Available:** April 2021.

**For More Information and To Apply:**

Go to [www.calpolycorporationjobs.org/postings/1560](http://www.calpolycorporationjobs.org/postings/1560).

For additional queries, contact **Gerald Holmes** at [gjholmes@calpoly.edu](mailto:gjholmes@calpoly.edu).

AA/EEO/Disability/Protected Veteran Employer

### Plant Pathologist

Colorado State University (Center, Colorado)

CSU's San Luis Valley Research Center (SLVRC) seeks a research professor/extension specialist in plant pathology for our Center, CO, location. Minimum requirements include a Ph.D. degree in plant pathology, plant biology, horticulture, or related field, as well as the ability to conduct research in plant pathology and disease control. See

[full job description and apply online](#) for full consideration by April 25, 2021.

CSU is an EO/EA/AA employer and conducts background checks on all final candidates.

### Winifred Asbjornson Plant Sciences Endowed Chair—Assistant/Associate/Full Professor at Montana State University

Montana State University (Bozeman, Montana)

We are seeking to fill two tenure-track faculty positions in the Department of Plant Sciences and Plant Pathology at Montana State University—one spring wheat breeder and one winter wheat breeder. [Please go to the website](#) for the full vacancy announcement and to apply. Applications will be considered for both positions unless you specify otherwise.

#### Duties:

- Directing independent breeding programs, including varietal development and testing.
- Establishing competitive and extramurally funded research programs with a focus on wheat improvement.
- Publishing scholarly research related to wheat breeding and genetics.
- Classroom instruction, advising/training graduate students and undergraduate advising.

*Classifieds, continued on page 15*



## Graduate Student Spotlight: Breanne Kisselstein

### What type of degree program are you enrolled in?

Ph.D., Cornell University.

### What year are you in graduate school?

I am currently a fifth-year student, with an expected graduation date of 2022.

### What is your academic department/section called at your institution?

Plant Pathology and Plant-Microbe Biology.

### Who is your major professor?

**Dr. David Gadoury**; co-advised by **Dr. Lance Cadle-Davidson**.

### Are you an APS member?

Yes.



### How have you been involved in the APS organization?

I am the current chair of the APS Committee for Diversity, Equity, and Inclusion (CDEI).

### Please provide a brief description of your research.

I am studying how the population structure of the grape powdery mildew fungus, *Erysiphe necator*, is impacted by disease progression, host resistance, and fungicides used in commercial vineyards.

### What's something interesting most people don't know about you?

In high school, I practiced ballet at a very professional school four to five times a week. It wasn't until I was recovering from a foot surgery that I discovered my passion for academics.

### What are some of your interests outside of science?

I do a lot of advocacy work for people of all historically underrepresented minority groups in STEM, including BIPOC, Latinx, and LGBTQ2S+ people, as well as people with disabilities. I'll be the first to admit that I have quite broad interests! I love to read nonfiction books, knit and crochet, practice Brazilian jiu-jitsu, and enjoy outdoor activities like hiking and boating.

### What is your hometown?

Syracuse, NY, USA.



### What is your favorite pathogen/plant disease?

Coffee rust—*Hemileia vastatrix*!

### If you know you are pursuing a specific career sector, what is it?

I am pursuing a career in the government sector.

### How did you become interested in the field of plant pathology?

After my second year of undergraduate studies, I was a summer research scholar for my current advisors at Cornell AgriTech in Geneva, NY. I worked in the USDA Grape Genetics Research Unit characterizing transformed *Arabidopsis* mutants compromised in nonhost resistance against the grapevine powdery mildew fungus.

### Do you have any social media handles that you want to share?

E-mail: [bm76@cornell.edu](mailto:bm76@cornell.edu)

Instagram: [@Brecheesey](https://www.instagram.com/Brecheesey)

Twitter: [@BA\\_BreCheese](https://twitter.com/BA_BreCheese) ■



Learn more about the [APS Graduate Student Committee](#) initiatives and student opportunities. Connect with the committee on Twitter [@plantpathgrads](#) and [Facebook](#).

*Classifieds, continued from page 14*

- Providing appropriate public, departmental, and university service.

#### Required Qualifications:

- 1) A Ph.D. degree in plant breeding, genetics, or a related field.
- 2) Experience in field research and design of field experiments.
- 3) Experience in basic and advanced techniques used in plant breeding and genetics research.
- 4) A record of publication in refereed journals.

- 5) A record of developing both basic and applied research projects.

#### Preferred Qualifications:

- 1) A record of success and collaboration in plant breeding research.
- 2) Postdoctoral experience in plant

genetics, plant breeding, or a related field.

- 3) Teaching experience.
- 4) Experience in writing grant applications and a record of obtaining extramural funds. ■



#### FIND THE LATEST JOBS IN PLANT PATHOLOGY

Search online for new job opportunities in the field of plant pathology using the APS Job Center. Visit the [APS Job Center](#).



## SPOTLIGHT

### Second Issue of *PhytoFrontiers*<sup>TM</sup> Available Now!

*PhytoFrontiers*<sup>TM</sup> is an interdisciplinary open-access journal publishing high-quality research that covers basic to applied aspects of plant health. The second issue contains an article exploring the use of aerated steam as a heat treatment to manage angular leaf spot in strawberry nursery production and other freely available articles.

### Call for Papers on the Role of the Abiotic Environment in Plant-Microbe Interactions

In response to the **Top 10 Unanswered Questions in MPMI**, the 2022 *MPMI* Focus Issue will address the role of the abiotic environment in interactions between plants and microbes. Focus Issue Editors **Jacque Bede**, **Kenichi Tsuda**, and **Jeanne Harris** will be accepting submissions through July 24, 2021.

### Be Included in the 2022 *Phytopathology* Focus Issue

*Phytopathology* Focus Issue Editors **Elizabeth (Betsy) Pierson**, **Jaime Cubero**, **Judith K. Brown**, **Caroline Roper**, and **Nian Wang** have selected *Ca. Liberibacter* pathosystems as the topic for the January 2022 Focus Issue. Submit your research by June 15, 2021.

### April Issue of *Plant Disease* Sets Record as Longest in Society History

Over 500 pages long, the latest issue of *Plant Disease* includes 156 articles and plant disease notes, as well as a feature on fig mosaic disease. ■



## TRENDING

### *Phytopathology*

☞ Identification of Major Quantitative Trait Loci Controlling Field Resistance to Downy Mildew in Cultivated Lettuce (*Lactuca sativa*)  
L. Parra, I. Simko, and R. W. Michelmore

☞ The History of *Botrytis* Taxonomy, the Rise of Phylogenetics, and Implications for Species Recognition  
A. R. Garfinkel

☞ A High-Quality Genome Resource of *Botrytis fragariae*, a New and Rapidly Spreading Fungal Pathogen Causing Strawberry Gray Mold in the United States  
Y. Wu, C. Saski, G. Schnabel, S. Xiao, and M. Hu

### *Plant Disease*

☞ Etiology of Halo Blight in Michigan Hopyards  
D. S. Higgins, R. J. Hatlen, J. M. Byrne, M. L. Sakalidis, T. D. Miles, and M. K. Hausbeck

☞ A Fig Deal: A Global Look at Fig Mosaic Disease and Its Putative Associates  
S. Preising, D. F. Borges, M. M. de Queiroz Ambrósio, and W. L. da Silva

☞ Genome-Wide Mapping of Loci for Adult-Plant Resistance to Stripe Rust in Durum Wheat Svevo Using the 90K SNP Array  
X. Zhou, X. Zhong, J. Roter, X. Li, Q. Yao, J. Yan, et al.

### *MPMI*

☞ Transcriptional Profiling of Three *Pseudomonas syringae* pv. *actinidiae* Biovars Reveals Different Responses to Apoplast-Like Conditions Related to Strain Virulence on the Host  
E. Vandelle, T. Colombo, A. Regaiolo, V. Maurizio, T. Libardi, M.-R. Puttilli, D. Danzi, and A. Polverari

☞ Divergence of Phyllosphere Microbial Communities Between Females and Males of the Dioecious *Populus cathayana*  
L. Liu, L. Lu, H. Li, Z. Meng, T. Dong, C. Peng, and X. Xu

☞ Proteomic Analysis of Potato Responding to the Invasion of *Ralstonia solanacearum* UW551 and Its Type III Secretion System Mutant  
B. Wang, T. He, X. Zheng, B. Song, and H. Chen

### *Plant Health Progress*

☞ Known Distribution of the Soybean Cyst Nematode, *Heterodera glycines*, in the United States and Canada in 2020  
G. L. Tylka and C. C. Marett

☞ Plant-Microbiome Interactions for Bacterial Wilt Suppression in Modern Tobacco Production  
R. O. García-Rodríguez and L. D. Thiessen

☞ Flaming *Phlox* and the Ubiquitous Powdery Mildew Disease  
C. Farinas, P. S. Jourdan, and F. P. Hand

### *Phytobiomes*

☞ Influence of Plant Host and Organ, Management Strategy, and Spore Traits on Microbiome Composition  
K. Gdanetz, Z. Noel, and F. Trail

☞ Comparative Analysis of the Rhizosphere and Endophytic Microbiomes across Apple Rootstock Genotypes in Replant Orchard Soils  
C. Van Horn, T. S. Somera, and M. Mazzola

☞ Environment Has a Stronger Effect Than Host Plant Genotype in Shaping Spring *Brassica napus* Seed Microbiomes  
Z. P. Morales Moreira, B. L. Helgason, and J. J. Germida

### *PhytoFrontiers*<sup>TM</sup>

☞ IdeTo: Spreadsheets for Calculation and Analysis of Area Under the Disease Progress Over Time Data  
I. Simko

☞ Field Evaluation of Interactions Between Insects and *Erwinia amylovora* in a New York Apple Orchard  
M. Boucher, R. Collins, K. Harling, G. Brind'Amour, S. Hesler, K. Wentworth, K. Cox, and G. Loeb ■

☞ = Editor's Pick    ☞ = Open



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