

# Phytopathology News

December 2021 Volume 55 • Number 11

## Now Available! APS Office of International Programs Presents *From Our Kitchen to Yours*. A Delicious Way to Support the Global Experience Award!

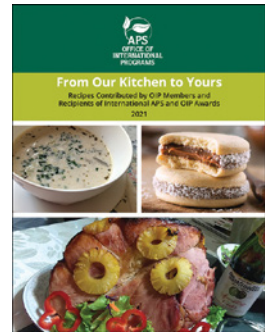
The APS Office of International Programs (OIP) presents *From Our Kitchen to Yours*. This digital cookbook contains recipes contributed by OIP members and volunteers, as well as past recipients of the Global Experience Award, OIP Books of the World Award, Excellence in International Service Award, JANE International Research Award, and OIP International Travel Award.

All proceeds from this cookbook will benefit the Global Experience Award—one of the premier awards granted by OIP.

This award provides funding for APS plant pathologists to partner with scientists from developing countries to create and implement extension and outreach programming for communities within these countries.

This cookbook will delight the taste buds, and proceeds will contribute to the Global Experience Award. The recipes represent a diverse and delicious cross-section of cuisines, and we hope you will enjoy making them as much as we enjoyed testing them! Visit the APS PRESS bookstore to purchase

your copy of the APS OIP cookbook, *From Our Kitchen to Yours*, and consider purchasing one for anyone on your holiday gift list! Give a gift that gives back! ■



### Editor's Corner

## Introducing Robert C. Kemerait, Jr. as the New *Phytopathology News* Editor-in-Chief

Robert C. Kemerait, Jr., University of Georgia, [kemerait@uga.edu](mailto:kemerait@uga.edu)



To be honest, becoming the editor of *Phytopathology News* was not something that ever occurred to me and certainly wasn't something I aspired to in my career. When delivered to my mail box in print

format, I used to read (and greatly enjoy) every word in every issue. However, with the switch to an online-format, months would sometimes pass before I looked at an issue again. It wasn't that the content was any less appealing to me; it was simply that being "out of sight" meant "out of mind."

It's been several years since my "brother" and close colleague **Dr. Kenny Seebold** first approached me about taking over as

editor. I believe that my exact words to him at the time were, "Now Kenny, why would I want to do that?" His reply was, "Bob, I think you would actually enjoy it. You like working with people, and everyone knows you like to be the first with the news, for better or worse." Though all of this was true, I remained unconvinced that becoming the editor was what I needed to do. As an Extension specialist at the University of Georgia, I am most at home in the cotton and peanut fields diagnosing disease problems. My "wheelhouse" is in front of Extension agents, farmers, and growers back home in Georgia and in far-off places around the world. The study of plant diseases and the discipline of plant pathology are so very broad that it was intimidating to find common ground among those of us who identify, in one way or another,

as "plant pathologists." Lastly, I am prone to misspelled words and run-on sentences, which doesn't bode well for an editor.

Dr. Seebold never forgot his invitation. When he asked me again, I agreed to

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**Submission Guidelines:** Address all editorial correspondence to: Kenny Seebold, Valent USA, 608 Havana Court, Lexington, KY 40511 U.S.A. Phone: +1.859.940.5184; E-mail: [PhytoNewsEditor@scisoc.org](mailto:PhytoNewsEditor@scisoc.org). To ensure timely publication of your news items and announcements, please send in material six weeks prior to date of publication. Material should be no more than six months old when submitted. Submit materials as electronic files, via e-mail. For information on submitting electronic images contact [Jordana Anker](mailto:Jordana.Anker@scisoc.org). *Deadline for submitting items for the February 2022 issue is January 4, 2022.*

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

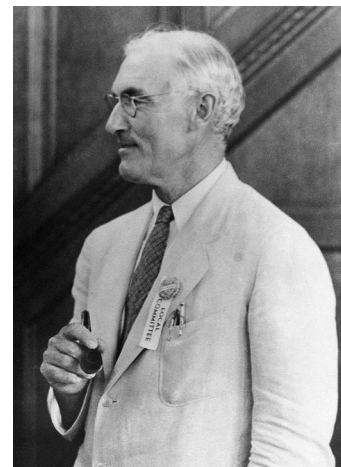
# Rollins A. Emerson: The Father of American Plant Breeding?

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

This story starts with **Rollins Adams Emerson**, one of the first geneticists in the United States. Today, his accomplishments and contributions for improving plant breeding and crop genetics have been largely forgotten. The story of his pioneering research working with the genetics and breeding of the common bean and corn is the rest of the story.

### Rollins Adams Emerson

Emerson was born in Upstate New York in 1873. When he was a child, his family moved to Kearney in central Nebraska, where they homesteaded new farmland on the prairies. After high school, he obtained a B.S. degree in 1895 from the Agricultural College at the University of Nebraska–Lincoln (UNL), where the eminent botanist **Charles E. Bessey** was his mentor. Emerson worked in Washington, DC, for several years before returning to Lincoln in 1899 as a professor and head of the Horticulture Department. He then began a stellar career of research in plant breeding and genetics, concentrating first on the common bean, thereby becoming one of the early (if not the first) dry bean researchers in the United States. In fact, this work occurred almost 30 years prior to a dry bean industry even beginning in Nebraska.



*Rollins A. Emerson. (Photo: American Philosophical Society)*

### Cornell Years

Emerson took a leave from UNL in 1910–1911 to pursue a Ph.D. degree at Harvard. After completing the degree in 1912, he returned to Lincoln, but accepted an offer to head Cornell's Department of Plant Breeding in 1914. He changed his model from bean to corn, and over the next three decades, he achieved world-renowned recognition as a pioneering corn geneticist, eventually building a corn breeding and genetics dynasty. He mentored dozens of brilliant young students—many who later became accomplished geneticists in their own rights, including Nobel laureates **George Beadle** and **Barbara McClintock**.

Emerson was considered by many to be the greatest geneticist of his day, with his contributions coming at a time when support for genetics was minimal and many prominent scientists doubted the validity and utility of this new science. According to Beadle's recollections, Emerson moved from UNL to Cornell University in 1914, in part because he felt his work was judged by UNL administrators as being too theoretical to ever be useful agriculturally.

However, it should be noted that in addition to his remarkable work in basic genetics, Emerson also maintained an interest in the practical applications of his basic studies to help solve farmers' agricultural problems. In the last decade of his career, he returned to his first love, breeding horticultural crops, particularly dry beans. At the time, New York was the number one producer of beans in the United States, and the industry was being severely threatened by anthracnose. He has been credited with saving the dry bean industry in New York State from complete disaster and collapse after transferring resistance to the disease into new dry bean cultivars.

### Discovery of Mendel's Work

Emerson was among the first American scientists to embrace the ideas of **Gregor Mendel** (also referred to as Mendelian genetics), stating that certain genetic traits are

*Perplexing Past, continued on page 3*

inherited or passed to progeny from their parents. These principles were derived after the amateur botanist carefully conducted experiments between 1856 and 1863, utilizing garden peas within a small 5-acre plot on the monastery grounds of the Abby of St. Thomas in Brno, Moravia (present day Czech Republic). After publishing his results in an obscure Austrian journal in 1866, Mendel's work went unnoticed until 1900, when his publication was rediscovered independently by four scientists: Dutch botanist **Hugo de Vries**, German botanist and geneticist **Carl Correns**, Austrian agronomy graduate student **Erich von Tschermak-Seysenegg**, and American wheat breeder and economist **William Jasper Spillman**.

It is plausible that Emerson might have become even more universally recognized for his work had he been more accomplished in the German language. **Wayne F. Keim** (another UNL and Cornell plant breeding alumnus) related a story to me that he obtained from a personal conversation with Emerson. Although Emerson had retired before Keim started graduate school at Cornell in 1947, he did meet with Emerson on two occasions. During one of those exchanges, Emerson informed Keim that he had seen Mendel's paper on the landmark pea experiments in the late 1890s while still at Nebraska. Due to his lack of mastery and comprehension of German, however, he was unable to fully understand the significance of Mendel's paper. Based on this conversation with Emerson, Keim then asked himself "how close was Rollins A. Emerson and the University of Nebraska, College of Agriculture, to being the 'first discoverers' rather than the three Europeans"?

### Emerson's Legacy in Nebraska

The name of Rollins Emerson has lived on in the annals of Nebraska agricultural history, although his innovative investigations and even his existence during the early years of dry bean research in the United States is largely unknown. The bacterial wilt-resistant Great Northern dry bean cultivar Emerson, developed by UNL breeder **Dermot Coyne** and plant pathologist **Max Schuster** in 1971, was named in honor of the eminent Nebraskan geneticist. Although this cultivar is well known in the industry, few actually know the identity of the honored individual or his contributions to science and agriculture. It is remarkable that this cultivar is still in use today in Nebraska, 50 years after its release. Now you know *the rest of the story*.

### REFERENCES

- Beadle, G. W. 1974. Recollections. *Annu. Rev. Biochem.* 43:1-13.
- Frolik, E. F., and Graham, R. J. 1987. College of Agriculture of the University of Nebraska-Lincoln, the First Century. Board of Regents, University of Nebraska, Lincoln, NE.
- Keim, W. F. 2002. Lincoln to Ithaca to Palo Alto—A scientific trek. *Agron. Hort. Newsl.* (Summer).
- Keim, W. F. 2014. Personal correspondence with R. M. Harveson.
- Murphy, R. P., and Kass, L. B. 2011. Evolution of plant breeding at Cornell University: A centennial history (1907–2006). Internet-First University Press, Ithaca NY.
- Rhoades, M. M. 1949. Biographical memoir of Rollins Adams Emerson (1873–1947). *Biogr. Mem. Natl. Acad. Sci.* 25:312-323. ■



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## OPRO Meets Melanie Medina López

Submitted by Melanie Medina López, a Ph.D. student in the Department of Plant Pathology at The Ohio State University, on behalf of The Ohio State University Plant Pathology Graduate Student Association.

**Science outreach activity:** “Plant Pathogens and the People That Study Them” video.

**Type of event:** An online video.

**Intended audience:** K-12 students. This video was specifically created for elementary school students.

**Description of the activity:** This video was created for OSU’s WestFest, which is a science and sustainability festival geared toward the general community. This year the festival took place entirely online. We put the content together in a video so we would still be able to teach children about plant pathogens and plant pathologists.

**Materials needed for this activity:** The video is available on [YouTube](#).

**How many times has this activity been hosted?** This video was made available for one event. However, it is available on YouTube for others to use freely.

**In total, how many participants have been in attendance?** WestFest had approximately 674 participants. Thus far, the video has 56 views.

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



Thumbnail of YouTube video.

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

The APS Graduate Student Committee encourages graduate student members to apply to be featured in a *Phytopathology News* [spotlight article](#). Applicants are chosen based on their involvement in APS as student members and their expected graduation dates. [Submit your application](#) for consideration today.

Editor’s Corner, continued from page 1

sign-on as editor of *Phytopathology News*. “I’ve got this,” I thought at the time. I’ll admit, there still is a little bit of angst. How does one follow in the footsteps of previous editors such as Dr. Seebold and **Dr. Doug Jardine**? What can I possibly say in my “Editor’s Corner” that will have meaning to a broad swath of our readers? What can we do to build upon the content of *Phytopathology News* so that it continues to be a resource where we find common ground, a place where announcements are posted, achievements are recognized, and news of all types is shared among us? Whether your preferred APS journal is *MPMI*, *Phytopathology*, *Plant Disease*, or *Plant Health Progress*, *Phytopathology News* has been, and will continue to be, where we can share in the “other” part, the collegial part, of a shared career and membership in The American Phytopathological Society.

I would like to recognize Kenny for his dedicated service from 2015 to 2021 as editor-in-chief of *Phytopathology News* and to thank him for bringing me in from “out in the cold” to serve as the next editor. Dr. Seebold has done an excellent job and is to be commended. Finally, as we move into December, I wish all of you a safe holiday season and hope you are able to enjoy time with friends and family. ■

## Apply for APS Foundation Awards

The APS Foundation is accepting applications for the following awards:



- **JANE Award**—Research funding for cooperation between scientists from the United States and developing countries.
- **OIP Global Experience Award**—Helps APS plant pathologists working with scientists and extension personnel in developing countries in training and outreach efforts.

**Application deadline is April 15, 2021. Apply Today!** ■

# De Bary Outstanding Children's Science Book Awards 2021



The committee for The American Phytopathological Society's De Bary Award for Outstanding Children's Science Books is happy to announce this year's winners. For younger readers, we recommend **Astronauts Zoom! An Astronaut Alphabet**; for intermediate readers, **You're Invited to a Moth Ball – A Nighttime Insect Celebration**; for all readers, **What Is Coronavirus? How It Infects, How It Spreads and How to Stay Safe**. As always, we pick "winners" because it's expected, but we trust parents to look at the list of books and have an idea which ones will suit their children.

## For Youngest Children (5–7 years old)



**WINNER: Astronauts Zoom! An Astronaut Alphabet** by Deborah Rose. 2021. Persnickety Press, VC Baker & Taylor Publisher Services. Ages 2–7. Hardcover: \$16.95

We like alphabet books that are age-appropriate, and this one would be great to read to space-loving toddlers or to give to space-loving young readers. Our judges liked the excellent layout of photographs of astronauts doing stuff (e.g., **Awaken**, **Brush their teeth**, etc.).

**Earth Hour: A Lights-Out Event for Our Planet** by Nanette Heffernan, illustrated by Bao Luu. 2020. Charlesbridge. Ages 3–7. Hardcover: \$11.99

This book tells kids about the annual "Earth Hour," when everybody turns out lights for one hour to symbolize the need to save energy. Does this really happen? None of us had ever heard of Earth Hour, but the illustrations of people in cities around the world turning out lights and witnessing natural beauty are splendid. Our 8-year-old sample child liked this one the best.

**Here We Go Digging for Dinosaur Bones** by Susan Lendroth, illustrated by Bob Kolar. 2020. Charlesbridge. Ages 4–8. Hardcover: \$15.60

One judge said "The book seems designed for reading to one 10 year old and one 4 years old at the same time" and that's the problem: there are lively illustrations of kids participating in a paleontological dig, with the main text intended to be sung to "Here we go round the mulberry bush." However, the explanatory text below provides good information about paleontology (and our sample child liked those). It's your call if you want to sing this book.

**Rare & Blue – Finding Nature's Treasures** by Constance Van Hoven, illustrated by Alan Marks. 2020. Charlesbridge. Ages 5–9. Hardcover: \$18.99

Random blue things (lobsters, butterflies) are celebrated in watercolors. Not really scientific, but one judge said, "This book aims to give young people a sense of wonder and an appreciation for rarity."

**Welcome Home, Whales** written and illustrated by Christina Booth. 2021. Blue Dot Kids Press. Ages 4–9. Hardcover: \$17.95

A child dreams of the return of a whale from its yearly migration. Few scientific facts are provided, but the illustrations are nice, and the sample child liked the story. One judge said, "It's not going to inspire scientists, but it will make people think about the need to watch out for the whales."

## For Middle Readers (8–12 years old)

**Monster in the Water—Fighting Back Against Harmful Algal Blooms** by Dylan D'Agate, illustrated by Maria DeCerce. 2021. Get Creative 6. Ages 6–10. Hardcover: \$14.95

This book was written by a 16-year-old to warn other kids about algal blooms and how to prevent them. It has some scientific facts slightly nullified by the illustrator's insistence on putting angry yellow eyes on the algal bloom.

**This Is a Book to Read with a Worm** by Jodi Wheeler-Toppen, illustrated by Margaret McCartney. 2020. Charlesbridge. Ages 5–10. Hardcover: \$16.99

This book encourages kids to find a worm and do simple experiments with it (shine a light on it, expose it to alcohol). Many of the judges liked the scientific spirit, but we recommend it for older kids and hope that parents buying this book will chaperone the worm to make sure it doesn't experience trauma. Our sample child's mother was not thrilled that the child wanted to try this.



**WINNER: You're Invited to a Moth Ball—A Nighttime Insect Celebration** by Loree Griffin Burns, photographs by Ellen Harasimowicz. 2020. Charlesbridge. Ages 5–8. Hardcover: \$13.38

This book invites you to take a white sheet, an ultraviolet light, and a few other pieces of equipment and hold a moth observation party. We all loved this book and recommend it to parents with this proviso: if you buy the book, you're going to need to do this, so be prepared to get that ultraviolet light (our sample child pretty firmly wanted to do this next camping trip). One judge noted that this book didn't provide specific recommendations for city kids, but anywhere with a park should be fine.

**Who Needs a Forest Fire?** by Paula Henson, illustrated by Sue Todd and Emily Underwood. 2021. Terra Bella Books. Ages 5–10. Paperback: \$16.99

This book explains the complicated story of forest fires: they are needed to allow many ecosystems to thrive, but not when the fires are hotter and more frequent as they are spurred by human interference and global warming. Good information and illustrations.

*De Bary Awards, continued on page 6*

## For older readers (through 16 years old) or all ages

**Herbaria—A Guide for Young People** written and illustrated by Kelly LaFarge. 2021. The University of Chicago Press. Hardcover: \$19.95

One of the judges said, “I would imagine this is the only one of its kind”: a book about herbariums for kids. It’s fact-filled and loaded with photographs and illustrations and perhaps intended to be dipped into rather than read. It covers the history of plant collecting and how plant samples are stored and where, but it overlooks the importance of herbaria in providing genomic information.

**Our World—Out of Balance** by Andrea Minoglio, illustrated by Laura Fanelli. 2021. Blue Dot Kids Press. Ages 8–12. Hardcover: \$21.95

This is a book for children about how humanity’s actions are changing the planet, and it is comprehensive. It states a topic (e.g., extreme weather, pollution, animal extinction), depicts it with extremely good graphics, summarizes it in the text and then describes what people are doing to fix it, and what you (a kid) can do to help. The judges found some inaccuracies in the information, and while we think Greta Thunberg would like it, it is very, very depressing.

**The Stardust Mystery** by Peter Solomon. 2021. Thebeamer LLC. Ages 7–12. Paperback: \$25.99; and **The Race to the Big Bang—The Stardust Mystery Project** by Peter Solomon. 2021. Thebeamer LLC. Ages 13–18. Paperback: \$20.49

These are adventure stories featuring a cast of school kids who are competing in science contests. The illustrations are meant to look

like video games, so they didn’t appeal to us but perhaps will appeal to the target audience. As scientists, we wanted to see kids motivated by a sense of wonder, not by a big prize.



**WINNER: What Is Coronavirus? How It Infects, How It Spreads and How to Stay Safe** written and illustrated by Saffithry Persad. 2021. Firewater Media Group. Ages 12–18. Paperback: \$17.95

This is a timely introduction to virology and epidemiology. One judge said, “[There is] enough information about viruses generally that it will continue to be worth recommending,” but pointed out that some of the information is already out-of-date. Another judge praised the good use of illustrations.

Thanks to our committee: Margot Beckett, Vanina Castroagudin, Albert Culbreath, Megan Daniels, Margery Daughtrey, Margaret McGrath, Chuanxue Hong, Cristi Palmer, Kerry Pedley, Diana Sherman, Emily Smallwood, Nina Shishkoff, and Olivia Stanley, plus our guest child. Nominations will be accepted for the next De Bary list of outstanding children’s science books through July 2022. We are accepting good science books in all languages (but would appreciate the nomination of guest judges, preferably APS members, who speak the language). We cannot accept free copies of books, but we are happy to look at PDF versions sent by email (which only judges and selected children will read). Contact **Nina Shishkoff**. ■



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## Thank You, Donors

Thank you to the donors to the APS Foundation whose combined donations totaled \$74,000 in 2021. These donations have a lasting impact on the many individuals

who receive 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; every amount donated has a significant impact on the future of plant pathology. **Give today!** ■

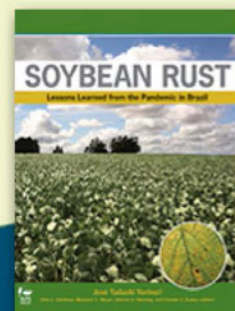
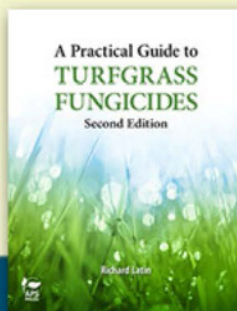
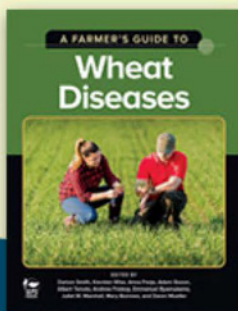


## Thank You, APS Volunteers

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 [aps@scisoc.org](mailto:aps@scisoc.org). There are many more ways to engage with APS! ■

NEW ▶



# USDA NIFA Grant Panelists—Volunteers Serve for Science

Hannah Rivedal, APS Public Policy Board Intern



Last month's *Phytopathology News* included a [call for USDA-NIFA grant panelists](#), who help select the best proposals submitted to the agency's numerous grant programs. This month, I sat down with one of the National Program Leaders of NIFA, **Dr. Ann Lichens-Park**, to discuss what it is like to serve on a panel and why plant pathologists should consider volunteering.

Read an overview of our conversation and learn more about this opportunity below!

In talking with Dr. Lichens-Park, I learned that more than 1,500 volunteers contributed to NIFA's grant review process during the last two fiscal years. Each of the agency's grant programs requires a panel of experts. Panels are made up of scientists with varied expertise related to the proposal topics, who represent different geographic locations, ethnicities, and career levels. The agency also considers whether panelists have a conflict of interest in serving—for example, a panelist cannot review a proposal from another member of their institution, a recent collaborator, or a graduate or postdoc-

toral advisor. If a panelist does have a conflict of interest with one of the applications, they leave the room when the panel discusses that application. The identities of panelists are kept confidential.

Once selected as a volunteer, you can ask the panel manager how many applications you are expected to review and in what time frame.

You read each application and consider its merit based on the Request for Applications. The panel will then meet to discuss the applications and develop an initial ranking for all proposals in the set of applications. Proposals are then considered a second time to ensure that the final ranking reflects a fair evaluation of all proposals. NIFA wants panelists to be prepared for this experience, so they provide more than three hours of [online training](#) that covers many aspects of volunteering.

Serving on a NIFA panel is valuable to early-career scientists like me because it provides an opportunity to learn what sort of proposals are submitted to a program, what makes a successful grant, and what weaknesses can be critical in review. Your service as a grant panelist is also valuable to NIFA, enabling the agency to support the highest quality science based on reviews of willing experts. This is a chance to benefit you, your career, and the scientific community at large. So, consider volunteering to be a NIFA grant panelist—I did, and I cannot wait to serve! ■

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## Call for Applications for 2022 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 they were pioneers in developing ef-

fective soil fumigation through experimental research.

The foundation was established in 1987 to support graduate student research. To date, \$598,500 has been awarded to 91 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 2022 APS meeting in Pittsburgh, PA, and are presented their awards at a luncheon attended by their research advisors, previous awardees, and members of the Foundation Committee.

### 2021 Foundation Award Winners

**Camilo H. Rojas**, North Carolina State University

**Proposal title:** Revealing the Effector Repertoire of *Ceratocystis fimbriata* to Accelerate Sweetpotato Breeding Efforts

**Andres Dejesus Sanabria-Velazquez**, North Carolina State University

**Proposal title:** Exploring Alternative Management of Soilborne Pathogens in Stevia (*Stevia rebaudiana*) in North Carolina, Mexico, and Paraguay

**Chaydon O'Fallon**, University of California, Riverside

**Proposal title:** Identification of *Phytophthora* spp. Causing Root and Crown Rots in California Cherry Orchards and Their Management Using New Fungicides with Unique Modes of Action

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 proposal for future consideration. The research for which the award is given is expected to be performed by the applicant during the academic year 2022–2023 and a one-page progress report is due one 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 sub-

*Storkan-Hanes-McCaslin Foundation Awards, continued on page 8*

mitted electronically, no later than May 1, 2022 to: **Dr. Michael Stanghellini** (chair of the Selection Committee).

Please submit a combined file containing:

1. A short, two- to 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).
2. A one-page resume (i.e., a brief education and research background, including a telephone number and email address).
3. 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 (e.g., organization, correct English grammar, and spelling) of the written proposal. Funding will begin September 1, 2022. ■

## People

### New Position



The University of Minnesota is thrilled to share that **Dr. Megan McCaghey** joined the Department of Plant Pathology in August 2021 as an assistant professor with a 50%/50% research/teaching appointment and an emphasis on soilborne fungal pathogens. Dr. McCaghey holds an undergraduate degree from Hendrix College, an M.S. degree in international agricultural development from U.C. Davis, and a Ph.D. degree in

plant pathology from the University of Wisconsin. In her new role, Dr. McCaghey is researching the most relevant soilborne fungal disease problems identified by Minnesota farmers and looks forward to collaborating with others working in this area. Her initial efforts will focus on management of Sclerotinia of soybean and Phomopsis and Sclerotinia of sunflower. An overarching theme in her research is improving disease management through genetic and soil-ecological methods. She is also interested in shifting plant pathogens and how the diseases they cause are impacted by climate change. Dr. McCaghey is looking forward to teaching next year, leveraging her previous teaching experiences. She describes our department as a "supportive community" and a "collaborative research environment," indicating that her new job is a perfect fit for her research experiences and interests. We couldn't agree more! We welcome Dr. McCaghey to our department! Dr. McCaghey's position is supported by the Agricultural Research, Education, Extension and Technology Transfer (AGREETT) program at the University of Minnesota.

*People, continued on page 9*

## APS Foundation

### 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.*

#### Timothy Paulitz



Why do I give to APS Foundation? First, to recognize all those mentors and advisors who made my career possible. Like **Martin Stoner**, my undergraduate mentor who fostered my interest in plant pathology; like my graduate teachers at UC Riverside, such as **Albert Paulus**; my postdoc mentors, like **Tex Baker**, **Bob Linderman**, and **Joyce Loper**; and those who gave me advice later in my career, like **Jim Cook**. APS has provided

a network for my collaborations nationally and internationally. I learn much more by personal contacts at meetings than I can by just reading scientific papers. APS has also provided an avenue for leadership over the years—APS PRESS, *Phytopathology*, and the APS Centennial Planning Committee. We can do so much more in a collective effort. Secondly, to support the next generation of plant pathologists. As I near the end of my career, I am hopeful to find so many young scientists with the same drive and passion that I have for plant pathology. I want to foster their success in the future and ensure that our discipline remains strong and effective.

*Timothy Paulitz is a plant pathologist with the USDA-ARS Wheat Health, Genetics and Quality Research Unit at Washington State University.*

#### Christine Smart



I joined APS as a graduate student and was not really sure what the society could offer me. Over the many years that I have been a member, I have come to realize the amazing resources and opportunities APS can offer. Our annual meetings are not only a place to reconnect with lifelong friends and colleagues, but also to meet new people and learn about the amazing science that is happening around the world. I love being a plant pathologist,

and APS is a way for all pathologists to experience the passion and excitement of our discipline. I have benefitted from APS at every step of my career, and my students have benefitted from travel awards and the many professional development opportunities. I donate to APS Foundation because I want our society to remain vibrant and continue to inspire future pathologists.

*Christine Smart is a professor of plant pathology at Cornell University, director of Cornell's School of Integrative Plant Sciences, and an APS Fellow.* ■



## Graduate Student Spotlight: BeKa (Rebecca) Leuschen



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

Ph.D., Purdue University.

### What year are you in graduate school?

I am in my second year as a Ph.D. student.

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

Quantitative Plant Pathology Program in the Department of Botany and Plant Pathology.

### Who is your major professor?

**Dr. Anjali Iyer-Pascuzzi.**

### Are you an APS member?

Yes.

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

I have been very active in the North Central-APS division, serving as the Purdue University Botany and Plant Pathology Social and Social Media chair. In this position, I have worked with NC-APS institutions to organize networking events for graduate students. I hope to continue to be involved in the NC-APS region, and even more so in the APS organization, as I continue my academic career. Something I am specifically interested in working on are DEI initiatives by APS.

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

My current research project aims to identify mechanisms of pattern-triggered immunity (PTI) in tomato roots. Specifically, I am looking at the localization of pattern recognition receptors (PRRs) and how the presence of PRRs varies among root tissues and developmental zones.

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

I love watching classic Disney movies, and I have been to Disney parks in Florida, Japan, France, and the Bahamas.

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

Outside of science, I love to travel—being outdoors to hike or kayak. I am always ex-

cited to try new foods and learn new cooking/baking techniques. I also recently started learning traditional Choctaw beading techniques.

### What is your hometown?

Kansas City, MO, USA.

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

Turnip mosaic virus (TuMV).

### If you know you are pursuing a specific career sector and want that shared, what is it?

I am currently pursuing a career in academia and am hoping to serve as a teacher, mentor, and researcher for underrepresented minorities, including indigenous students.

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

For my undergraduate honors thesis at the University of Nebraska–Lincoln, I worked under plant virologist **Dr. Hernan Garcia-Ruiz**. Dr. Garcia-Ruiz showed me how I could approach common plant pathology questions using my biochemistry background, and I immediately found an interest in using the biochemical techniques to study how plants perceived different pathogens.

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

E-mail: [rlusche@purdue.edu](mailto:rlusche@purdue.edu) ■



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

*People, continued from page 8*

## New Publications

The second edition of *Fungos em Plantas no Brasil (Fungi on Plants in Brazil)* is now available as a freely accessible e-book [online](#) (Mendes, M. S., Urben, A. F., and Dianese, J. C. 2019. *Fungos em Plantas no Brasil*. Escola Nacional de Gestão Agropecuária, Brasília).

The first edition was published in 1998 as a printed book. I am very happy to be able to open this publication for free use by plant pathologists. This 2019 second edition, published in 2020, is a revised and

amplified version in a format that will allow for continuous update of the database. We are hopeful that by mid 2022 we will have a new version available.

—José Carmine Dianese

The U.S. Wheat and Barley Scab Initiative (USWBSI) is pleased to announce the publishing of its [2021 Fusarium Head Blight Disease Impact Update](#). This year commentary from experts in 32 states indicated most growers dealt with drought conditions during the season, causing reduced yields and test weights. While very few reports of Fusarium head blight (FHB, also known as scab) were received, a few isolated occur-

rences were found in some states. Major cases of FHB were reported from Kansas, Missouri, Oklahoma, and Texas.

Readers interested in learning more about FHB can visit [ScabUSA](#) to find publications and resources by USWBSI-funded researchers. Producers can also view the [USWBSI FHB Risk Tool](#) developed by researchers in the USWBSI to monitor FHB risk during the growing season, as well as review data from prior years for planning.

For more information about USWBSI, please contact the Networking & Facilitator Office (NFO) Director of Operations **Michelle Bjerkness** at +1.612.990.5032 or [nfo@scabusa.org](mailto:nfo@scabusa.org). ■

## Classifieds

### Assistant/Associate/Full Professor of Plant Virology

University of Florida (Gainesville, Florida)

**Title:** Assistant/Associate/Full Professor of Plant Virology

**Location:** Department of Plant Pathology, University of Florida, Institute of Food and Agricultural Sciences (IFAS), Gainesville, Florida

**Salary:** Commensurate with Qualifications and Experience

**Review Date:** For full consideration, candidates should apply and submit additional materials by November 30, 2021. The position will remain open until a viable applicant pool is determined.

### Duties and Responsibilities

The Institute of Food and Agricultural Sciences is committed to creating an environment that affirms diversity across a variety of dimensions, including ability, class, ethnicity/race, gender identity and expression. We particularly welcome applicants who can contribute to such an environment through their scholarship, teaching, mentoring, and professional service. We strongly encourage historically underrepresented groups to apply.

If an accommodation due to a disability is needed to apply for this position, please call +1.352.392.2477 or the Florida Relay System at 800.955.8771 (TDD) or visit [Accessibility at UF](#).

This is a 9-month tenure-accruing position that will be 20% teaching (College of Agricultural and Life Sciences), 80% research (Florida Agricultural Experiment Station) available in the Department of Plant Pathology, Institute of Food and Agricultural Sciences (IFAS), at the University of Florida. The position can be filled at the assistant/associate/full professor level, depending on qualifications. This assignment may change in accordance with the needs of the unit. The successful candidate is expected to establish an independent, nationally and internationally recognized extramurally funded research program in plant virology.

Viral genetics, evolution, and ecology are foundational to pathogen emergence, vector relationships, host range, and the stability of host resistance. Plant viruses are causing devastating losses to food crops worldwide, but development of new disease management strategies are limited by our understanding of evolutionary and ecological aspects of virus–plant interactions. If you are excited about addressing forward-looking questions in plant virus systems and contributing to food security, please con-

sider applying for this position. This is an opportunity to develop or grow a research program using high-throughput genotyping and enhanced computational tools at a university heavily invested in computational and AI resources. Research that addresses questions in evolutionary epidemiology, host resistance, pathogen virulence, evolution and emerging diseases, and genotypic and phenotypic adaptation is of interest. Research that will contribute to prediction or management of plant virus pandemics or emerging pathogens is highly desirable.

Experience in systems virology, evolutionary molecular genetics, systems modeling, genotype to phenotype mapping, or similar computational approaches is necessary. The successful candidate is expected to establish or grow a nationally and internationally recognized extramurally funded research program. In addition to establishing a productive research program, the candidate is also expected to engage in scholarly activity related to teaching, including mentoring graduate and undergraduate students and teaching graduate or undergraduate courses.

The position is located in Gainesville and tenure will accrue in the Department of Plant Pathology. The faculty member will participate actively in undergraduate and graduate education by chairing and serving on graduate committees, supervising thesis and dissertation research, supervising undergraduate research, and publishing the results with their graduate students. The faculty member will seek contract and grant funding actively to support their program. The faculty member will engage in Extension activities in their program area.

The successful candidate will have access to advanced AI-focused computing resources and extensive computational support through the NVIDIA. There are opportunities for collaboration in initiative computational and modeling efforts across the university and in the department. The university boasts a large group of virologists across several colleges. Core facilities within UF's Interdisciplinary Center for Biotechnology Research (ICBR) contain equipment and expertise for bioinformatics, proteomics, mass spectrometry, metabolomics, electron microscopy, cytometry, DNA sequencing, and gene expression analyses.

Teaching is a highly valued activity, and there are opportunities to develop a creative and impactful teaching program. The successful candidate will engage in scholarly activities related to instruction, including teaching undergraduate and/or graduate courses, advising and mentoring undergraduate and graduate students, participating

in curriculum revision and enhancement, seeking funding for the teaching program, supervising undergraduate and graduate research and creative work, publishing teaching-related scholarship, producing learning tools, and engaging in professional development activities related to teaching and advising. Faculty are encouraged to support and participate in the CALS Honors Program, distance education, and international education.

Because of the IFAS Land-Grant mission, all faculty are expected to be supportive of and engaged in all three mission areas—Research, Teaching, and Extension—regardless of the assignment split specified in the position description.

### Qualifications

#### Required

A doctorate (foreign equivalent acceptable) in plant pathology, molecular biology, ecology, molecular genetics, or a closely related discipline is required. Candidates should have demonstrated skills in verbal and written communication, interpersonal relationships, and procurement of extramural funding. Candidates must be supportive of the mission of the Land-Grant system. Candidates must also have a commitment to IFAS core values of excellence, diversity, global involvement, and accountability.

#### Preferred

Relevant postdoctoral experience is expected.

### Background Information

The [Department of Plant Pathology](#) at the University of Florida is one of the largest in the United States, with over 30 faculty located in Gainesville and at eight Research and Education Centers around the state. We have broad expertise in microbial and plant genetics and genomics, as well as disease diagnostics and management. There is a substantial graduate program, with 50–60 graduate students and an extensive graduate curriculum. Collaboration across departments and colleges is the norm, and department values are collaborative, diverse, and inclusive.

UF is the flagship AAU academic research institution of the State of Florida and was recently named a [Top 5 Public University](#) in the country. The [University of Florida](#) is a Land-Grant, Sea-Grant, and Space-Grant institution, encompassing virtually all academic and professional disciplines, with an enrollment of more than 56,000

*Classifieds, continued on page 11*

students. UF is a member of The Association of American Universities. The [Institute of Food and Agricultural Sciences](#) includes the [College of Agricultural and Life Sciences](#), the [Florida Agricultural Experiment Station](#), the [Florida Cooperative Extension Service](#), the [College of Veterinary Medicine](#), and the [Florida Sea-Grant program](#) and encompasses 16 on-campus academic departments and schools, 12 Research and Educational Centers (REC) located throughout the state, 6 Research sites/demonstration units administered by RECs or academic departments, and Florida Cooperative Extension Service offices in all 67 counties (counties operate and maintain). The School of Natural Resources and Environment is an interdisciplinary unit housed in IFAS and managed by several colleges on campus. UF/IFAS employs nearly 4,500 people, which includes approximately 990 salaried faculty and 1,400 permanent support personnel located in Gainesville and throughout the state. IFAS, one of the nation's largest agricultural and natural resources research and education organizations, is administered by a vice president and four deans: the dean of the College of Agricultural and Life Sciences, the dean for Extension and director of the Florida Cooperative Extension Service, the dean for Research and director of the Florida Agricultural Experiment Station, and the dean for the College of Veterinary Medicine. UF/IFAS also engages in cooperative work with Florida A&M University in Tallahassee, FL.

#### Employment Conditions

This position is available January 1, 2022, and will be filled as soon thereafter as an acceptable applicant is available. Compensation is commensurate with the education, experience, and qualifications of the selected applicant.



#### 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](#).

#### Nominations

Nominations are welcome. Nominations need to include the complete name and address of the nominee. This information should be sent to:

Please refer to Requisition # 85157

**Svetlana Folimonova**

Chair, Search and Screen Committee

University of Florida

Department of Plant Pathology

PO Box 110680

Gainesville, FL 32611-0680

Telephone: +1.352.273.4655

Facsimile: +1.352.392.6532

E-mail: [svetlana@ufl.edu](mailto:svetlana@ufl.edu)

#### Application Information

Individuals wishing to apply should go [online](#) and submit:

- Cover letter that states applicant's interest in the position and qualifications relative to the credentials listed above
- Curriculum vitae
- Contact information (including email addresses) for five individuals willing to write letters of recommendation
- Unofficial transcripts

Selected candidate will be required to provide an official transcript to the hiring department upon hire. A transcript will not be considered "official" if a designation of "Issued to Student" is visible. Degrees earned from an education institution outside of the United States are required to be evaluated by a professional credentialing service provider approved by the National Association of Credential Evaluation Services (NACES).

Hiring is contingent upon eligibility to work in the United States. The University of Florida is a public institution and subject to all requirements under Florida Sunshine and Public Record laws.

The University of Florida is an Equal Opportunity Institution dedicated to build-

ing a broadly diverse and inclusive faculty and staff. The University and greater Gainesville community enjoy a diversity of cultural events, restaurants, year-round outdoor recreational activities, and social opportunities.

#### Assistant Professor of Ecology and Evolution of Infectious Plant Diseases

**Oregon State University** (Corvallis, Oregon)

The Department of Botany & Plant Pathology (BPP) at Oregon State University is searching for a tenure-track assistant professor position in Ecology and Evolution of Infectious Plant Diseases. The successful candidate will be expected to establish a robust and extramurally funded research program that will address ecological and evolutionary processes that drive the dynamics of infectious plant diseases. The focus of the program can be on existing and/or emerging plant infectious diseases that are important to the sustainability of agricultural systems in Oregon and the Pacific Northwest. All research topics within the area of ecology and evolution of infectious plant diseases will be considered. We will give preference to highly qualified candidates who show potential to 1) collaborate effectively with researchers, stakeholders, and/or Extension personnel; 2) integrate biological studies with contemporary quantitative approaches; and 3) advance departmental goals in diversity, equity, and inclusion. ■

#### Calendar

##### APS-SPONSORED EVENTS

###### MARCH 2022

[APS Caribbean Division Meeting, joint with ESA-Southern Branch](#)

###### JUNE 2022

[APS North Central Division Meeting](#)

###### AUGUST 2022

[Plant Health 2022](#)



## SPOTLIGHT

### First *Plant Health Progress* Focus Issue Includes 28 Oomycete Articles!

The *Plant Health Progress* Focus Issue on Managing Stubborn Oomycete Plant Pathogens is now complete with 28 articles—all available online. We'd like to thank Guest Editors **Chandrasekar (Shaker) S. Kousik**, **Lina M. Quesada-Ocampo**, **Anthony Keinath**, **Mary Hausbeck**, **Leah Granke**, **Rachel Naegele**, and **Pingsheng Ji** for their work on this impressive issue.

### Submit Your Efficacy Trial Reports to *PDMR* by December 10 to Be Included in Volume 16

A biannual APS publication, *Plant Disease Management Reports (PD MR)* facilitates the rapid dissemination and archiving of information on cultural, chemical, and biological control of plant diseases. Like previous releases of *PD MR*, Volume 16 will be published in two installments, enabling authors to submit reports twice a year. Learn about the [submission process](#) and review a [sample report](#). Then, [submit](#) your own report to this platform. The first submission form closes December 10, 2021.

### Call for Papers! Submit to the 2022 *PhytoFrontiers* Focus Issue

Guest Editors **Kitty Cardwell**, **Carrie Harmon**, **Poonam Sharma**, and **James Stack** are spearheading the 2022 *PhytoFrontiers*™ Focus Issue: Diagnostic Assay Development and Validation: The Science of Getting It Right. This issue will collect a series of articles designed to raise awareness and improve discourse in the plant pathology community about the importance of assay validation for accurate diagnostics. [Learn more](#).

### A Sequence Change in a Single Protein Allowed a Tomato Virus to Become a Global Crop Pandemic

In a study recently published in the *MPMI* journal, **Dr. Ziv Spiegelman** and **Dr. Hagit Hak** explored the molecular mechanism by which an emerging viral tomato disease was able to successfully break the reliable *Tm-2<sup>2</sup>* resistance gene and become a devastating global crop pandemic. ■



## TRENDING

### *Phytopathology*

🍃🍃 Spatiotemporal Changes in Varietal Resistance to Wheat Yellow Rust in France Reveal an Increase in Field Resistance Level During the Period 1985–2018  
R. Perronne, F. Dubs, C. de Vallavieille-Pope, M. Leconte, P. du Cheyron, V. Cadot, T. Vidal, and J. Enjalbert

🍃🍃 Names of Phytopathogenic Fungi: A Practical Guide

P. W. Crous, A. Y. Rossmann, M. C. Aime, W. C. Allen, T. Burgess, J. Z. Groenewald, and L. A. Castlebury

🍃🍃 The Use of Biochar for Plant Pathogen Control

J. Poveda, Á. Martínez-Gómez, C. Fenoll, and C. Escobar

### *Plant Disease*

🍃🍃 Degradation of Aflatoxins B<sub>1</sub> by Atoxicogenic *Aspergillus flavus* Biocontrol Agents

L. A. Maxwell, K. A. Callicott, R. Bandyopadhyay, H. L. Mehl, M. J. Orbach, and P. J. Cotty

🍃🍃 Detection of Four New Tomato Viruses in Serbia Using Post Hoc High-Throughput Sequencing Analysis of Samples From a Large-Scale Field Survey

A. Vučurović, D. Kutnjak, N. Mehle, I. Stanković, A. Pecman, A. Bulajić, B. Krstić, and M. Ravnikar

🍃🍃 Where Does the Peanut Smut Pathogen, *Thecaphora frezii*, Fit in the Spectrum of Smut Diseases?

S. L. Arias, V. S. Mary, P. A. Velez, M. G. Rodriguez, S. N. Otaiza-González, and M. G. Theumer

### *MPMI*

🍃🍃 The Natural Antisense Transcript *DONE40* Derived from the lncRNA *ENOD40* Locus Interacts with SET Domain Protein ASHR3 During Inception of Symbiosis in *Arachis hypogaea*

P. Ganguly, D. Roy, T. Das, A. Kundu, F. Cartieaux, Z. Ghosh, and M. DasGupta

🍃🍃 Metatranscriptomic Comparison of Endophytic and Pathogenic *Fusarium*–*Arabidopsis* Interactions Reveals Plant Transcriptional Plasticity

L. Guo, H. Yu, B. Wang, K. Vescio, G. A. Delulio, H. Yang, et al.

🍃🍃 Natural Genetic Diversity in the Potato Resistance Gene RB Confers Suppression Avoidance from *Phytophthora* Effector IPI-O4  
H. S. Karki, S. Abdullah, Y. Chen, and D. A. Halterman

### *Plant Health Progress*

🍃🍃 Effective Downy Mildew Management in Basil Using Resistant Varieties, Environment Modifications, and Fungicides

J. S. Patel, C. A. Wyenandt, and M. T. McGrath

🍃🍃 An Accreditation Program to Produce Native Plant Nursery Stock Free of *Phytophthora* for Use in Habitat Restoration

T. J. Swiecki, E. A. Bernhardt, S. J. Frankel, D. Benner, and J. Hillman

🍃🍃 A Diagnostic Guide for Pythium Damping-Off and Root and Stem Rot of Cucurbits

S. M. Toporek and A. P. Keinath

### *Phytobiomes*

🍃🍃 Mycobiome Transplant Increases Resistance to *Austropuccinia psidii* in an Endangered Hawaiian Plant

M. K. Chock, B. K. Hoyt, and A. S. Amend

🍃🍃 Comparison of the Species Communities of *Phytophthora*, *Pythium*, and *Phytophthora* Associated with Soybean Genotypes in High Disease Environments in Ohio

K. A. Navarro, S. Wijeratne, S. Culman, M.-S. Benitez, and A. E. Dorrance

🍃🍃 Metagenomic Analysis Reveals Reduced Beneficial Microorganism Associations in Roots of Foot-Rot-Affected Citrus Trees

C. Yang and V. Ancona

### *PhytoFrontiers*™

🍃🍃 *Dickeya dianthicola* Is Not Vectors by Two Common Insect Pests of Potato

J. K. Insinga, A. Alyokhin, J. Hao, T. Ge, N. F. Marangoni, and A. Baron

🍃🍃 Spectral and Thermal Responses of Peanut to Infection and Colonization with *Athelia rolfsii*

X. Wei, D. B. Langston, Jr., and H. L. Mehl ■

🍃 = Editor's Pick   🍃 = Open

