ISPP INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

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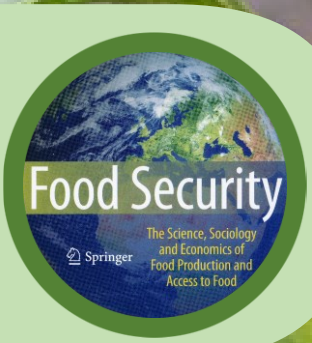
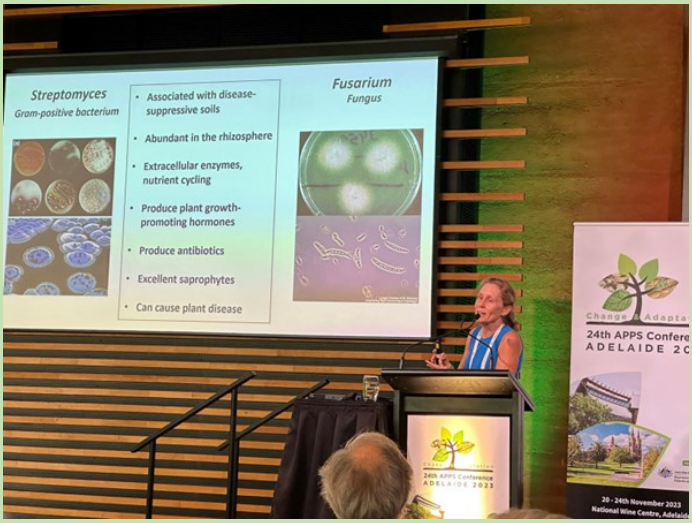


AUSTRALASIAN PLANT PATHOLOGY SOCIETY (APPS) CONFERENCE IN ADELAIDE, NOVEMBER 2023

SUE PEDERICK, APPS REGION COUNCIL COORDINATOR, APPS CONFERENCE COMMITTEE

The Australasian Plant Pathology Society (APPS) conference 'Change and Adaptation' was held on the 20th to the 24th November 2023, Adelaide, South Australia at the National wine centre; APPS2023 (eventsair.com). Organised by South Australian APPS members from the South Australian Research Development Institute (SARDI), Commonwealth Scientific and Industrial Research Organisation (CSIRO) and an Industry representative from Syngenta. The conference was led by Dr Nicole Thompson (SARDI) as conference convenor. The theme for the conference, "Change and Adaptation", was chosen to highlight the ever-changing nature of pathogens and the array of emerging technologies being developed to monitor and control disease. Conferences are a wealth of knowledge on a personal and professional level, if you have the opportunity in future grasp it, you wont be sorry!

Left: The APPS conference committee, National Wine Centre, Adelaide SA. LtoR: Dr Cathy Todd, Brittany Oswald, Dr Belinda Stummer, Sara Blake, Dr Mohsen Khani, Dr Ismail Ismail, Dr Gupta Vadakattu, Dr Nicole Thompson, Dr Belinda (Brandy) Rawnsley and Sue Pederick. **Right:** APPS Conference at the National Wine Centre, Adelaide SA, some of the main room attendees.



Left: Presidential Address 'Pioneering discoveries in plant virology from Australia (what lessons can we learn from history?)' Dr Andrew Geering President of the APPS delivering his keynote speech, with Dr Nicole Thompson chairing. **Right**: Professor Linda Kinkel, The University of Minnesota, keynote speech 'Species interactions in the plant microbiome: a riddle, wrapped in mystery, inside an enigma.

Left: Dr Peter Dodds - CSIRO, 'Uncovering virulence gene diversity in rust fungi'. **Right:** APPS fellow Professor Lester Burgess AM and Professor Amanda Able, University of Adelaide.

BURSARY CONTINUES TREVOR WICKS' LEGACY

PROFESSOR EILEEN SCOTT, UNIVERSITY OF ADELAIDE, TREVOR WICKS APPS STUDENT TRAVEL FUND CHAIR

It was an honour and a pleasure to have Dr Keren Wicks present certificates to the winners of the Trevor Wicks Memorial Travel Bursary at the conference dinner. Early career researchers Drs Tory Clarke, Reannon Smith and Nga Tran received bursaries to support travel to ICPP 2023 in Lyons International Congress of Plant Pathology (icpp2023.org). Keren remarked that her late husband made lifelong friends and collaborations as a result of his overseas trips. He often spoke of people who had mentored and encouraged him when he was a student. Trevor, in turn, mentored and sponsored students and ECRs throughout his career, so he would be pleased that this scholarship continues his legacy.

L to R: Professor Eileen Scott, Dr Nga Tran, Dr Tory Clarke, Dr Reannon Smith & Keren Wicks. Adelaide Oval, APPS Conference Dinner.

Thank you again to the platinum sponsor for supporting the APPS Conference event:

Australian Government
Department of Agriculture, Fisheries and Forestry

BREAKTHROUGH TO BOOST DISEASE RESISTANCE IN CROPS

CSIRO NEWS RELEASE, 27 FEBRUARY 2024

Scientists at Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia's national science agency, have achieved a breakthrough in molecular plant pathology, marking a technological leap forward for breeding durable disease-resistant crops. Plant pathogens greatly reduce agricultural productivity and are a persistent threat to global food security. Annually, rust pathogens lead to crop losses of US$1 billion worldwide.

The scientists developed a novel rapid gene-screening platform which can identify new avirulence (Avr) effector genes in plant pathogens, building on decades of CSIRO research in synthetic biology, genetics and molecular plant pathology.

CSIRO's Dr Peter Dodds, co-lead of the project, said the new method will have a huge impact on future pathogen-resistant crop development. "Our advanced screening technology represents a technological leap forward in our ability to study the processes that give plants enduring resistance to disease, enabling new genetic strategies to safeguard crop production and disease management in Australia and abroad," Dr Dodds said.

This method enables high-throughput screening of complex genetic libraries in a plant's cellular environment at an unprecedented speed. This enhances the ability to select more disease-resistant crops and aids efforts in pathogen surveillance. This technology positions CSIRO to tackle important biosecurity challenges as climate change increases risks for disease outbreaks.

Research Scientist and lead author Dr Taj Arndell working with technician Natalie Niesner at a CSIRO Black Mountain laboratory (Photo credit: CSIRO).

"We have been able to identify several new fungal Avr effector genes in the wheat stem rust pathogen, reducing the time from years or even decades to mere months."

Effector genes in plant pathogens, like rust fungus, encode proteins that suppress plant immune responses. However, if the plant recognises these pathogen proteins, they can activate plant defence mechanisms and stop widespread infection.

Dr Thomas Vanhercke, who also co-led the project explained that while this study examined Avr genes in a rust fungus which affects wheat, the same technique can be applied to other crops and pathogens.

The article 'Pooled effector library screening in protoplasts rapidly identifies novel Avr genes' was published in *Nature Plants*.

LADYBUG SCENTS OFFER A ECOLOGICALLY FRIENDLY WAY TO PROTECT CROPS

VANESSA GARCIA, PENN STATE NEWS, 22 FEBRUARY 2024

Researchers found that ladybug scents can cue aphids to eat and reproduce less (Photo credit: Sara Hermann / Penn State. Creative Commons).

The use of pesticides, while beneficial for global food security, wreaks havoc on natural ecosystems and human health. To address this issue, Penn State researchers have turned to an unlikely enforcer to protect crops: the ladybug. The team, led by Sara Hermann in the Penn State College of Agricultural Sciences, developed a novel pest management tool by leveraging the chemical ecology of predator-prey interactions between ladybugs and aphids.

They published their work in the journal *Basic and Applied Ecology* and recently filed a provisional patent application for the innovation.

While ladybugs are known to be ravenous consumers of aphids, small insects that eat nearly every kind of plant, Hermann has focused her research on the non-consumptive dynamics between these organisms. What piqued her interest is the aphid's ability to detect the unique smells that ladybugs emit and process this smell as a cue to change behavioural traits that allow them to avoid being eaten.

"The major goal is to start to think outside the box," said Hermann, the Tombros Early Career Professor and assistant professor of arthropod ecology and trophic interactions. "We want to understand how the fear of being eaten influences behaviour and physiology. We start with big ecological questions cantered in agricultural systems to develop interventions. Using knowledge of basic ecological interactions that already exist, we can work with nature rather than against it."

Hermann investigates aphid behavioural responses to ladybug "scents" and characterizes the chemical makeup of these scents. She conducts this research, which was featured in a recent PBS Terra video, in collaboration with the Huck Institutes of the Life Sciences' Center for Chemical Ecology at Penn State.

Hermann and her team identified the main compounds constituting the ladybug scent in 2021 and found that the scent alone can induce certain behaviours in aphids. They apply the ladybug scent by diffusing it into the air around the plants, signalling trouble to aphids in the nearby vicinity. In various experiments, the researchers have found that aphids have a reduced preference for ladybug scented plants. In her most recent paper, Hermann also found that the presence of ladybug odours also reduced the amount of time aphids ate and dropped their population numbers by 25%.

According to Hermann, the scent's components can be commercially produced, which she hopes will make this intervention relatively accessible to develop and bring to market. She and co-author Jessica Kansman, assistant professor of plant sciences and plant pathology at Montana State University, recently received a patent for the scent, which may allow the product to be used as a pest deterrent by commercial operations and consumers in the public.

"Our work suggests that the presence of lady beetle odour cues alone may serve as a method to reduce aphid populations, at least short term, and could be a promising technique warranting further exploration," Hermann said.

Similar chemical ecology processes that use pheromones to manipulate pest behaviour were initially pioneered in pest management as "mating disruption." Tom Baker, emeritus professor of entomology, helped lead these efforts, which have been applied widely in fruit crop systems with success, Hermann said. Mating disruption reduces successful mate finding of pest organisms using sex pheromones. Hermann's findings, in contrast, use the "fear of predation" via predator odours to reduce pest attraction, development and feeding.

The scent intervention, developed for a widespread and destructive species of aphids, could provide a sustainable agriculture solution, according to the researchers. As opposed to other agricultural solutions that work by killing aphids, Hermann said that this treatment is not expected to result in resistance issues that are common with pesticide application.

Moving forward, Hermann said she intends to investigate the community-wide impact of applying the ladybug scent to agricultural fields. Additionally, her lab will investigate similar predator-prey dynamics in new predators and parasitoids, insects whose larvae parasitize other insects.

"Together with our colleagues at the Huck's Center for Chemical Ecology, we're harnessing the power of these and other natural chemicals and ecological dynamics," Hermann said. "In an era where environmental threats loom larger than ever, our commitment to these sustainable, nature-inspired practices is not just promising — it's essential for the health and future of our planet."

CORN GENOME CAN GANG UP ON MULTIPLE PATHOGENS AT ONCE

LAUREN QUINN, UNIVERSITY OF ILLINOIS NEWS, 7 FEBRUARY 2024

In a changing climate, corn growers need to be ready for anything, including new and shifting disease dynamics. Because it's impossible to predict which damaging disease will pop up in a given year, corn with resistance to multiple diseases would be a huge win for growers. Now, University of Illinois Urbana-Champaign researchers are moving the industry closer to that goal.

Tiffany Jamann (Photo credit: University of Illinois).

Goss's wilt, a bacterial disease, and fungal diseases gray leaf spot, northern corn leaf blight, and southern corn leaf blight are important to growers across the Midwestern U.S. and, in some cases, globally. The study, published in G3 Genes|Genomes|Genetics, reveals genomic regions associated with resistance to all four diseases.

"We not only found regions of the genome conferring resistance to each disease, but also identified a handful of experimental corn lines that were resistant to all of them. These findings should help the industry develop materials with resistance to multiple diseases at once," said Tiffany Jamann, senior author of the new study and associate professor in the Department of Crop Sciences, part of the College of Agricultural, Consumer and Environmental Sciences (ACES) at U. of I.

The team made several strategic crosses between disease-resistant and susceptible corn lines that let them map resistance traits to specific locations in the genome. For now, those regions are fairly large, comprising hundreds of individual genes. If there are specific genes with outsized effects, they haven't been identified yet.

Still, identifying important regions is helpful, as disease resistance rarely comes down to a single gene. In fact, the additive or quantitative power of multiple genes working together can mean more durable resistance. There's a backup if a pathogen finds a way around a given resistance mechanism. Interestingly, this durability may even work against different groups of pathogens.

"We found 19 regions associated with resistance to the bacterial disease Goss's wilt. Several of those regions are also involved with resistance to fungal pathogens," Jamann said. "Thus, it is possible to breed for resistance to several diseases at one time using the same genetic regions."

Fungi and bacteria are very different biologically, but both have to find ways to get into the plant, travel throughout, and reproduce. Jamann says it's possible that resistance genes trigger changes in the plant's vasculature to make it harder for both kinds of pathogens to move around, but she still can't say exactly how the genes help plants protect themselves. She's working on it, though, thanks to a 2022 grant from the National Science Foundation.

Although the team identified three corn lines with resistance to all four diseases, it will be a while before growers can purchase seed for multiple-resistant corn as a result of this work. First, Jamann's team will fine-map the regions highlighted in this study to find any major-effect genes, then pass that information off to breeders who can develop hardy new hybrids. Still, Jamann says, multiple resistance is on its way.

THE COFFEE LEAF RUST PANDEMIC: AN EVER-PRESENT DANGER TO COFFEE PRODUCTION

A review by Athina Koutouleas, David B. Collinge, and Eric Boa titled "The coffee leaf rust pandemic: An ever-present danger to coffee production" was published on 15 December 2023 by *Plant Pathology* (vol. 73, p. 522-534). The abstract is as follows:-

Coffee leaf rust (CLR) is caused by the biotrophic pathogenic fungus *Hemileia vastatrix*. Despite being the most researched coffee disease, mysteries still exist relating to its epidemiology and biology. The objective of this work is to highlight past and present events concerning this prominent coffee disease. We start with an historical overview of the homeland of *Coffea arabica*, the Afromontane forest of south-west Ethiopia, and then follow its journey across the globe linked to colonial trade and power struggles. We report the relevance of CLR to coffee production today, with a focus on the Americas and summarize unproven hypotheses in relation to the cause of recent epidemics. We present an original hypothesis concerning the first major outbreak occurring in 1869 in Ceylon (Sri Lanka), based on geopolitical connections to global trade. We review old and new options for management of the disease. The likelihood of a yet undetected alternate host of *H. vastatrix* is also considered as an additional piece of the epidemiological puzzle. Finally, we reflect on the interactions between H. vastatrix and a changing climate. By better understanding past events, linked to CLR, we may be better prepared for future outbreaks.

Read paper.

UNCOVERING THE ANTIFUNGAL ACTIVITIES OF WILD APPLE-ASSOCIATED BACTERIA AGAINST TWO CANKER-CAUSING FUNGI

A paper by Tohir A. Bozorov *et al.* titled "Uncovering the antifungal activities of wild apple-associated bacteria against two canker-causing fungi, *Cytospora mali and C. parasitica*" was published on 15 March 2024 by *Scientific Reports* (vol. 14, article number: 6307). The abstract is as follows:-

Cytospora canker has become a devastating disease of apple species worldwide, and in severe cases, it may cause dieback of entire trees. The aim of this study was to characterize the diversity of cultivable bacteria from the wild apple microbiota and to determine their antifungal ability against the canker-causing pathogenic fungi *Cytospora mali* and *C. parasitica*. Five bacterial strains belonging to the species *Bacillus amyloliquefaciens*, *B. atrophaeus*, *B. methylotrophicus*, *B. mojavensis*, and *Pseudomonas synxantha* showed strong antagonistic effects against pathogenic fungi. Therefore, since the abovementioned *Bacillus* species produce known antifungal compounds, we characterized the antifungal compounds produced by *Ps. synxantha*. Bacteria grown on nutritional liquid medium were dehydrated, and the active compound from the crude extract was isolated and analysed via a range of chromatographic processes. High-performance liquid chromatography, mass spectrometry, and nuclear magnetic resonance analyses revealed a bioactive antifungal compound, phenazine-1-carboxylic acid (PCA). The minimum inhibitory concentration (MIC) demonstrated that PCA inhibited mycelial growth, with a MIC of 10 mg mL−1. The results suggested that PCA could be used as a potential compound to control *C. mali* and *C. malicola*, and it is a potential alternative for postharvest control of canker disease.

Read paper.

TALKING TOMATOES: HOW THEIR COMMUNICATION IS INFLUENCED BY ENEMIES AND FRIENDS

ANANYA SEN, ILLINOIS IGB NEWS, 25 JANUARY 2024

Plants produce a range of chemicals known as volatile organic compounds that influence their interactions with the world around them. In a new study, researchers at the University of Illinois Urbana-Champaign investigated how the type and amount of these VOCs change based on different features of tomato plants.

Esther Ngumbi, left, and Erinn Dady studied the effect of arbuscular mycorrhizal fungi, caterpillars, and the variety of tomato plants on plant chemistry (Photo credit: Illinois IGB).

The smell of cut grass is one of the defining fragrances of summer. Smells like that are one of the ways plants signal their injury. Because they cannot run away from danger, plants have evolved to communicate with each other using chemical signals. They use VOCs for a variety of reasons: to help prepare their own defenses, to warn each other of threats, to recruit beneficial soil microbes that can help plants grow, and to alert insect predators that there is a pest chewing on that plant's leaves.

"When a caterpillar chews on a leaf, the plant sends out a signal that calls out to the caterpillar's predators. It's like a billboard that tells them where lunch is," said Erinn Dady, a graduate student in the Ngumbi lab.

Studying the factors that influence VOC emissions, therefore, is key to understanding plant health. In the past, other studies have looked at how soil microbes like arbuscular mycorrhizal fungi or caterpillars or the variety of tomato plant can influence VOCs. In the current study, the researchers studied the collective influence of all these factors on plant chemistry using four tomato varieties—two heirlooms and two hybrids.

"Previous studies looked at tomato varieties that are grown conventionally at a massive scale for processing, and are not usually grown by small farmers, so we decided to ask Illinois farmers what they grow. Based on their feedback, we chose tomato varieties that are commonly grown in central Illinois," Dady said. The hybrids used were Mountain Fresh and Valley Girl, and the organic heirlooms were Amish Paste and Cherokee Purple.

The researchers compared the responses of untreated plants to those that had been exposed to AMF, caterpillars, or both. They studied the VOCs by enclosing the eight-week-old tomato plants with an odor-blocking oven bag for an hour. They drew out the air around the plants and analysed the different chemicals produced by each plant using gas chromatography-mass spectrophotometry.

The AMF and the caterpillars, separately, decreased the volatile emissions in all four varieties of tomato plants. Their effect when present together was minimal compared to the effects when either one was present.

Although it is unclear why the beneficial fungal associations decreased the VOCs, it is concerning that the plants were not as responsive to the caterpillars. Furthermore, the hybrid tomatoes emitted lower quantities of volatiles compared to the heirloom tomatoes. "Heirloom tomatoes—the big, juicy tomatoes we all love—are bred for flavor. Meanwhile, hybrids are grown for large scale conventional production, which comes at a cost to the plant," said Esther Ngumbi (CIS/MMG), an assistant professor of integrative biology. "Our work suggests that we are compromising plant defenses through our breeding processes."

The plants were also evaluated based on their growth both above the ground and in the soil. The researchers found that plants that had associations with the fungi had higher leaf biomass and more complex root structures.

"AMF form partnerships in over 80% of the land plants, setting up a trade where the fungi extract nutrients from the soil in exchange for carbon from plants," Dady said. "We found that, especially in Cherokee Purple, AMF may confer additional benefits, including enhanced growth and greater emission of VOCs."

Surprisingly, the plants that were treated with caterpillars had greater plant growth. "These plants had more biomass in both their roots and above the ground, which seems counterintuitive because they've actively been eaten. I would assume they would have less biomass," Dady said. "It is possible that the caterpillars triggered a growth response, similar to how you prune a tree to make it produce new growth."

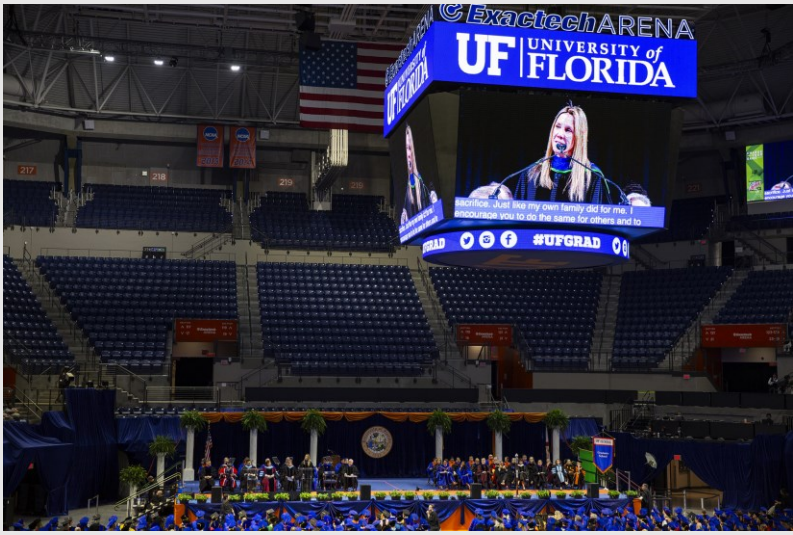
The researchers are interested in further investigating the growth response to caterpillars. "It's possible that the plants decided that the number of caterpillars we were using were not sufficient to be considered a threat and that's why they kept growing. It is also possible that the caterpillars weren't hungry enough to cause enough damage," Ngumbi said.

"There's a lot going on behind the scenes that we don't yet understand. For example, we are barely scratching the surface in understanding the role of different microbes," Dady said. "People tend to think that plants are not intelligent, but our studies have shown that they are actively responding to the environment around them using chemistry."

"We are trying to spread the gospel of plant chemistry, it's the language plants use to communicate and we are excited to learn more," Ngumbi said.

PUT OUT YOUR RUNNERS: PLANT PATHOLOGY PROFESSOR DELIVERS FLORIDA UNIVERSITY COMMENCEMENT ADDRESSES

JOE KALEITA, UF/IFAS PLANT PATHOLOGY



"Put out your runners" exclaimed Dr. Natalia Peres, Professor of Plant Pathology and "Florida's strawberry doctor," according to University of Florida President Ben Sasse. Peres described how the sweet red fruit reproduces by spreading runners across the ground rather than growing from seeds.

"Reach out with the knowledge and expertise that you have gained," said Peres in her commencement address to doctoral candidates from across the University of Florida during a graduation ceremony at the Stephen C. O'Connell Center on 15 Dec. 2023. "Reach out, because you and your extensive expertise are needed, even if your new community or workplace doesn't know it yet. Your runners are your connections, and it's those connections that will bolster you, spread great ideas, and create a better world."

Since 2015, the university has invited faculty members to address graduates at its Spring, Summer and Fall commencement exercises. Peres is the 21st professor to deliver a commencement address since 2015, but the first from outside the Gainesville campus. In addition to the doctoral ceremony, Peres addressed bachelor's and master's degree graduates at two other ceremonies during the graduation weekend.

Peres received the invitation after Sasse met with researchers at the UF/IFAS Gulf Coast Research and Education Center over the summer. "I am the first professor who is not based in Gainesville to give a commencement speech," said Peres, "because President Sasse was the first UF president to visit our research campus in Balm."

Peres' selection was "a demonstration of the reach that the University of Florida has across the entire state of Florida," said Dr. J. Scott Angle, Senior Vice President for Agriculture and Natural Resources at IFAS and Interim Provost and Senior Vice President for Academic Affairs for the University. "President Sasse wanted to acknowledge and recognize the important efforts of the university statewide, and Dr. Peres was the perfect person to help do this.

"I left that meeting in awe," said Sasse while introducing Peres, "of how she and her colleagues are using AI to help Florida strawberry growers defeat the diseases that threaten their crops using something as accessible as the supercomputer that all of us are carrying in our pockets."

Dr. Peres' work extends beyond Florida to reach internationally. "Many of the strawberry transplants we use for strawberry production in Florida are grown in nurseries in different parts of Canada (Ontario, Quebec, Nova Scotia)," Peres said. "So working with nurseries and researchers in Canada ultimately helps our Florida growers."

Dr. Peres is also an amazing mentor, which extends beyond her students' graduation, notes Dr. Jack Rechcigl, director of the Gulf Coast Research and Education Center, in nominating Peres for a mentorship award. "She supports her students in their career development. Many of her former advisees have gone on to achieve remarkable success in academia and industry."

Peres is the first plant pathologist to deliver a commencement address at the University of Florida. "Dr. Peres is a phenomenal role model for all aspiring scientists," said Dr. Mathews Paret, Plant Pathology department chair. "Her selection as the University of Florida commencement speaker is very special for the UF/IFAS Department of Plant Pathology, Gulf Coast Research and Education Center, and a wonderful moment for everyone at UF to celebrate."

"Dr. Peres is clearly the leading strawberry plant pathologist in the United States and one among the most distinguished globally in this high-value crop that is a hallmark of Florida agriculture," said Paret. "The immense passion, commitment, and the ability to build a highly successful team working with breeders, climate scientists, engineers, and other disciplines, county Extension agents, and industry personnel puts Dr. Peres' program among the most impactful plant pathology programs in the country."

Building that team was a challenging task for Peres. "When I came to UF from my native Brazil, the strawberry growers I'd been asked to help were not that thrilled," said Peres in her speech. "My PhD, and nearly all my academic research, focused on citrus, not strawberries."

"On top of that, my English wasn't great," Peres said. "The growers complained they couldn't understand me – and to be honest, I often couldn't understand their Southern accents either."

Her persistence – and her science – convinced growers to work with her, and that teamwork has paid off for everyone involved. "I started out as her biggest critic," said Al Herndon, a consultant for Ferris Farms in Floral City who has worked in strawberry farming for 33 years. "Now I'm her biggest supporter. She really cares about us, the growers."

"It's to the point that whenever I have a problem I'm not sure about, I call her," Herndon said. "Working with her has been an unbelievable privilege.

Her research has allowed growers to significantly reduce the spraying of their crops to prevent disease. Current research utilizing AI will allow growers to quickly identify diseases on their phones.

"I have only been able to develop and test this system because of my runners, my connections- my partnerships and friendships with my colleagues and growers," Peres said. "Partly because of those partnerships and those friendships, we've spread great ideas, and we've done important things."

"Gator graduates, go out and spread out your runners, Peres concluded. "Try to help others, and to connect with people on a human level. Believe in your work. Go forth. I can't wait to see the world that you will grow."

CURRENT VACANCIES

No vacanices.

ACKNOWLEDGEMENTS

Thanks to Grahame Jackson, Greg Johnson, Jan Leach, Laura Mugnai, Sue Pederick, Eileen Scott, and Nicole Thompson for contributions.

COMING EVENTS

International Symposium on Grapevine Epidemic Diseases
16 May – 18 May, 2024
Austin, Texas, USA
Website: web.cvent.com/event/7b4a5e7f-3901-4d94-b035-5c96932142a1/summary

6th European Bois noir workshop and Prophylactic and Agro-Ecological Control of flavescence dorée and other Grapevine Yellows (Pro-AECOGY)
14 June – 16 June, 2024
Bordeaux, France
Website: https://boisnoirwkshop.sciencesconf.org/

10th International conference on *Pseudomonas syringae*
4 June – 7 June, 2024
Porto, Portugal
Website: psyringae2024.com

International Plant Molecular Biology (IPMB) Congress
24 June – 28 June, 2024
Cairns, Queensland, Australia
Website: www.ipmb2024.org/

XX International Plant Protection Congress
1 July – 5 July, 2024
Athens, Greece
Website: www.ippcathens2024.gr

International Conference on Plant Pathogenic Bacteria & Biocontrol 2024
7 July – 12 July, 2024
Virginia Tech, Blacksburg, Virginia, United States
Website: icppbbiocontrol2024.org

Triennial Conference of the European Association for Potato Research (EAPR)
7 July – 12 July, 2024
Oslo, Norway
Website: nibio.pameldingssystem.no/eapr2024

miCROPe 2024 conference - Microbe-assisted crop production – opportunities, challenges and needs
15 July – 18 July, 2024
Vienna, Austria
Website: www.micrope.org

Plant Health 2024
27 July – 31 July, 2024
Memphis, Tennessee, USA
Website:
www.apsnet.org/meetings/annual/Pages/default.aspx

Asian Conference on Plant Pathology 2024
3 August – 7 August, 2024
Changchun, Jilin, China
Website: acpp2024.tri-think.cn

Australasian Soilborne Disease Symposium 2024
26 August – 29 August, 2024
Kingscliffe, New South Wales, Australia
Website: www.asds-apps.com/

11th IUFRO *Phytophthora* in Forests and Natural Ecosystems working party
8 September – 13 September, 2024
Bay of Islands (Paihia), New Zealand
Website: www.scienceevents.co.nz/iufro2024

International Phytobiomes Conference 2024
8 October – 10 October, 2024
St. Louis, MO, USA
Website: phytobiomesconference.org

Australasian plant virology workshop (APVW 2024)
29 October – 31 October, 2024
Gold Coast, Australia
Contact and Email: Fiona.Filardo@daf.qld.gov.au
Website: apvw-2024-.w.kamevents.currinda.com

9th ISHS International Postharvest Symposium
11 November – 15 November, 2024
Rotorua, New Zealand
Website: scienceevents.co.nz/postharvest2024

17th Congress of the Mediterranean Phytopathological Union - New phytopathology frontiers of research and education for plant health and food safety
7 July – 10 July, 2025
Ciheam-Bari, Italy
Contact and Email: Anna Maria D'Onghia,e-mail: mpu2025@iamb.it
Website: www.mpunion.org

13th International Workshop on Grapevine Trunk Diseases
21 July – 25 July, 2025
Ensenada, Baja California, México
Contact and Email: Rufina Hernández, 13iwgtd@cicese.mx
Website (under construction): 13iwgtd.cicese.mx

14th Arab Congress of Plant Protection Sciences
3 November – 7 November, 2025
Algeria
Contact and Email: hou.boureghda@gmail.com
Website will be developed soon.

International Congress of Plant Pathology 2028
19 August – 25 August, 2028
Gold Coast, Queensland, Australia
Website: www.icpp2028.org

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

WWW.ISPPWEB.ORG

The ISPP List is an e-mail list server which broadcasts messages and announcements to its subscribers. Its goal is to facilitate communication among members of the International Society for Plant Pathology and its Associated Societies. Advertised vacancies in plant pathology and ISPP Newsletter alerts are also sent to members of the ISPP List.

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