## UF/IFAS Plant Pathology Update

### Summer 2020



### A MESSAGE FROM OUR CHAIR

Welcome to the inaugural edition of the Plant Pathology Update! The release of this newsletter was planned for spring 2020, but like most of life, COVID 19 disrupted our plans. After a difficult period during which our research came to a halt, we have slowly resumed our laboratory and field activities. Our research is moving forward even while we maintain social distancing, mask use, and special hygiene measures. University and department meetings are virtual as are Extension events. Teaching moved to online delivery in the middle of the spring semester and will largely continue in that mode during the fall semester, which starts August 31, 2020.

As chair, I could not be prouder of our department! Our teachers continued to provide quality instruction during the transition from in person to online courses. Faculty transitioned student research activities to bioinformatics and writing as possible, while maintaining biological materials needed for eventual startup. Some students continued their research from home (sometimes bringing microscopes), presented online seminars and kept track of each other with virtual happy hours on Fridays. Seven of our students graduated this summer despite the hurdles that the pandemic provided.

It is not possible to overstate the dedication of the Gainesville staff during this difficult time. Most staff worked from home, often commandeering the dinner table or a spare bedroom to set up offices. Equipment was purchased and IT problems were solved. Graduate student advising, registration, and admissions continued. Space inventory, fiscal and HR tasks, did not pause. COVID 19 related tasks such as tracking research activities and personnel approvals were implemented. Greenhouses were maintained 7 days a week by our greenhouse staff, to reduce the density of personnel in those facilities. Masks and hand sanitizers were distributed and safety trainings were conducted as we reopened. These are just the highlights of the many contributions that our staff made to keep the department moving forward.

A special shout out the two plant diagnostic laboratories (Gainesville and Homestead) which accepted disease samples throughout the pandemic. Plant diseases continued to damage crops and samples continued to arrive. However, social distancing slowed sample processing; diagnosticians worked shifts in an expanded work week to be there for our stakeholders. Thankfully, all diagnostic facilities around the state are approved to process samples at this time.

The purpose of this newsletter is to highlight the accomplishments in the Department of Plant Pathology at the University of Florida and to recognize the faculty, students and staff who contribute to department's success. At this time, we are the largest plant pathology faculty, and are proud to have the largest graduate program in the country. We hope that all the members of the department enjoy the newsletter, but also hope to expand our community by maintaining alumni connections and reconnecting to alumni and friends across the state and around the world.

Please visit our website (https://plantpath.ifas.ufl.edu/) for more details about us and exciting updates.

Dr. Rosemary Loria, Chair

## IN THIS ISSUE A Message From Our Chair Graduating Students #ufplantpath is Growing Welcome Dr. Samuel Martins Awards & Recognition In The News

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Truffles Aren't Just for Foodies Some Birds Love Them, Too

UF Plant and Soil Diagnostic Labs Essential to Florida Agriculture, Economy during COVID-19

**Evaluating Global Crop Risks: How Crop Landscapes Affect Disease** 

UF Researchers Use Drones to Detect Tomato Diseases with 99% Accuracy

## **Congratulations To Our 2020 Summer Graduates!**



Kamal Bansal Doctor of Philosophy



Crystal Conner Master of Science



Minh Dao Doctor of Philosophy





Rodrigo Onofre Doctor of Philosophy



Zhuxuan Xu Master of Science



## #ufplantpath is growing!



Get connected with the UF/IFAS Department of Plant Pathology.



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### **Follow Us!**

Follow our Instagram, Twitter, and Facebook pages to stay up-to-date on the latest from UF/IFAS Department of Plant Pathology.

### #ufplantpath

Use the hashtag #ufplantpath and tag @ufplantpath when posting about our department.

Thank you for helping our department continue to grow!



# Dr. Samuel Martins!

A native of Brazil, Dr. Martin's earned his B.S. in Agronomy and an M.S. and Ph.D. in Plant Pathology from the Federal University of Lavras. A portion of his Ph.D. was completed at the University of Delaware. From 2015-2017, he served as an assistant professor at the Federal University of Goiás where he taught IPM and General Plant Pathology. He spent the next three years as a postdoctoral researcher at Penn State University. While there, his research focused on a blotch on mushrooms (Agaricus bisporus) with the ultimate goal of providing industry with biologically based disease management tactics to add to environmental management practices already in place.

Dr. Martins joined our department earlier this month as an assistant professor. His position will have teaching and research duties. He will begin teaching PLP2000: Plants, Plagues, and People and Tropical Plant Pathology in Spring, 2021. His research will focus on assessing, manipulating and qw2tracting bacteria from the Phytobiome to manage plant disease, improve nutrient uptake and diminish the impact of abiotic stress. His interests are crop diseases caused by bacteria, seed-microbial interactions, microbiome and biocontrol.

# Awards & Recognition



**Dr. Svetlana Folimonova** was selected as the winner of the 2020 American Phytopathological Society Syngenta Award.

Read more

**Dr. Natalia Peres** has been named fellow of the American Phytopathological Society.

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**Dr. Mathews Paret** earned the Foundation John and Ann Niederhauser Endowment Award by the American Phytopathological Society.

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## IN THE NEWS

Photo: Dr. Mathews Paret, U-Scout

### Scientists to Study Crippling Tomato Disease to Lay Groundwork for Prevention

"A destructive disease known as bacterial spot can ruin tomatoes anywhere it strikes. That's why University of Florida scientists want to understand how the pathogen that causes the disease spreads and evolves on farms. Erica Goss, an associate professor of plant pathology at UF/IFAS, was awarded a \$455,000 grant by the National Institute of Food and Agriculture, an arm of the USDA, to study the epidemiology of bacterial spot in tomatoes."

Truffles Aren't Just for Foodies Some Birds Love Them, Too

Plant Pathology Student Marcus Caiafa in Chile Photos: Dr. Matthew Smith



"In 2012, Matthew Smith, a fungal ecologist at the University of Florida, found himself hiking through remote, old-growth forests of Southern Chile. He and a colleague had secured a grant to search for fungi species undescribed and new to science, but Smith was particularly keen on finding his favorite kind of fungi: truffles."



#### Read more here



UF Plant and Soil Diagnostic Labs Essential to Florida Agriculture, Economy during COVID-19

Dr. Carrie Harmon at the UF PDC. Photo: IFAS

"All plant industries in Florida and beyond use our services," Dr. Carrie Harmon, Director of the UF Plant Diagnostic Center said. "This week, we have received samples of tomato, potato, pepper, turf, several different woody and herbaceous ornamentals, palms and more. We receive about 3,300 samples a year, plus an additional 3,700 emergency survey samples from the USDA Animal and Plant Health Inspection Service."



### **Evaluating Global Crop Risks: How Crop Landscapes** Affect Disease

"In a new study published in BioScience on July 29, UF preeminent professor of plant pathology Karen Garrett and a team of international researchers reviewed current disease and pest risks to potato, cassava, sweet potato, yam and banana/plantain. They also proposed a new model for assessing the risk from pathogens and pests to these crops globally and prioritized key areas for surveillance and mitigation."



### UF Researchers Use Drones to Detect Tomato Diseases with 99% Accuracy

"Scientists at the University of Florida's Southwest Florida Research and Education Center have taken tomato research to the skies. An agricultural engineer and a plant pathologist have joined forces to use drones to combat the spread of bacterial spot and target spot—two deadly tomato diseases.

The project's plant pathologist, Dr. Pamela Roberts, has more than 20 years of tomato research under her belt.

'The two [diseases] that this research focused on are chronic, we have them every single season,' Roberts said. 'They can be very devastating and that's one of the reasons that we we're looking at early detection in order to try to intervene as early as possible.' Roberts said tomato growers traditionally have to physically check crops for signs of disease, which is time consuming and labor intensive."