Happy 2022!

Last year, COVID-19 continued to present challenges to faculty, staff and students. Even so, they all continued to excel on many academic and professional levels in 2021. Before I recount these activities, however, I wanted to let you know that Dr. Rodrigo Valverde will retire in February and the search is on for his replacement. Sadly, we lost one of our emeritus faculty, Dr. Marc Cohn, who passed away in June.

Another item of interest: We were asked by former vice president of agriculture and dean of the College of Agriculture Bill Richardson to develop an undergraduate program with the Department of Entomology. The program is titled Plant Health Management and will be housed in PPCP. Five new undergraduate courses have been proposed, and two instructors (one for each department) will be dedicated to help launch this program. To date, the letter of intent for this program has been approved by the LSU Board of Regents.

Last year, faculty and students published a number of refereed manuscripts and extension articles; gave many presentations virtually, locally, regionally nationally and internationally; and competed for grants to support their research and outreach. They also won prestigious recognition for their efforts that include the APS Fellow (Dr. Rodrigo Valverde), LSU

In Memory of Marc Cohn

Dr. Marc A. Cohn died on Saturday, June 19, 2021, at his home after battling pancreatic cancer. Born on March 10, 1949, in New York, Cohn was a world-renowned plant physiologist specializing in seed biology who earned his B.S. in biology from Northeastern University (’71) and his M.S. (’74) and Ph.D. in plant physiology (’77) from Cornell University. Cohn spent most of his career in the Department of Plant Pathology & Crop Physiology at Louisiana State University, where he started as an assistant professor in 1978, becoming an associate professor in 1982 and a full professor in 1990. Over his 38 years, he successfully raised more than $5 million in grant support. During his time at LSU, Cohn was highly recognized for his teaching ability and was the recipient of multiple honors, including the Tiger Athletic Foundation Presidents Award (2015), Alumni Association Teacher of the Year — Agriculture (2012), Alumni Association Excellence...
Continued from Page 1

AgCenter Excellence in Extension (Dr. Raj Singh), APS student travel awards (Izabel Costa de Novaes, Gabriel Munoz Herrera and Waana Kaluwasha), Cal Agri Products Student Support Award (Cesar Escalante) and C. W. Edgerton Award (Teddy Garcia). Our M.S. and Ph.D. graduate students were highly engaged, and their efforts and outstanding contributions continue to infuse the department with vitality and enthusiasm while helping to answer basic scientific questions along with solving plant disease problems of importance to the clientele of Louisiana.

In this current newsletter, you’ll see for yourself these wonderful activities and achievements of our faculty, staff, students and even former students and their profound effects on the university and AgCenter’s missions, Louisiana agriculture and beyond.

Happy reading!

Continued from Page 1

Marc Cohn was preceded in death by his parents, Lee Rutsky Cohn and Max M. Cohn. He is survived by his partner of more than 20 years, Edie Bernard, and her children, Ellen and Marc Sager, and grandchildren, Max and Julia.

Help Us to Ensure Excellence in Plant Pathology and Crop Physiology

While the department receives monetary support for core research/extension programs (LSU AgCenter) and its teaching program (LSU College of Agriculture), these funds are not sufficient to provide the resources to move our programs to the next level of performance.

Private financial support is becoming a vital resource to enhance existing programs and begin new initiatives. Please consider contributing to help support our programs.

You may help to support the Plant Pathology & Crop Physiology Department by donating to one of the funds below:

#106098 — The Max and Leah Cohn Invited Lecture Endowment Fund
#100250 — Plant Pathology and Crop Physiology Excellence Fund
#100246 — Dr. C. W. Edgerton Memorial Fund
#100247 — Dr. Weston J. Martin Fellowship Fund
#105458 — M. C. “Chuck” Rush Plant Pathology Teaching Laboratory Fund
#106771 — Raymond W. Schneider Student Travel Fund
#104814 — Don Ferrin Student Teaching Fund

Donations can be made by accessing the LSU Foundation site at www.lsufoundation.org/give or by sending a personal check made out to the LSU Foundation with a letter stating which fund you would like to donate to. Address the letter to:

Department of Plant Pathology & Crop Physiology
302 Life Sciences Building
LSU Campus
Baton Rouge, LA 70803

For more information contact: Lawrence E. Datnoff
Professor and Department Head
ldatnoff@agcenter.lsu.edu
or 225-578-1366
Faculty

Dr. Marco Gama, of the Universidade Federal Rural de Pernambuco (UFRPE) in Brazil, joined the Phyobacteriology Lab (Pl: Dr. Jong Hyun Ham) in September 2021 as a visiting professor. Gama’s visiting sabbatical period will be from September 2021 to August 2022. Gama will perform research with Ham on the evaluation of genes related to copper-resistant strains of *Burkholderia* spp., the cause of sour skin in onion bulbs. This collaborative research is part of an ongoing excellent international partnership between LSU AgCenter and UFRPE.

Postdoctorates

Dr. Aaron DeVries has wide-ranging interests in plant biology, including their molecular development, pathology, evolution and taxonomy, all of which have roots in his early experiences with the Boy Scouts. After graduating with a B.S. in botany from Iowa State University in 1999, he worked in various research assistant positions for several years with a prominent seed company before picking up an interest in genetics, which eventually led to a Ph.D. in plant biology at the University of California, Riverside in 2015. Since then, his postdoctoral research has focused on the microbiome of the common reed (*Phragmites australis*), beginning with the U.S. Geological Survey in Michigan and then continuing at LSU with Dr. Vinson Doyle, starting in May 2021.

After completing a master’s degree in plant pathology in his home country of Nepal, Shankar Gaire joined Texas A&M University as a graduate research assistant in the Department of Plant Pathology and Microbiology. He completed his Ph.D in spring 2021 with his dissertation titled “Seedling blight of rice in the southern United States and its management” under the supervision of Dr. Shane Zhou. Currently, he is a postdoctoral researcher in the laboratory of Dr. Jonathan Richards. His current research focuses on the fine mapping and cloning of a major resistance gene (CRSP2.1) to the rice pathogen *Cercospora janseana*.

Student Scholars

Iris Aguilar is from El Salvador and received her undergraduate degree from Zamorano Pan-American Agriculture School in Honduras. Aguilar completed an internship in the LSU AgCenter Department of Plant Pathology & Crop Physiology in Dr. Tristan Watson’s nematology laboratory from May to October 2021. During this time, Iris worked on field, greenhouse and laboratory projects on a variety of crops and developed a particular interest in sugarcane. Iris will be returning to the department as a M.S. student in January 2022 to conduct research on nematode management in sugarcane.
Leticia Almeida, of the Federal University of Lavras, Brazil, has been visiting the LSU AgCenter Plant Diagnostic Center since Sept. 15, 2021. Almeida’s visit lasts until March 15, 2022. She is learning conventional and molecular techniques with Dr. Raj Singh to diagnose plant health problems caused by various biotic and abiotic stresses. She is currently working on reporting a new anthracnose disease of Bougainvillea caused by a Colletotrichum sp.

David Bonilla is from Honduras and completed his undergraduate degree from Universidad Nacional de Agricultura. He completed an internship in Dr. Tristan Watson’s nematology laboratory from June to November 2021. David worked on a number of field crops during this time and was heavily involved in evaluating the susceptibility of soybean varieties to the reniform nematode. During his internship, David became increasingly interested in plant pathology and is currently organizing his application materials to the graduate school to return to our department as a master’s student in the near future.

Katerina Netopilova, of Mendel University, Czech Republic, visited the LSU AgCenter Plant Diagnostic Center as part of the Mendel Graduate Student Visiting Scholar Program from Aug. 1 to Sept. 15. She learned different methods of indoor industrial hemp production and its advantages compared to outdoor production with Dr. Raj Singh.

Samuel de Paula, a Ph.D. student at the University of Sao Paulo, Brazil, is carrying out part of his research project at Dr. Garcia’s lab from September 2021 to July 2022. During his internship, de Paula will be involved in enhancing rice resistance to blast disease through various molecular approaches. His research project focuses on the functional characterization of the effector proteins of the rice blast fungus, Magnaporthe oryzae. He is working with Dr. Ely Oliveira Garcia and an undergraduate student, An Vu, to learn various techniques in the fields of microbiology and molecular biology, such as protein tagging and microbial transformation.

Francisco Valle, of National University of Agriculture in Honduras (UNAG), worked at the Phyobacteriology Lab (PI: Dr. Jong Hyun Ham) as a visiting intern student from June 1 to Oct. 31. During his internship period, Valle was involved in soybean and rice research projects, focusing on biotic and abiotic materials that promote plant growth and health.
Ph.D. degree

Teddy Aroca Garcia


He has joined the lab of Dr. Cheryl Andam at the University at Albany - State University of New York as a postdoctoral research associate to work on the evolutionary history and speciation of human bacterial pathogens, including *Streptococcus agalactiae*, *Staphylococcus aureus*, *Salmonella enterica* and *Pseudomonas aeruginosa*.

Cesar Escalante Guardado

Endornaviruses of pepper (*Capsicum* spp.) and interactions of bell pepper endornavirus with the host and plant pathogens, advised by Dr. Rodrigo Valverde.

He has joined the Department of Entomology and Plant Pathology and USDA-ARS, Auburn University as a postdoctoral fellow researcher to work on the cotton dwarf leaf curl virus.

M.S. degree

Heather Cizek

Response of Roseau cane (*Phragmites australis*) to two biotic stresses: the aphid *Hyalopterus pruni* and the fungus *Bipolaris yamadae*, advised by Dr. Rodrigo Valverde.

She will move to Florida and will be searching for job opportunities in biological sciences.

David Galo

Isolation of culturable fungi from Roseau cane (*Phragmites australis*) foliage growing in die-off and non-die-off affected areas of coastal Louisiana, advised by Dr. Rodrigo Valverde.

He will continue with his Ph.D. in the department to study diseases caused by nematodes with Dr. Tristan Watson.

Turner Graham

Using UAV technology paired with multispectral cameras to assess crown rust epidemics of oats, advised by Dr. Boyd Padgett.

He will work as a crop consultant with Lance Rodriguez Ag Services with plans to obtain all licensing necessary to start his own consulting business.

Max Miller

The use of RNA interference to investigate the role of ZMPR10 in salt stress response and MTL/NLD/ZmPLA1 in the improvement of haploid induction in maize, advised by Dr. Zhi-Yuan Chen.

He joined the lab of Dr. Matthew Blair, Department of Agricultural and Environmental Sciences, Tennessee State University, as a doctoral student to work on gene identification for aluminum tolerance in cowpea.

John Ontoy

Genetic characterization of resistance to bacterial panicle blast and sheath blight in rice using QTL-linkage analysis and QTL-seq, advised by Dr. Jong Ham.

He will continue his rice disease resistance study for the Ph.D. degree in Ham’s lab.

Jose Solorzano

Understanding the etiology of taproot decline of soybean caused by *Xylaria necrophora*, advised by Dr. Vinson Doyle.

He has joined the lab of Dr. Dean Malvick, Department of Plant Pathology, University of Minnesota, as a doctoral student to work on understanding the epidemiology and etiology of tar spot of corn and develop diagnostic and management tools for the pathogen *Phyllachora maydis*.
The COVID-19 pandemic changed plans again shifting an in-person American Phytopathological Society (APS) annual meeting to one that was fully online. Faculty and students from PPCP attended virtually and were actively involved from leading sessions to presenting posters. Their activities included the following:

- Characterization of rhizospheric microbiomes associated with sheath blight resistant and susceptible rice lines, Jobelle Bruno.

Seed treatment effects of soybean-associated beneficial bacteria on the microbiomes in soybean plants, Rosalie Calderon.

Role of the soybean ionome in cultivar resistance to Cercospora leaf blight, M. Izabel Costa de Novaes.

Inoculation of two Roseau cane varieties with fungi isolated from die-off and non-die-off affected areas, David Galo.

Wound healing and its role in the prevention of Rhizopus soft rot on sweet potato (Ipomoea batatas) roots, Waana Kaluwasha.

Effects of seed-treatment chemicals on red rot of sugarcane in billet planting system, Kezia Reis.

In addition, three students won APS student travel awards (Tsune Kosuge, Joseph Kuc and H. David Thurston) to attend virtually and included Izabel Costa de Novaes, Gabriel Munoz Herrera and Waana Kaluwasha.
Graduate Student Activities

PPCP members participate in the LSU Undergraduate Research Info Fair

Members of the Plant Pathology & Crop Physiology Department participated virtually in the Undergraduate Research Info Fair during the fall welcoming week at LSU. The purpose of the fair is to introduce undergraduate students to research opportunities that are available to them from different departments and schools on campus. This event allowed students, faculty and staff to interact and share knowledge and research conducted in the PPCP department. This effort could help attract undergraduate students to pursue graduate education in PPCP in the near future!

PPCP students and staff participate in Ag Career Fair

The purpose of the Agriculture Career Fair was to provide an opportunity for students from LSU and Southern University to interact with academic departments at LSU and local and nationwide employers recruiting for a variety of internships, graduate programs and full-time positions. Plant Pathology & Crop Physiology Department students and staff participated and shared information regarding research projects that were ongoing in the department and information on how to apply if interested in pursuing an M.S. or Ph.D. degree.

Jin invited by PPCP-GSA as guest seminar speaker

Dr. Hailing Jin, distinguished professor at University of California-Riverside, was chosen by the Department of Plant Pathology & Crop Physiology Graduate Student Association (PPCP-GSA) as the guest speaker for the spring 2021 online seminar series. Members of the PPCP department learned about several aspects of her research conducted over the years in the development of effective and environmentally friendly strategies to manage or control plant diseases and to ensure sufficient food production. To promote person-to-person interactions, Jin met with graduate students and faculty throughout the day via a Microsoft Teams video meeting before the seminar. Although the interaction was completely online, it was very insightful for members of the PPCP department, and everyone learned new scientific concepts and ideas.
Garcia Wins prestigious C. W. Edgerton Award

*Teddy Aroca-Garcia*, Ph.D. candidate, recently won the C. W. Edgerton Award. This award was established in 1965 by two of Dr. Edgerton’s sisters to award outstanding performances by Plant Pathology & Crop Physiology students. Garcia was nominated by his advisor, *Dr. Vinson Doyle*, for his outstanding academic and professional achievements.

Kaluwasha and Escalante receive PPCP student support fund awards

*Waana Kaluwasha*, advised by *Dr. Chris Clark*, received funding from the Cal Agri Products LLC Graduate and Undergraduate Student Support Fund.

Cesar Escalante, advised by *Dr. Rodrigo Valverde*, received funding from the Don Ferrin student teaching fund. This fund was established by his wife, Pam Ferrin, in 2013 to support PPCP graduate student education in honor of Dr. Don Ferrin.

Costa de Novaes and Kaluwasha receive Ray and Dorothy Young Assistantship

*M. Izabel Costa de Novaes* and *Waana Kaluwasha* were co-recipients of the 2021 Ray and Dorothy Young Endowed Assistantship in Louisiana Row Crop Integrated Pest Management. This endowed assistantship was established to honor Ray and Dorothy Young for their professional contributions and service to agricultural industries for more than 40 years as agricultural consultants. Costa de Novaes and Kaluwasha are pursuing their Ph.D. degrees with *Drs. Sara Thomas-Sharma* and *Chris Clark*, respectively.
Robertson receives PPCP Outstanding Service Award

Clark Robertson was awarded the Plant Pathology & Crop Physiology’s Outstanding Service Award for his 17 years of service to the soybean pathology program under the leadership of both Drs. Sara Thomas-Sharma and Raymond Schneider. Clark performed yeoman’s work in this program. He collaborated in numerous research and outreach projects with extension faculty and crop consultants, assisted many graduate students with their thesis and dissertation research, and helped teach introductory plant pathology to both undergraduates and graduate students. Furthermore, he wrote refereed articles, abstracts and proceedings, and presented his research findings at local and regional meetings. Clearly, his impact on the program was outstanding.

Clark took his talents to Livingston and Tangipahoa parishes where he serves as the extension agent for horticulture.

Early Career Alumni Awards

Melanson receives LSU College of Agriculture Early Career Alumni Award

Dr. Rebecca Melanson received the Early Career Alumni Award on Nov. 19. She obtained her M.S. in 2011 and her Ph.D. in 2014, both in plant pathology. Her major advisor was Dr. Jong Ham. During her time at LSU, Melanson was an active leader in the Plant Pathology & Crop Physiology Graduate Student Association, the American Phytopathological Society and the Southern Division of APS.

Currently, Melanson is an associate extension professor for the Mississippi State University Extension Service. Melanson educates and assists stakeholders, including commercial producers and county agricultural agents, with plant disease identification and management. She has taken over as the leader and organizer for one extension program and has developed and organized seven additional extension programs. In addition to her leadership accomplishments, Melanson has written 13 publications. Five of these new publications have won awards from the Mississippi Association of County Agricultural Agents, and two have won regional awards from the National Association of County Agricultural Agents.
Faculty Awards

Singh wins LSU AgCenter’s Excellence in Extension and Loupe Extension Team awards

Dr. Raj Singh, associate professor and director of the Plant Diagnostic Center, won the LSU AgCenter’s Excellence in Extension and the Denver T. and Ferne Loupe Extension Team awards. The Excellence in Extension recognized his outreach and educational contributions that helped industry professionals, AgCenter agents and home gardeners identify solutions to their plant health problems. The Loupe Extension Team Award was in recognition of excellence in delivering turf extension educational programs. The team wrote 80 extension publications for the Louisiana Home Lawn Series and launched new webpages, developed digital content and produced best management practice guides while working directly with clientele.

Valverde receives prestigious APS Fellow Award

Dr. Rodrigo Valverde, professor, was elected as a 2021 fellow of the American Phytopathological Society (APS).

APS recognized Valverde for his outstanding contributions in describing and characterizing many newly recognized viruses causing diseases in common beans, citrus, peppers, sweet potatoes, tomatoes and ornamentals. His modifications and validations of using dsRNA analysis for plant virus detection has benefited researchers and diagnosticians worldwide. He also is well recognized for pioneering research on persistent plant viruses — endornaviruses — demonstrating they are in a mutualistic relationship with the plant. Finally, his approach to hands-on teaching has allowed him to mentor graduate, undergraduate and intern students who enjoyed and benefited from his constant presence at the lab bench.

The society grants the Fellow Award to a small percentage (less than 0.25%) of its membership in recognition of distinguished contributions to plant pathology or to APS in the areas of original research, teaching, administration, professional and public service, and extension and outreach.
## Faculty Hire

### Dalla Lana hired as the next rice pathologist

**Dr. Felipe Dalla Lana** was recently hired as the next rice pathologist to replace **Dr. Don Groth**, who retired in January 2021. In March of this year, he will start as an assistant professor at the H. Rouse Caffey Rice Research Station and in the Department of Plant Pathology & Crop Physiology. His research and extension responsibilities will include the development of management strategies for rice diseases in Louisiana. He will apply the principles of statistics, data analysis and integrated pest management to better understand the disease ecology and epidemiology and create a program focused on the profitability, sustainability and competitiveness of rice production in Louisiana.

Dr. Dalla Lana received his B.S. (2011) in agronomy from the Federal University of Santa Maria, Brazil, and an M.S. (2013) in crop sciences/phytopathology from the Federal University of Rio Grande do Sul, Brazil. His master’s research used meta-analysis to study the relationship between disease intensity and yield while also quantifying the decline of fungicide efficacy for soybean rust across Brazil. Afterward, he moved to the U.S. and started studies in the Department of Plant Pathology at Ohio State University, where he received the degrees of M.S. (2018) and Ph.D. (2020) in plant pathology. Under Dr. Pierce A. Paul’s mentorship and co-advised by Dr. Laurence V. Madden, he developed multiple epidemiology studies of corn Gibberella ear rot and grain contamination with mycotoxins. In addition to his dissertation research, he also worked on earlier efforts to understand the epidemiology of corn tar spot in the U.S. and other meta-analytic studies. In 2020, he started postdoctoral training at Pennsylvania State University, working with Dr. Paul D. Esker on developing decision support tools for corn and wheat.

## Faculty Retirement

### Valverde retires

**Dr. Rodrigo Valverde** was born in Limón, Costa Rica. In 1977, he earned the degree of agronomy engineer from the University of Costa Rica and later an M.S. (1980) and Ph.D. (1983) from the University of Arkansas. After two postdoctoral positions at the University of California, Riverside and University of California, Davis, he joined Ball PanAm Plant Company as their plant pathologist. In 1988, he joined the Department of Plant Pathology & Crop Physiology at LSU and began conducting research on plant viruses and teaching a course in plant virology.

Throughout his career, Valverde’s research has been exceptional. He has focused on studying diseases of unknown etiology and biological and molecular characterization of viruses. Moreover, together with graduate students, visiting scientists and collaborators, he identified, characterized and developed detection tools for several newly recognized virus species in crops such as sweet potatoes, peppers, tomatoes, common beans and ornamentals. His research results have provided national and international virus-research programs with novel viruses and detection tools essential for their investigations.

One of the main accomplishments of his career has been his work on virus detection and identification using viral dsRNA. Valverde validated, used and promoted the method for dsRNA extraction as a practical method to detect and identify plant, fungal and oomycete viruses. Although this method was developed over 40 years ago, it is still used today as an initial tool to detect viruses by RT-PCR and to conduct high throughput sequencing. Using this method, Valverde was not only able to identify several novel plant viruses but also discover a satellite virus whose replication depends on tobacco mosaic virus.

A disease of unknown etiology was devastating the leather leaf fern industry in Costa Rica and other...
Central American countries. Valverde and a colleague were able to identify a virus (Japanese holly fern mottle virus) as a key component of that disease. Testing for the virus now allows growers to manage the disease. Valverde also identified and developed detection tools for a new beetle-transmitted pepper virus affecting pepper crops in Central America. This virus can cause synergism in mixed infections with pepper potyviruses. Insect vector transmission of plant viruses has been another area of Valverde’s contributions to plant virology. Throughout his career, he has conducted research on virus transmission by beetles, aphids, thrips and whiteflies, including the discovery of new vector species.

Valverde also became one of the world’s leading authorities on endornaviruses, a unique group of viruses that do not cause apparent diseases in crops. Although endornaviruses have been reported infecting economically important crops such as rice, common bean, cucurbits and pepper, little is known about the effect they have on these crops. Valverde developed bell pepper near isogenic lines, and he, along with his students and collaborators, have found that endornaviruses can be in a mutualistic interaction with the crop, providing beneficial effects that may include fitness advantages in the form of protection or tolerance to biotic/abiotic agents.

At LSU, Valverde initiated, designed and developed a course in plant virology. He put a great deal of effort into his teaching and enjoyed a hands-on teaching approach. Valverde has also contributed by serving as guest lecturer in and improved several other courses taught in the department. He was dedicated to educating and training numerous students, including students at the high school, undergraduate and graduate levels. He was the major advisor or co-advisor for 18 graduate students and has served as a committee member for 36 graduate students. Furthermore, he participated as a committee member for students at universities in Australia, Mexico and Spain. Valverde has mentored and trained international undergraduate student interns from the Czech Republic, Ecuador, Honduras and Thailand. Furthermore, Valverde has been involved in training visiting scientists and postdoctoral researchers. Valverde has proven to be an outstanding mentor for students.

For over 10 years, Valverde was the chair of the APS/APHIS Widely Prevalent Virus Committee. This committee prepares updated lists of prevalent viruses in each state and interacts with state departments of agriculture when issues related to APHIS permits arise. The committee provides partial financial support to APS symposia, special sessions and workshops dealing with plant virology.

Valverde developed a notable number of national and international research collaborations. His willingness to develop research collaborations with colleagues within and outside the department resulted in numerous joint refereed publications. He has edited one book and published 12 book chapters and over 100 refereed articles. He also published 17 technical articles in trade journals. In addition, he was recognized for his academic and professional achievements by receiving a number of awards that include a Fulbright Scholar award to conduct research and teaching in France (1995), fellowship awards by the Spanish Ministry of Education (2002 and 2010), the LSU AgCenter’s Tipton Team Research Award with the Sweetpotato Team (2002), the Gamma Sigma Delta Teacher Merit Honor Roll for his teaching achievements in the College of Agriculture at LSU (1998), Fulbright Specialist Roster (2019), the Erasmus+ STAFF Mobility Scholarship Teaching award (2020) and APS Fellow (2021).
Faculty Activities

Zhi-Yuan Chen

Invited Presentations


Awards and Honors

- A paper with Marija Zivanovic titled “In vitro screening of various bacterially-produced double-stranded (ds) RNAs for suppressing the expression of Cercospora cf. flagellaris target genes and cercosporin production,” published in Phytopathology, was selected as Editor’s Pick.

Committees

- APS mycotoxin subcommittee, member.
- APS host resistance subcommittee, member.
- Department committees: Space committee, graduate admission committee, Ely Garcia and Jonathan Richards’ mentoring committee and chairing a search committee for a new faculty position.
- AgCenter committees: Faculty Council and Promotion and Tenure committee.

Grants and Contracts

- AMCOE Aflatoxin Program grant for “Transgenic Control of Aflatoxin Contamination in Corn through Host Induced Gene Silencing.” $55,000. June 2021 to May 2022.
- 2021 Mid-South Soybean Board grant for “Spray application of dsRNA for simultaneous management of multiple soybean fungal and insect diseases.” $20,000. Jan. 1, 2022 to December 2022.

New Graduate Students

- Dablieny Garcia Souza, graduate student from São Paulo University, Brazil.

New Collaborations

- Dr. Cristina Sabliov, professor at the Biological and Agricultural Engineering Department, LSU AgCenter. Collaborating on producing nanoparticles for improving the delivery and efficacy of dsRNA in plant disease management.
- Dr. Surassawadee Promyou, associate professor at the Department of Agriculture and Natural Resources, Kasetsart University, Chalermprakiet Sakon Nakhon Province Campus. Collaborating on using dsRNA treatment to extend the shelf (storage)-life of important fruit and vegetables in Thailand.

Chris Clark

Invited Presentations

- CleanSEED workshop, Mississippi State University. “How the U.S. Sweet Potato Seed Systems got to Where we are Today”, July 21.

Other Presentations


Committees

- CleanSEED SCRI planning committee.
- NCPN QMS Steering committee.
- FINDMe Advisory committee.
Faculty Activities

Grants and Contracts

- CleanSEED SCRI Planning Grant. $45,000. Louisiana portion: $9,940.
- National Clean Plant Network. $179,540.
- USDA SCRI led by NCSU. Rapid Development of Marketable Root-Knot Nematode Resistant Sweetpotato Varieties: Translation of Genomics and Advanced Phenomics into On-Farm Crop Management Solutions. LSU AgCenter Subaward to Watson, Clark, LaBonte, Villordon and Smith: $990,398.

New Collaborations

- CleanSEED, a project with planning support from USDA SCRI involving Louisiana, Mississippi, Arkansas, North Carolina and California improve sweetpotato seed programs.

Vinson P. Doyle

Invited Presentations


Committees

- PPCP Courses and Curricula Committee, Chair.
- College of Agriculture Courses and Curricula Committee, Chair.
- PPCP Graduate Admissions.
- PPCP Graduate Student Recruiting.
- College of Agriculture Undergraduate Research Grant Review Committee.
- Mycological Society of America Student Mentor Travel Awards Committee, Chair.

Grants and Contracts

Principal investigator


Co-principal investigator

- 2021 Louisiana Soybean and Grains Research and Promotion Board (LSGRPB) Funding Program. “Soybean seed treatment with fungicide-loaded nanoparticles.” PI: Cristina Sabilov; Co-PIs: Trey Price, Vinson P. Doyle, Jeff Davis.
- College of Agriculture Undergraduate Research Program. “Quantifying Metabolites of Xylaria necrophora, a Fungus Responsible for Taproot Decline of Soybean in the Southern United States”. Student investigator: Michelle Gremillion. Faculty supervisor: Vinson P. Doyle.

New Postdoctoral Research Associates

- Dr. Aaron Devries.
Faculty Activities

Jong Hyun Ham

Invited Presentations


• Special Online Lecture Invited by Federal Rural University of Pernambuco, Recife, Brazil. Oct. 22, 2021. “Genetics of Plant-(Bacterial) Pathogen Interactions.”

Other Presentations


Committees

• PPCP Safety/Operational Committee, chair.
• PPCP Graduate Student Recruiting Committee, chair.
• PPCP Course and Curricula Committee, member.
• PPCP Promotion and Tenure Committee, member.

Grants and Contracts


• Louisiana Soybean and Feed Grains Research and Promotion Board Grant. “Development of New Biological Agents for Seed Treatment and Biofertilization to Promote Soybean Growth.” PI: Jong Hyun Ham, co-PI: Changyoon Jeong. $32,000. April 2021 to March 2022.

• The Land Institute Super Ratooning Rice Program. $27,080. January 2021 to December 2022.

Visiting Scientists/Students

• Marco Gama, visiting professor from Federal Rural University of Pernambuco (UFRPE), Brazil. September 2021 to September 2022.


New Graduate Students

• Jhonson Leonard, June 2021 to present. Ph.D. program.
• Jonas Padilla, January 2021 to present. M.S. program.

Dr. Rebecca Weiser, Cardiff University, Cardiff, United Kingdom.

• Dr. Ebony Murrell, The Land Institute, Salina, Kansas.
• Dr. Maheshi Dassanayake, Biological Sciences, LSU.
• Dr. Michal Brylnski, Biological Sciences, LSU.

Jeff Hoy

Committees

• Safety.
• Recruiting.
• Mentor
  • Thomas-Sharma, chair.
  • Richards, chair.
  • Garcia, member.

Grants and Contracts

• American Sugar Cane League $30,000.
Faculty Activities

• Certis $19,000.
• Helena Chemical $19,000.
• FMC $5,000.
• BASF $2,000.

Visiting Scientists/Students:
• Jose Cortes, Ph.D.
• Chenie Zamora M.S.
• Kezia Reis, M.S.

Ely O. Garcia

Committees
PPCP Organizational committees: Courses and Curricula; Graduate Student Recruiting; Newsletter, Website, Social Media; Processing Lab and Incubators; Equipment Room.

Graduate Student Mentoring Committees
• Cesar Escalante, Ph.D. student, LSU PPCP, mentor Dr. Rodrigo Valverde.
• Olanike Omolehin Olukunle, Ph.D. student, LSU PPCP, mentor Dr. Chen.
• Jobelle Bruno, M.S. student, LSU PPCP, mentor Dr. Ham.
• Samuel de Paula, Ph.D. student, University of Sao Paulo, Brazil, mentor Dr. Sergio Pascholati.
• Alfonso Daniel Vitoria Arellano, Ph.D. student, University Federal de Pelotas, Brazil, mentor Dr. Leandro Dallagnol.
• Dean’s Representative: Prava Adhikari, M.S., LSU Biological Sciences, mentor Dr. Larkin.

Grants and Contracts
• KWS SAAT SE & Co. KGaA. Development of management protocols for Northern Corn Leaf Blight. Collaboration Agreement. $ 94,325.

Visiting Scientists/Students
• Samuel de Paula, Ph.D. student, University of Sao Paulo, Brazil.

Boyd Padgett

Invited Presentations
• Two Master Gardener meetings.
• Recertification.
• LACA.

Other Presentations
• Two production presentations.
• Mid-South Association of Wheat Scientists.
• Soybean and Grain.
• Three Lectures PLHL 4001.

Committees
• Four Graduate (one co-major).
• LSUAC Search Committee for Corn, Grain Sorghum and Cotton Specialist.
• LSUAC Entomologist.
• SERA3.
• Promotion and Tenure, faculty.
• IPM Advisory.
• Six mentoring committees (chair of two).
• Louisiana Agriculture Consultants Executive Board.
• Louisiana Agriculture Consultants Planning Committee.
• Louisiana Agriculture Consultant Governmental Affairs Committee.

Grants and Contracts
• $135,200 plus in-kind support of $15,000.

New Collaborations
• U.S. Department of Agriculture National Institute of Food and Agriculture-CPPM.
• U.S. Department of Agriculture Agricultural Research Service-USWBSI.
• U.S. Department of Agriculture -NIFA.
• United Soybean Board.
• Soybean and Grain Research and Promotion Board.
• National Peanut Board.
• BASF.
• Bayer.
• Corteva.
• FMC.
• Syngenta.
• VIVE.

Trey Price

Invited Presentations
Faculty Activities

- Mississippi State Crop Doctor’s Podcast. “Corn Pathology with the LSU AgCenter’s Trey Price.” June 1, 2021.

Awards and Honors

- NCERA137: Soybean Diseases. North Central regional award winner and nominee to the Experiment Station Section National Excellence in Multistate Research Award.

Committees

- NCERA-137 soybean disease working group.
- NCERA-184 wheat disease working group.
- Corn disease working group.
- Cotton leafroll dwarf virus working group.
- Cotton seedling disease research and education committee.
- Cotton nematode research and education committee.
- Cotton disease loss committee.
- PPCP Awards and Publicity.
- LACA Planning Committee.
- Multiple graduate student committees: PPCP, Entomology, School of Plant Environmental and Soil Sciences.
- Multiple mentoring committees: Northeast Region, PPCP, Central Region, School of Plant Environmental and Soil Sciences.
- Hiring committees: Rice pathology, agronomist.
- Ray and Dorothy Young Scholarship Committee.

Grants and Contracts

- Evaluation of Fungicides on Important Rice Diseases Under Upland (Row Rice) Conditions, LRB.
- Further Defining the Threat of CLRDV to Louisiana Cotton Production, Cotton Incorporated.
- Developing Management Strategies for Corn and Wheat Diseases, Louisiana Soybean and Grain Research and Promotion Board.
- Developing Management Strategies for Soybean Diseases, Louisiana Soybean and Grain Research and Promotion Board.
- Managing Foliar Diseases and Head Blights of Grain Sorghum, Louisiana Soybean and Grain Research and Promotion Board.
- Evaluation of Soybean Germplasm for Novel Sources of Resistance to Frogeye Leafspot, Louisiana Soybean and Grain Research and Promotion Board, Richards.
- US Wheat and Barley Scab Initiative U.S. Department of Agriculture-Agriculture Research Service-USWBSI.
- Enhanced Pest Control Systems for Mid-South Soybean Production, MSSB.
- SCN Coalition, USB.
- Investigating Fungicide and Plant Growth Regulator Efficacy in Louisiana Peanut, National Peanut Board.
Faculty Activities

New Collaborations

- Drs. Sebe Brown and Tyler Towles, Effect of cover crop and seed treatment on stand establishment in corn, cotton and soybean.
- Dr. Blair Buckley, USB/MSSB soybean variety development.
- Dr. Josh Copes, Cotton and soybean official variety trials, soybean weathering studies, corn and grain sorghum fungicide trials at NERS.
- Dr. Matt Foster, Corn, cotton and grain sorghum OHT location.
- Mr. Jeremy Hebert, Off-station soybean trials in Acadia Parish.
- Dr. Donnie Miller, Dennis Burns and Warren Ratcliff, Nematicide efficacy and other field trials at NERS, spring burndown location at MRRS.
- Dr. David Moseley, Taproot decline variety trial, salt tolerance variety trial.
- Dr. Boyd Padgett, Soybean official variety trial, foliar fungicide efficacy trials, off-station trials, wheat and oat field trials, USB/MSSB variety development project, peanut work.
- Dr. Rasel Parvej, Soybean salt tolerance, OVT/OHT locations at MRRS.
- Dr. Daniel Stephenson and Darrell Franks, DLRS field trial coordination.
- Dr. Zhi-Yuan Chen and Marija Zivanovic, Multiple efforts in basic research regarding the CLB pathogen complex.
- Dr. Vinson Doyle, CLB pathogen characterization, species composition, fungicide resistance (local and international efforts in Argentina), further defining etiology/epidemiology, inoculum production; TRD: characterization of X. necrophora, toxin production and characterization.
- Dr. Steve Harrison, Wheat and oat variety development, scab nursery, Hessian fly tolerant varieties.
- Dr. Josie Rezende and Dr. Tristan Watson, Multiple nematicide trials and processing of field samples.
- Dr. Jon Richards, Searching for QTLs for soybean diseases.
- Dr. Christina Sabilov, Utilizing nanoparticles to improve pesticide efficacy.
- Drs. Raj Singh and Rodrigo Valverde, First report of CLRDV.

- Dr. Sara Thomas-Sharma, USB/MSSB soybean variety development project, micronutrients and CLB, cercosporin variety screening assay, multiple grant proposals.
- Drs. Brian Ward and Bishnu Shrestha, USB/MSSB soybean variety development, CLB pathogen characterization, fungicide resistance, cercosporin assay for screening varieties.
- Our program collaborates with many scientists across the United States and internationally on a number of projects, including soybean variety development; developing management strategies for taproot decline; corn, soybean and wheat disease working groups (CDWG, NCERA-137 and SSDW, and NCERA-184, respectively); cotton disease loss, nematode, seedling disease, target spot, and CLRDV working groups; wheat variety development and scab management; fungicide resistance; remote sensing; novel disease discovery; and developing integrated disease management strategies in agronomic crops.

Jonathan Richards

Invited Presentations

- SD-APS Genomic Approaches to Plant Pathology: Bioinformatics as a Powerful Tool workshop. “Introduction to association mapping in microbial organisms.”

Other Presentations

- Awards and Honors
- Senior editor, Phytopathology.
- Editor, Phytofrontiers.

Committees

- Rice Pathologist Search Committee.
- Faculty advisor, PPCP Graduate Student Association.
- Courses and Curricula Committee, Plant Pathology and Crop Physiology.
- Graduate Student Recruiting Committee, Plant Pathology and Crop Physiology.
Faculty Activities

- PPCP Newsletter/Website/Social Media Committee, Plant Pathology and Crop Physiology.
- APS Southern Division Awards Committee member.

Grants and Contracts

- USDA-APHIS. Cooperative Agreement. “Integrating the effects of environmental stressors, above and belowground interactions, and plant genetics to understand Roseau cane die-off and restoration.” PIs: Rodrigo Diaz, James Cronin, Vinson Doyle, Tracy Quirk, Xuelian Meng, and Jonathan Richards. 2021-2023. $303,290 ($1,611,263 total project).

New Collaborations

- Rodrigo Diaz, LSU Entomology: Genomics of Lilioceris cheni.
- Rodrigo Diaz, Vinson Doyle, Jim Cronin, Tracy Quirk, Xuelian Meng: Roseau cane die-off.
- Jefferey Ray, Rusty Smith and Alemu Mengistu, USDA-ARS: Comparative genomics of soybean rust isogenic lines and population genetics of Macrophomina phaseolina.

Raj Singh

Invited Presentations

Faculty Activities

• LSU AgCenter Hemp working Group Meeting, Baton Rouge, Louisiana. “Industrial Hemp New Diseases in Louisiana.” July 9, 2021.


• LSU AgCenter Fall Gardening Program, Ferriday, Louisiana. "Integrated Disease and Pest Management in Home Gardens." June 17, 2021.


Other Presentations


Faculty Activities


Awards and Honors


Committees

- NACAA Southern Region Agronomy and Pest Management Professional Development Committee, vice chair.
- Southern Hemp IPM Working Group, member.
- Hammond Research Station Landscape Horticulture Faculty Search Committee, member.
- Southeastern U.S. Vegetable Extension Working Group, member.
- The Southern Region Small Fruit Consortium Steering Committee, member.
- Senior Editor Plant Health Progress Journal, member.
- NDPN Accreditation and Proficiency Committee, member.
- Cucurbit Downy Mildew Working Group, member.
- Citrus Clean Plant Network Tier II Governing Body, member.
- Louisiana Citrus Growers Association Board, member.
- Professional Excellence Recognition Committee, Louisiana County Agricultural Agents Association, chair.
- LSU College of Agriculture Scholarship Committee, member.
- LSU AgCenter Horticulture Extension Committee, member.
- LSU AgCenter Industrial Hemp Working Group, member.
- Course and Curricula Committee PPCP, member.
- Graduate Student Admissions Committee PPCP, member.
- Award and Publicity Committee PPCP, chair.

Grants and Contracts

- US Army Corps of Engineers, Engineer Research and Development Center. Development of Septoria villarsiae for biological control of Nymphoides peltata. $100,000. May 1, 2021 to April 30, 2026. PI: Raj Singh, Member: Monique De Souza.
- U.S. Department of Agriculture National Institute for Food and Agriculture. Southern Plant Diagnostic Network Agricultural and Food Research Initiative Grant. $39,000. PI: Raj Singh.
- U.S. Department of Agriculture NCPN Citrus Clean Plant Network Grant. $55,061. PI: Raj Singh.

Visiting Scientists/Students

- Katerina Netopilova, Mendel University, Brno, Czech Republic, Aug. 1-Sept. 15, 2021

New Graduate Students

- Hamilton Crockett, M.S.

New Collaborations (University, Industry, Other): Name of collaborator or institution

- U.S. Army Corps of Engineers, Engineer Research and Development Center
Sara Thomas-Sharma

Committees
• Courses and Curricula Board, member.
• Graduate Student Recruiting Board, member.
• College of Agriculture Faculty Policy Committee member.
• APS-Office of International Programs liaison to APS-Office of Education.
• APS Teaching Committee, member.
• Books for the World Award, administrator.
• APS-OIP Board, member.
• APS Epidemiology Committee, member.

Grants and Contracts
• “Characterizing the production and spread of inoculum and infection strategies for Cercospora leaf blight and purple seed stain.” With Doyle, V.P., Price, T., Richards J. $25,000. April 1, 2021 to March 30, 2022.

Tristan Watson

Invited Presentations

Other Presentations

Rodrigo Valverde

Invited Presentations
• Intercultural University of Puebla Sate and the Mexican Society of Plant Pathology. “How to publish a scientific article.” June to July 2021.

Awards and Honors
• APS Fellow

Committees
• APS/APHIS, Co-organizer of an APS International Forum on virus prevalence.
• Ph.D. graduate student committee for student from Universidad Autonoma Chapingo, Colegio de Postgraduos, Mexico.

Grants and Contracts
• Louisiana Soybean and Grain Research and Promotion Board. “Host status of resistant soybean varieties to geographically diverse root-knot nematode populations in Louisiana.” $15,014.
Faculty Activities

2021-2022.

- The IR-4 Project. $1,750. 2021-2022.
- Stoller Industry Trial: $4,300.
- Bayer Industry Trial: $5,000.
- HumaGro Industry Trial: $4,500.
- Vive Industry Trial: $4,500.
- Syngenta Industry Trial: $23,000.

Visiting Scientists/Students

- David Bonilla, UNA Visiting Student, June to November 2021.
- Iris Aguilar, Zamorano Visiting Student, May to October 2021.
- Michelle Gremillion, LSU Student Worker, April to August 2021.

New Graduate Students

- David Galo, August 2021.

New Collaborations

- Craig Yencho (NCSU), et al. Characterization of root-knot nematode resistance mechanisms in sweetpotato.
- David Moseley (Dean Lee Research Station, LSU AgCenter) et al. On-farm field performance of root-knot nematode resistant soybean varieties.
2021 PPCP Annual Holiday Gathering: Santa, his helper and the PPCP graduate students.