

# Dispersal Notes

Spring 2017 Semester Newsletter

Department of Plant Pathology and Microbiology  
Iowa State University



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# Message from the Department Chair

## Dear Friends and Alumni!

Classes have ended, exams are graded and with last Saturday's (4.5-hr!) commencement in Jack Trice Stadium, another Spring Semester is in the books. Fieldwork is picking up and laboratory work never stopped anyway. The Department of Plant Pathology is moving along with high intensity and much success in our Extension, Research and Teaching missions. Our students, staff and faculty are an incredibly productive and successful group of professionals and colleagues. Keep visiting our departmental webpage (<https://www.plantpath.iastate.edu/>) and from there click your way to the different pages and department groups.

You likely have heard the news that ISU President and fellow plant pathologist, Steven Leath, has resigned from his appointment here and is on his way to assume the presidency of Auburn University in Alabama. President Leath has been a wonderful colleague to all of us and we wish him all the best for his new responsibilities. One of his last actions on campus was to donate his rather extensive plant pathology library to our department to be distributed among his former colleagues. I even found a nematological volume in his collection, the 'Pictorial Key to Genera of Plant-Parasitic Nematodes' (a classic reference work), and have added it to me bookshelf. We will most definitely miss him on campus, and I hope that his new roles will still allow him to be involved in our discipline through the Plant Pathology department at Auburn. A search will soon get under way and we hope to have a new President in place during the fall. Stay tuned!



As I mentioned to you in prior newsletters, there is a new building on the horizon for our department – literally: when I look out of my office window, there it is – on the horizon. You can see it too by following this [link](#).

Last week we had a chance for the first guided tours of the interior of this structure, and it is impressive and exciting. The offices are taking shape and we soon will have to face the interesting task of assigning office space. Please wish me luck for that! Let me tell you, the new labs are impressive: on each floor, five units of two lab groups each are laid out next to each other and joined by open hallways. Work in our department will be very different, and interactions among lab groups will be taken to a new level. I cannot wait to see all this unfold. Talking about timing, we are officially on the clock now. The big move of all equipment and inventory is scheduled for Spring Break 2018! We have an exciting year ahead of us!

I close by wishing you all a wonderful summer and I hope you will enjoy this newsletter. I encourage you to provide us with your feedback and to stay in touch – and by all means, schedule a trip to Ames after spring break 2018 and admire our new home. Please also join me in thanking Mary and Esmail Zirakparvar for their endowment gift that allows us to provide you with this newsletter as well as our monthly news flyers. Please also let me to point out that if you wanted to support the department as well, we have taken the liberty of including gifting directions towards the end of this newsletter. Here is an example of a worthy target for your donation: you may have enjoyed the alumni socials at the annual APS meetings in the past. We have to rely on donations to fund these socials, and even the smallest check makes a difference in our ability to continue to do so.

Our department is a truly special place and I am deeply grateful to have the opportunity to serve as your department chair.

## Thomas Baum and Gary Munkvold elected fellows to American Phytopathological Society

PLPM professors [Thomas Baum](#) and [Gary Munkvold](#) were elected this year to be fellows of the American Phytopathological Society (APS). These awards were given for their career-long achievements in the field of plant pathology. Among Baum's achievements include leading "an outstanding and creative molecular nematology program" and making "major contributions in the molecular analyses of the plant side" of nematode-plant interactions. Munkvold was noted as a highly cited researcher, particularly with his work on mycotoxins. In addition, Munkvold was lauded as a prolific extension leader in the field of seed science and plant pathology. The two will receive their awards at this year's APS meeting in Austin, Texas.



Thomas Baum



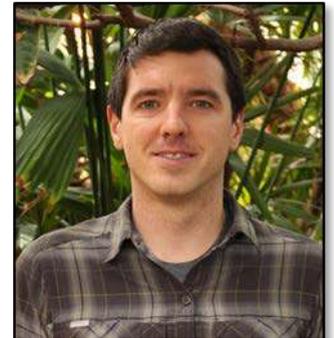
Gary Munkvold

## Mitch Elmore receives postdoctoral grant

Congratulations to Dr. Mitch Elmore (right) for his success in the FY2016 Postdoctoral Fellowship Competition from the Agriculture and Food Research Initiative (AFRI) - Food, Agriculture, Natural Resources and Human Sciences Education and Literacy Initiative. Elmore will receive \$152,000 over two-years for his project entitled "Dynamic protein networks during cereal-fungal interactions".

Research will be carried out in the laboratories of Roger Wise (USDA-ARS) and co-mentor Justin Walley (ISU Department of Plant Pathology & Microbiology).

The AFRI Food, Agriculture, Natural Resources, and Human Sciences Education and Literacy Initiative (ELI) provides fellowships to undergraduate, predoctoral, and postdoctoral students in the agricultural sciences.



## PLPM presents research at Iowa Soybean Association research conference

The Iowa Soybean Association held its annual research conference from February 7<sup>th</sup> to 8<sup>th</sup> at the Iowa Events Center in Des Moines, IA. Farmers, industry representatives, crop consultants, and researchers attended sessions on a wide range of issues affecting soybeans. Several members of the PLPM department gave talks, including Dr. Gwyn Beattie, Dr. Alison Robertson, Mauricio Serrano (pictured bottom left) and Dr. Gregory Tylka (pictured bottom right).



## Mohsin Raza presents research and receives award at California conference

Muhammad Mohsin Raza (below), a PhD student in the PLPM department, presented research at the 63<sup>rd</sup> Annual Conference on Soilborne Plant Pathogens and the 49<sup>th</sup> California Nematology Workshop in March. Raza's presentation was titled "Soybean sudden death syndrome: Variation in disease intensity, canopy reflectance and yield at different spatial scales". Raza also won the **Bayer/Isagro Scholarship Award** at the conference.



Stith Wiggs (left) and Yuba Kandel (right) preparing inoculum for field studies.

## Iowa State students explore Costa Rican agriculture

Seventeen ISU students toured a diversity of agriculture – coffee, bananas, pineapple, oil palm, melons, bromeliads – as well as field research sites in Costa Rica from March 8-17, 2017, as part of the PLP 511 course, Integrated Management of Tropical Crops. They were hosted by faculty and students from University of Costa Rica who had toured Iowa agriculture in July 2016. The March trip was the 10<sup>th</sup> by 511 class groups since 1999; 9 UCR student groups have toured Iowa agriculture since then. PLPM co-instructor for the 511 course is Mark Gleason

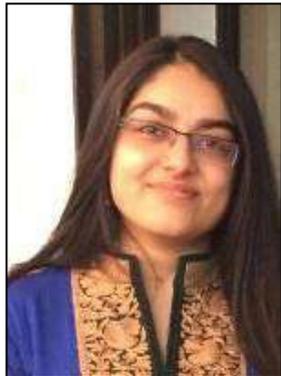


Iowa State University students on their Costa Rica tour in March.

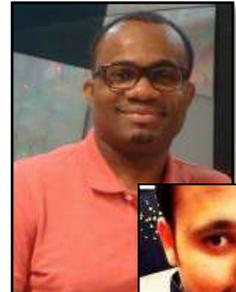


University of Costa Rica (UCR) student who hosted the group during the visit. The UCR students had toured Iowa agriculture in July 2016.

Congratulations to Priyanka Surana for her Research Excellence Award from the ISU Graduate College. Her PhD dissertation is entitled "Host membrane trafficking in *R* gene-mediated defense against powdery mildew". Priyanka is graduating with a PhD in Bioinformatics and Computational Biology with a minor in Statistics under the direction of Roger Wise and Dan Nettleton.



Congratulations to Olakunle Olawole, Plant Pathology and Microbiology, Ph.D. student in the Beattie Lab AND Pulkit Kanodia, IGG Ph.D. student in the Miller Lab. Olakunle and Pulkit were awarded the Print and Grace Powers Hudson Scholarship in Agriculture for a Ph.D. or M.S. student in the College of Agriculture and Life Sciences (\$1,000).



Congratulations to Elizabeth Carino, IGG Ph.D. student in the Miller Lab. Elizabeth was awarded a \$500 travel grant by the American Society for Virology to give an oral presentation of her research: "The 3' Untranslated Region of Maize Chlorotic Mottle Virus Contains a New Type of Cap-independent Translation Enhancer", at the annual ASV meeting in Madison, WI.

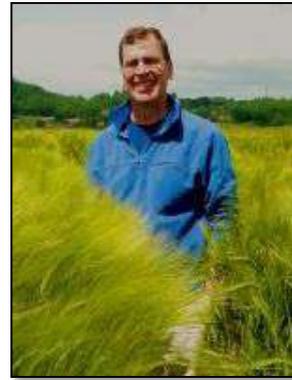


PLPM faculty Leanor Leandro, Gwyn Beattie, and Larry Halverson, along with ISU Agronomy professor Matt Liebman were recently approved for a grant titled "Unraveling the mechanisms underlying beneficial impacts of diversified cropping systems on pest management, soil health, and plant productivity". The grant totals \$500,000 over three years.

Gary Munkvold attended an APS Council meeting in Bellingham, WA in April. It was hosted by APS President Tim Murray from WSU. They also visited the Northwest Washing Research and Extension Center in Mt. Vernon, WA, and the Skagit Valley Tulip Festival.



Roger Wise was invited by the Michigan State University Genetics graduate program to participate in a career workshop on April 19<sup>th</sup>, 2017. He also presented a seminar, titled "Interchromosomal transfer of immune regulation during infection of barley by the powdery mildew pathogen", sponsored by the Genetics, Plant Breeding and Biotechnology programs.



Charlie Block gave a tour of the Seed Science Center during a PLPM department Brown Bag in Ma

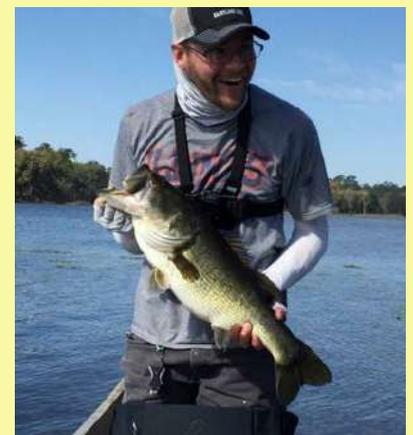


## Alumni Update: Ed Zaworski, MS 2014

Ed Zaworski graduated with a master's degree in the summer of 2014. His dissertation was titled "[Effects of ILeVO® on soybean sudden death syndrome and soybean cyst nematode](#)" and was advised by Dr. Daren Mueller and Dr. Greg Tylka. Currently, he is working as a diagnostician here at Iowa State in the Plant and Insect Diagnostic Clinic.

In the diagnostic clinic, my day-to-day duties involve diagnosing plant diseases, counting nematodes, interacting with clients and operating our lab's quality management system. This job has really been great! I have been able to branch out quite a bit from the world of corn and soybeans, as we get samples from all types of plants. I have also had the opportunity to travel, give talks and meet diagnosticians from other states, while participating in NPDN (National Plant Diagnostic Network) meetings.

Overall, diagnostics presents a new and interesting challenge every day! I am glad that this opportunity to stay and work at a great university, in an even better department, was available when I graduated.



# Farewell Editorial Message



Over the past two years we (Augie and Jared) have had the privilege of being the first pair of Zirakparvar outreach fellows for our department. During our tenure, we were honored to highlight our department's achievements and successes and re-live with all our social gatherings with you, our readers. Back in 2015, our department only existed on one tiny outdated webpage buried in the labyrinth of IState.edu. Through this fellowship, Jared expanded our department's presence past the confines of Bessey Hall (or Science 1 or Agronomy or Seed Science) with an updated website and burgeoning social media presence. With Twitter and Facebook, we started to engage with the community, sharing the fun side of science and helping others through our knowledge of plant pathology. Starting with a blank page, Augie created "The Dispersal Notes", our monthly newsletters, and filled it with exciting news, storytelling pictures, and current events to keep everyone up-to-date. At the end of each semester, Augie would gather stories from across the department to produce a special edition of "The Dispersal Notes" providing a retrospective look at all that our department had accomplished in the past six months. Never before has our department had this much engagement with ourselves and with our community. We were given the awesome task of starting something completely new to our department and we hope you have enjoyed the ride. As we both move on and graduate, we can't wait to see how the department continues to grow, following along [@PlantPathISU](#), and expect some pretty amazing newsletters headed our way.

We are truly thankful to the department and the Zirakparvar family for this chance to serve the department and alumni.

Sincerely,

Augustine Beeman and Jared Jensen



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# Donations to the PLPM Department

Please consider making a gift to the Plant Pathology Development Fund. Your gift allows us to provide lecture series, academic excellence awards, travel stipends, small research grants and professional development opportunities to faculty and students.

To make a tax-deductible gift visit [www.foundation.iastate.edu/ag](http://www.foundation.iastate.edu/ag). Mail your checks to the address below, or call the ISU Foundation at 515-294-4607. Please reference fund #0111622 to ensure that your donation is properly designated.

Support from our alumni and friends is critical to the success of our graduate program. Thank you for considering a demonstration of your support through a monetary gift.

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