

IOWA STATE UNIVERSITY
Department of Entomology
Laboratory of Bryony Bonning

News

Bonning moves to University of Florida, retains ISU links

Bryony Bonning moved to University of Florida to join the Department of Entomology and Nematology as an Eminent Scholar and Professor on February 1, 2017. She retains an Affiliate Professor appointment at Iowa State University and continues to run the NSF I/UCRC CAMTech through Iowa State University.

Bonning lab visits Valent BioSciences Corporation

Six members of the Bonning lab along with members of CIRAS were delighted to have the opportunity to tour the new Valent BioSciences Corporation facility in Osage, Iowa. The plant produces and conducts quality analysis for multiple biorational Bt-, plant growth regulator- and fungal- based pest and crop management products.

Bonning presents Hopkins Colloquium Seminar at Kansas State University

Dr. Bryony Bonning presented the 2016 Hopkins Colloquium Seminar at the Department of Entomology, Kansas State University. The seminar was entitled "Pea Aphids and Plant Viruses: Molecular Interactions and Innovation". Bonning, as Distinguished Colloquium Speaker, was presented with a plaque following the presentation, by Dr. John Ruberson, Chair of the Department of Entomology at KSU.

Bonning receives CALS Outstanding Achievement in Research Award

The Iowa State University College of Agriculture and Life Sciences announced awards for outstanding faculty and staff with Bryony Bonning as recipient of the 2016 Outstanding Achievement in Research Award.

Mariah receives 2015 Richardson Research Incentive Grant



Mariah Kemmerer was awarded the ISU Department of Entomology 2015 Henry and Sylvia Richardson Research Incentive Grant.

Sehiza Grosic joins the lab



Sheng Yang joins the lab from Durham University



Sheng Yang received his doctoral degree in May 2015 from Durham University, England, where he worked on insecticidal fusion proteins under the guidance of Dr. John A. Gatehouse. Sheng received his MS degree in Molecular Plant Biology from Shanghai Normal University, China. Sheng is working on modification of Bt toxins for optimized pest control.

Shunji Li joins the lab



Shunji Li arrived from China to join the lab as a graduate student in Entomology. Shunji completed her MS degree at Hunan Agricultural University on the effect of *Heliothis virescens* ascovirus 3h on host development. Shunji is working on insect-virus interactions.

Ben Deist graduates!

Congratulations to Ben Deist who graduated with a Masters degree in Microbiology in May.



Bonning awarded 2015 Rossmann Manatt Faculty Development Award



Bryony Bonning was awarded the 2015 Rossmann Manatt Faculty Development Award at the CALS awards ceremony.

Mike Rausch graduates!



Congratulations to Michael Rausch who graduated with a Masters degree in Microbiology in December.

Bonning delivers Patton Lecture at Cornell University

December 2015: Bryony Bonning delivered the 13th Annual Patton Lecture at the Department of Entomology, Cornell University, entitled **Plant Virus-Aphid Vector Molecular Interactions and Associated Technologies**. Dr Robert L. Patton (1914-2008), a member of faculty at Cornell from 1939-1978 was a pioneer in insect electrophysiology.

Biviana Flores-Escobar joins the lab

September 2014: Biviana Flores-Escobar joined the lab in September to work on modification of Bt toxins to target pests with low toxin susceptibility.

Purushottam Lomate joins the lab

July 2014: Purushottam Lomate joined the lab to work on stink bug physiology.

CAMTech flies ISU



September 2014: The ISU CAMTech team flew on one of the ISU planes to the Industry Advisory Board meeting in Lexington, KY in September.

Diveena moves on to Harvard



July 2014: Diveena leaves at the end of July to join the lab of Scott Kennedy at Harvard Medical School as a postdoctoral researcher.

Diveena and Divya graduate!

Congratulations to Diveena Vijayendran and Divya Sinha who graduated May 9th, 2014 with doctoral degrees in Genetics, and Molecular, Cellular and Developmental Biology respectively!



Mariah Kemmerer joins the lab

Mariah Kemmerer joined the lab to conduct research toward a doctoral degree in Microbiology. During her B.S. degree at Bethany College in West Virginia, she conducted research on whether *Pseudomonas aeruginosa* could be used to determine the metastatic potential of tumor cells.

Diveena Vijayendran awarded ISU Research Excellence Award

May 2014: Diveena Vijayendran was awarded an Iowa State University Research Excellence Award for her dissertation research. These awards recognize the top 10% of graduate student researchers within the university.

Mike Rausch receives first place award at NCB ESA



March 2014: Mike Rausch received the 1st place award in the oral presentation MS student competition at the North Central Branch meeting of the Entomological Society of America, held in Des Moines, IA. The title of his talk was *Bt toxin engineering to promote protoxin activation in the aphid gut*.

Research featured on "This Week in Virology"



ISU bee research featured on Iowa Public Radio

February 2014. Amy Toth discusses the plight of the honey bee and outlines collaborative research with Bryony Bonning and W. Allen Miller on the combined impact of nutritional stress and virus infection on honey bee health.

Listen to the program

Yuting Chen joins the lab from Ohio State

February 2014. Yuting Chen joins the lab to work as a Postdoctoral Research Associate to work on insect virus discovery. Yuting graduated in December 2013 with a Ph.D. from Ohio State University, where she was supervised by Dr. Andy Michel. Her dissertation research was on the molecular interactions and transmission of maize fine streak virus and its insect vector.

Nanasaheb Cougule leaves for a position at Bayer CropScience

Jan. 2014. Nana Chougule left the lab for a research position at Bayer CropScience after 4 years as a Postdoctoral Research Associate and Assistant Scientist in the Bonning lab.



Bonning and Miller publish new aphid resistance technology

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Inspired by viruses, researchers at Iowa State find new means of protecting plants from aphids

Posted Dec 9, 2013 1:48 pm

AMES, Iowa – A pair of researchers at Iowa State University drew inspiration from viruses in designing a new way to allow plants to protect themselves from aphids, pests that can drastically reduce crop yields.

Diveena Vijayendran receives Entomology Alumni Scholarship



December 2013. Graduate student Diveena Vijayendran was awarded the Entomology Alumni Scholarship by the Department of Entomology, Iowa State University. This scholarship is awarded based on promise for a successful career.

Photo: Sue Blodgett, Chair of the Department of Entomology, presents Diveena with the award.

Divya Sinha joins the lab

November 2013. Divya Sinha joins the lab as a Postdoctoral Research Associate to work on aphid - plant virus molecular interactions. Divya graduated with a Ph.D. in Molecular, Cellular and Developmental Biology from the lab of Dr. Michael Shogren-Knaak, in the Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University in May 2013.

Chougule receives funding from CRDF

October 2013. Nana Chougule received a grant as Principal Investigator for \$500,000 for "Bt toxins for resistance to the Asian citrus psyllid: from the Citrus Research & Development Foundation. Bryony Bonning, David Hall, USDA, ARS, Florida and Phyllis Martin USDA, ARAS Maryland are co-PIs on the grant.

Teresa Fernandez-Luna joins the lab

October 2013. Maria Teresa Fernandez-Luna joins the lab as a Postdoctoral Research Associate to work on modification of Bt toxins to target hemipteran pests. Teresa previously worked with Dr. Brian Federici at UC Riverside on the mode of action of Bt toxins in the mosquito.

Bonning awarded 2013 Nan-Yao Su Award for Innovation and Creativity in Entomology

Sept. 11, 2013.

NAN-YAO SU AWARD FOR INNOVATION AND CREATIVITY IN ENTOMOLOGY—Each year this award is given to an Entomological Society of America member who is able to demonstrate through his/her projects or accomplishments an ability to identify problems and develop creative, alternative solutions that significantly impact entomology. For more information, see the ESA web site.

Diveena Vijayendran receives 1st place in SIP student competition

August 2013. Diveena Vijayendran receives first place in the overall student oral presentation competition at the annual meeting of the Society for Invertebrate Pathology, held in Pittsburgh, PA.



Sijun Liu, Nana Chougule, Diveena Vijayendran and Bryony Bonning at the 2013 SIP meeting.

Luke Linz graduates and takes a job at Douglas Scientific



August 2013. Having graduated with a PhD in Microbiology in May 2013, Luke Linz left to take a research position at Douglas Scientific in Alexandria, MN. Luke worked in the Bonning lab for 4 years and received an Iowa State University Research Excellence Award.

NSF I/UCRC CAMTech - Launch Announced

August 2013. The National Science Foundation has funded an industry-university cooperative research center that will explore new strategies for managing insect pests that devastate crops and harm human health.



Bonning named ESA Fellow

Annapolis, MD; July 31, 2013 -- The Governing Board of the Entomological Society of America elected ten new Fellows of the Society for 2013. The election as a Fellow acknowledges outstanding contributions to entomology in one or more of the following: research, teaching, extension, or administration. See the ESA web site for full details.



Bonning and CAMTech featured

July 13, 2013

Biotech as Insect Assassin.

See the ISU Office of Biotechnology web site for the full story!

Jeremy Kroemer leaves for Monsanto Company

June 2013. Jeremy Kroemer left after 2 years as a postdoctoral researcher in the



Bonning lab for a research position at Monsanto Company.

L to R: Sijun Liu, Nana Chougule, Diveena Vijayendran, Ben

Deist, Jeremy Kroemer, Luke Linz, Mike Rausch and Bryony Bonning

Vijaya Paramasivan leaves the lab

May 2013. Vijaya Paramasivan leaves the lab to work with Dr. Thomas Baum, Department of Plant Pathology and Microbiology at Iowa State University. Vijaya worked for a year in the Bonning lab as an Assistant Scientist.

Diveena Vijayendran graduates from the PFF program

April 2013. Graduate student Diveena Vijayendran graduates from the Preparing Future Faculty program at Iowa State University. This national program prepares students for faculty careers through a combination of seminars, mentoring, and practical classroom and departmental service experiences.

Bonning receives funding from the Monsanto Corn Rootworm Knowledge Research Program

February 2013 - Monsanto announced the awardees for the first round of research grants in their Corn Rootworm Knowledge Research Program.

Bonning Featured in CALS Stories

Nov. 14, 2012 - Battling Pests While Protecting Beneficial Bugs by Ed Adcock.

Bonning, Palli visit USDA



October

2012. Bryony Bonning and S. Reddy Palli met with Dr. Sonny Ramaswamy, the director of the USDA's National Institute of Food and Agriculture in Washington DC to discuss the proposed NSF Industry / University Cooperative Research Center, the Center for Arthropod Management Technologies. As a fellow entomologist,

Dr. Ramaswamy was particularly interested in the proposed center as a mechanism to streamline research within academia with the needs of the agricultural industry sector.

Bonning presents seminar at UC Davis

April 18, 2012 - Oh, Those Pestiferous Aphids!

The seminar can be viewed here.

Researchers take novel approach to honey bee plight

June 20, 2012 - Iowa State University is taking a team approach in studying what is behind the disappearance of honeybees known as "Colony Collapse Disorder."

Reducing the Impact of Insects and Viruses on Food Security

May 2012. The Virus-Insect Interactions Initiative lead by Bonning featured in Inside Iowa State.

The Virus Insect Interactions group is developing solutions to reduce the impact of insects and viruses on food security for sustainable production of vegetables, fruits and farmed shrimp. More...

Bonning receives Research Innovation and Leadership Award

Nov. 18. 2011 - Technology Association of Iowa Honors Women of Innovation

Read the full details here.

Plant Science Faculty with covers highlighted

April, 2011. Five faculty members working within the Plant Sciences Institute at Iowa State University and whose work was featured on journal covers. Bonning is holding the journal of Virology in which Wendy Sparks' dissertation research



on baculovirus ODV proteins is featured.

Bonning elected Fellow of AAAS

Jan. 11, 2011 - AAAS members elected as Fellows.

ISU researchers study insecticide-free method for control of soybean aphids

Sept. 15, 2009 - ISU researchers study insecticide-free method for control of soybean aphids

AMES, Iowa - Two Iowa State University researchers are examining a new method of controlling soybean aphids without the use of chemical pesticides.

Bryony Bonning, professor of entomology, and Allen Miller, professor of plant pathology and director of the Center for Plant Responses to Environmental Stresses, are looking at a way to genetically modify soybeans to prevent damage from aphids.

Bioengineered Bugs A "Brisk Trade" in Applied and Basic Entomology

Sept. 1995 - Article in The Scientist

