



Ohio Plant Biotechnology Consortium

2011 OHIO PLANT BIOTECHNOLOGY CONSORTIUM  
(OPBC)

*Saturday, October 8, 2011*

*Nationwide and Ohio Farm Bureau 4-H Center  
2201 Fred Taylor Drive, Columbus, OH 43210*

**MEMBER INSTITUTIONS AND OPBC REPRESENTATIVES**

<b>Bowling Green State University</b>	<b>Paul Morris</b>
<b>Cleveland State University</b>	<b>Harry VanKeulen</b>
<b>Miami University</b>	<b>Quinn Li, OPBC Co-Chair</b>
<b>The Ohio State University</b>	<b>Terry Graham</b>
<b>Ohio University</b>	<b>Allan Showalter, OPBC Chair</b>
<b>University of Cincinnati</b>	<b>Steve Rogstad</b>
<b>University of Toledo</b>	<b>John Gray</b>
<b>Wright State University</b>	<b>Don Cippolini</b>
<b>Youngstown State University</b>	<b>Xiangjia "Jack" Min</b>
<b>Kent State University</b>	<b>TBA</b>

**William F. Ravlin, Ex-Officio Member  
The Ohio State University, OARDC**

**Lori Kaser, Program Coordinator  
The Ohio State University, OARDC**

**[www.opbc.osu.edu](http://www.opbc.osu.edu)**



*Administered by The Ohio Agricultural Research and Development Center*



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### Annual Meeting Agenda

- 8:15 a.m. Registration opens, Poster set up
- 9:00 a.m. Continental breakfast, Networking, Poster viewing
- 9:50 a.m. *Welcome*  
**Dr. Allan Showalter**, Ohio University, OPBC Chair
- 10:00 a.m. **Feng Qu**, Dept. of Plant Pathology, The Ohio State University  
"Is RNA silencing the only host defense against the genomes of plant viruses?"
- 10:30 a.m. **Brad Day**, Dept. of Plant Pathology, Michigan State University  
"From the outside, in: the *Pseudomonas*-actin connection in plant defense signaling"
- 11:00 a.m. Break
- 11:10 a.m. **Guo-Liang Wang**, Dept. of Plant Pathology, The Ohio State University  
"Fungal effector-mediated suppression of innate immunity in rice by targeting host ubiquitin proteasome system"
- 11:40 a.m. **Michael Held**, Dept. of Chemistry and Biochemistry, Ohio University  
"The biosynthesis and regulation of beta-glucans in grasses"
- 12:10 p.m. Luncheon (provided)
- 1:00 p.m. Poster Session and Networking
- 2:30 p.m. **Stephen Myers**, Ohio BioProducts Innovation Center, The Ohio State University  
"Lessons Learned: Moving Research Into the Marketplace"
- 3:00 p.m. **Rodrigo Sarria**, Dow AgroSciences  
Technology advancements at Dow AgroSciences
- 3:30 p.m. Break
- 3:40 p.m. **Christopher Taylor**, Dept. of Plant Pathology, The Ohio State University  
"Using composite plants for functional genomics"
- 4:10 p.m. **Roger William Innes**, Dept. of Biology, Indiana University  
"Molecular Mechanisms Underlying Pathogen Recognition in Soybean and Arabidopsis"
- 4:40 p.m. Closing Comments, Dr. Allan Showalter, Posters removed and Meeting adjourns
- 5:00 p.m. OPBC Executive Committee Members Meeting



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### TODAY'S SPEAKERS



**Feng Qu**

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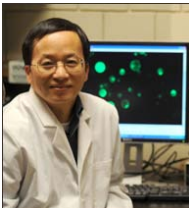
Feng Qu, Assistant Professor, Department of Plant Pathology, Ohio Agricultural Research and Development Center, Ohio State University. Received his Ph.D. from Chinese Academy of Sciences. Joined OSU/OARDC in the fall of 2008. Research interests: Conduct basic, applied, as well as integrated investigations of plant anti-viral defense mechanisms, including RNA silencing, nonhost resistance, and cross protection. Search for simple, cost-effective strategies to manage virus-related crop losses.



**Brad Day**

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Dr. Brad Day is an assistant professor at Michigan State University in the Department of Plant Pathology. He received his Ph.D. from the University of Tennessee with Gary Stacey in the area of host-Rhizobium symbiosis, working on chitin perception. After postdoc positions with Naoto Shibuya working on rice-fungal interactions, and then with Brian Staskawicz on Arabidopsis-Pseudomonas at UC Berkeley, Brad joined the faculty of MSU in 2006. His research covers the general area of signal perception in host-pathogen interactions, focusing on the host response to infection, as well as the virulence function of pathogen effector molecules. The primary projects in his lab cover the role of the actin cytoskeleton in defense signaling, and a functional genomics investigation into downy mildew of cucumber.



**Guo-Liang Wang**

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Dr. Guo-Liang Wang is a professor; Dept. of Plant Pathology, The Ohio State University. The main focus of Dr. Wang's laboratory is to understand the mechanisms of plant-pathogen interaction, and the signal transduction pathways leading to the induction of disease resistance responses. Rice is currently used as the model plant to clone disease resistance genes and genes involved in resistance responses to rice fungal and bacterial pathogens. The long-term goal is to genetically engineer plants for disease resistance in such a way as to reduce reliance on the environmentally damaging pesticides.



**Michael Held**

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Dr. Held has spent most of his career studying plant cell wall biosynthesis. He received his Ph.D. at Ohio University in 2004 for his work on the crosslinking of hydroxyproline-rich glycoproteins in Dr. Marcia Kieliszewski's lab. From there, Dr. Held moved to Purdue University for a Post-Doc to study cellulose and mixed-linkage beta glucan biosynthesis in Dr. Nick Carpita's lab. In 2007, he did a second post-doc at the Michigan State University Plant Research Lab (as part of the Great Lakes Bioenergy Research Center). Dr. Held worked in Dr. Federica Brandizzi's lab on a collaborative project with Dr. Curtis Wilkerson to define novel factors that influence the trafficking of hemicellulose and pectin. Just last year, he returned home to begin his own lab in the Dept. of Biochemistry at Ohio University. Dr. Held's current research projects include: (1) the regulation of cell wall polysaccharide biosynthesis by small RNAs and (2) identifying new components of polysaccharide synthase complexes.



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**Stephen Myers**

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OBIC, a Wright Center established in 2005 by Ohio's Third Frontier Program, integrates academia and industry towards development of renewable specialty chemicals, polymers/plastics and advanced materials. The alliance builds on strength of Ohio's agriculture and polymer industry sectors as well as significant involvement of Battelle, DOE Labs, and the USDA ARS. OBIC utilizes a "Cell-to-Sell"® program which supports cluster development to help build regional economies by accelerating innovation – specifically through cluster-driven commercialization of technologies that deliver sustainable bio-based materials meeting defined market needs. The program creates a critical bridge between researchers and commercialization partners to maximize development of new products and capture full market potential. Designed to complement a market-pull business model, the "Cell-to-Sell"® program critically assesses developed technology platforms for targeted market sectors, funding routes, and potential red flags. Results are integrated to provide a detailed list of services which can improve success of specific technologies relative to cluster-based commercialization. Successful application of the "Cell-to-Sell"® program has demonstrated the potential to accelerate development and increase economic growth. Current initiatives which are the focus of OBIC alliance members include alternative natural rubber, fillers and fibers for composites as well as biobased chemical additives, intermediates and resins. More recently, the program has been applied to Ohio's food processing sector.



**Rodrigo Sarria**

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Rodrigo Sarria is currently a Trait product Development Leader at Dow AgroSciences responsible for the dicot crops. Rodrigo has a BS in Biology from Universidad del Valle (Colombia), a PhD from Purdue University (Agronomy Department) and Post graduate work in the DOE-MSU Plant Research Laboratory with Natasha Raikhel. Rodrigo has also held appointments with the International Center for Tropical Agriculture (CIAT- Colombia) and BASF Plant Sciences. His areas research have been plant transformation, Cytoplasmic Male Sterility, Plant Cell Wall biosynthesis and Agronomic trait discovery.



**Christopher Taylor**

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After graduating in 1995 from North Carolina State University with a Ph.D. in Genetics, Chris began his professional career working in the Disease Control Group at Monsanto (St. Louis, MO). In 1999 he joined Akkadix Inc., (San Diego, CA) as a senior scientist and group leader. In 2001, Chris moved his research program to the Donald Danforth Plant Science Center (DDPSC, St. Louis) as a Principal Investigator. In 2009 Chris moved to The Ohio State University's Department of Plant Pathology in Wooster, Ohio. Chris's current research program examines the mechanisms by which disease-causing organisms interact with plant roots and the methods for their control.



**Roger William Innes**

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Dr. Innes is Professor and Chair of the Department of Biology at Indiana University. He earned his Ph.D. in Molecular Biology at the University of Colorado, and B.A. in Biology at Humboldt State University in California. He has made seminal contributions to our understanding of disease resistance mechanisms in plants.