

Greetings Alumni, Students, Friends, and Colleagues:

Welcome to the 2009 Department of Plant Pathology, Physiology, and Weed Science newsletter, celebrating the events and accomplishments of the past year. Due to the dedication and hard work of our faculty, staff, and students, PPWS has been able to weather the impacts of the difficult economic times and continue to grow, hire new faculty, and recruit new students.

- **Eva Collakova** joined PPWS in Blacksburg as a faculty member in January 2009, working in the area of plant metabolism and metabolic flux.
- **Mizuho Nita** joined the Alson H. Smith Jr. Agricultural Research and Extension Center in Winchester as a grape pathologist.
- A large number of department members participated in the 2008 Centennial Celebration of the American Phytopathological Society in Minneapolis. Special sessions, awards, and a book signing featuring PPWS faculty members are highlighted inside this issue.
- **Brett Tyler** received the Noel T. Keen Award for Research in Molecular Plant Pathology.
- The Virginia Tech College of Agriculture and Life Sciences recognized the achievements of two PPWS alumni: **Penny Hunst** (Ph.D. '81) and **Kevin Bradley** (Ph.D. '04).
- **Cindy Denbow** (Ph.D. '97) was honored for teaching excellence in the College of Agriculture and Life Sciences at the spring commencement ceremony.
- Eight graduate students completed dissertations or theses since last year's newsletter, and 10 new graduate students will join the department in 2009.
- Grants and contracts for our research and Extension programs increased nearly 70 percent for the year – another tribute to the success of the faculty leading those programs.

We invite you to check inside to view more activities from the past year, and we hope you will keep us updated on accomplishments and additional news from PPWS alumni.

Elizabeth Grabau, department head



Elizabeth Grabau, department head, Plant Pathology, Physiology, and Weed Science

Featured Alumna Penny L. Hunst (Ph.D. PPWS '81) was instrumental in gaining approval of genetically engineered corn varieties for commercial use during her employment (1999-2009) at Dow AgroSciences. The corn varieties confer comprehensive insect protection, protecting against four or more major insect pests of corn roots and stems. One variety captured nearly 20 percent of the nation's corn acreage in its first two years on the U.S. market and was named 2008 Product of the Year by *AgriMarketing* magazine. Hunst has received eleven Dow AgroSciences awards, including the New Ventures Concept Builder Award. Hunst left her position as the Dow AgroSciences global regulatory leader in May to join Bayer CropScience as a Global Regulatory Affairs Manager.



Left to right: Loke Kok, interim dean, College of Agriculture and Life Sciences; Penny L. Hunst; Sue Tolin, former advisor for Hunst.

Awards, Scholarships, and Recognition

Alumni

Kevin Bradley (Ph.D. PPWS '00), assistant professor and state Extension weed scientist in the Division of Plant Sciences at the University of Missouri, was awarded the College of Agriculture and Life Sciences 2008 Outstanding Departmental Recent Alumni Award.

Penny L. Hunst (Ph.D. PPWS '81) received the College of Agriculture and Life Sciences 2008 Outstanding Departmental Alumni Award.

Students

Peta-Gaye S. Chang won first place in the student presentation contest at the 2009 APS Caribbean Division meeting in Orlando, Florida.



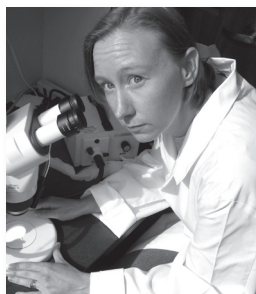
Peta-Gaye S. Chang (far right) pictured with other student participants.

Matt Goddard received the Hatzios Weed Science Scholarship. Matt also placed first in the Northeastern Weed Science Society's Weed Contest in the individual graduate category, and second in the Southern Weed Science Society Ph.D. Paper Presentation Contest. Additionally, Matt was chosen for an internship with the United States Golf Association Green Section.



Matt Goddard receives first place student presentation award

Sherry Hildreth was the recipient of the 2009 Arthur J. Webber Graduate Student of the Year Award and a Bruce Perry Scholarship.



Sherry Hildreth

John Willis was awarded a Bruce Perry Scholarship.

The **PPWS Weed Science graduate team** received third place in the Northeastern Weed Science Society's Weed Contest.



Shawn Askew (left), associate professor, with the graduate student team (left to right): Matthew Cutulle, Tyler Mittlesteadt, Jennifer Jester, and Matt Goddard

Faculty

Sue Tolin, professor, received the 2009 Alumni Award for Excellence in International Research.

Brett Tyler, professor, received the 2009 Alumni Award for Research Excellence and the APS Noel T. Keen Award for Research Excellence in Molecular Plant Pathology.

Cindy Denbow (Ph.D. '97), instructor, was awarded the College of Agriculture and Life Sciences Certificate of Teaching Excellence, Spring 2009.



Sue Tolin



Brett Tyler



Cindy Denbow

Faculty and Classified Staff Updates

The following faculty and staff members are commended for their years of service to the university: **Judy Fielder** (30 years), **Lloyd Hipkins** (25 years), and **Ruth Grene** (20 years).

Four new postdocs have joined the department: **John Todd Holland** (Okumoto lab), **Matthew Robert Hunt** (Grabau lab), **Maria S. Newcomb** (Schmale lab), and **Monica Fernandez Aparicio Ruiz** (Westwood lab).

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New Faculty

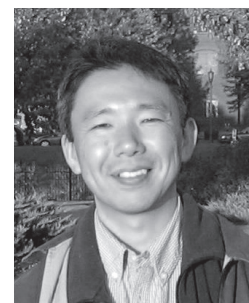
Eva Collakova has been an assistant professor in PPWS since January 2009. She received both her doctoral degree in plant biology and postdoctoral training at Michigan State University.

The main focus of her research is the transcriptional regulation of metabolism in developing plant embryos during accumulation of storage reserves. She uses reverse genetics, metabolite profiling, and metabolic flux analysis to follow metabolic changes in order to identify key players in the regulation of seed storage metabolism. Ultimately, the results of her research will be used to alter lipid and protein content in crop seeds via metabolic engineering for food and biofuel purposes.



Eva Collakova

Mizuho Nita joined PPWS as a grape pathologist at the Alson H. Smith Jr. AREC in January 2009. He received a Ph.D. in plant pathology from Ohio State University, then joined Pennsylvania State University, and later, Kansas State University as a postdoctoral scholar. His research focus is on epidemiological and applied studies of grape diseases, including disease forecasting and spatio-temporal analyses of grape leafroll-associated viruses. His Extension activities include developing fungicide spray guidelines, forecasting disease, field testing new fungicides, delivering educational presentations, and writing a grape disease blog (www.ppws.vt.edu/people/faculty/nita24/).



Mizuho Nita

Theses and Dissertations

Shanna Chriscoe, Raleigh, N.C. (M.S. '08), "Characterization of Transgenic Peanuts Expressing Oxalate Oxidase for Governmental Approval of Their Release for Control of Sclerotinia Blight."

Jeneylyne Colcol, Valencia City, Bukidnon, Philippines (M.S. '08), "Sensitivity of *Erysiphe necator* to Quinone Outside Inhibitors (Qol), Sterol Demethylation Inhibitors (DMI), Boscalid, and Quinoxifen, and of *Plasmopara viticola* to Qol Fungicides and Mefenoxam."

Virginia Sykes, Virginia Beach, Va. (M.S. '09), "Use of Digital Image Analysis to Identify *Rhizoctonia solani* and *Rhizoctonia zea* Resistance in *Schedonorus phoenix* Plant Introductions."

Peta-Gaye Suzette Chang, Aylsham, Kingston, Jamaica (Ph.D. '09), "Evaluation of NitroPure Nitrocellulose Membranes for Immunoassay and Coat

Protein Sequence Characterization for Cucumber mosaic virus and Three Potyviruses."

Troy Hoff, Lodi, Calif. (Ph.D. '08), "Dissection of Regulatory Networks Mediating Resistance and Susceptibility of *Arabidopsis thaliana* to the Downy Mildew Pathogen *Hyaloperonospora parastica*."

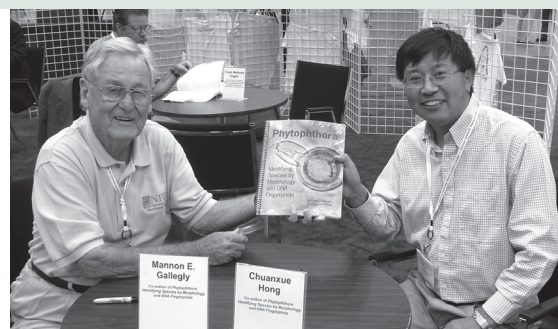
Tyler Mittlesteadt, Pulaski, Tenn. (M.S. '09), "Evaluation of Novel Techniques to Transition Over-Seeded Grasses on Bermudagrass Sports Turf."

Venkatesan Parkunan, New Delhi, India (Ph.D. '08), "Induced Disease Resistance Elicited by Acibenzolar-S-Methyl and Plant Growth-Promoting Rhizobacteria in Tobacco (*Nicotiana tabacum* L.)."

John Willis, Trenton, Tenn. (Ph.D. '08), "Impact of Sulfonylurea Herbicides on Seeded Bermudagrass Establishment and Cold Temperature Influence on Perennial Ryegrass Response to Foramsulfuron."

APS 2008 Best-Selling Book

Mannon E. Gallegly of West Virginia University and **Chuan Hong**, associate professor, PPWS, authored one of APS's 2008 best-selling books: *Phytophthora: Identifying Species by Morphology and DNA Fingerprints*. The genus *Phytophthora* is one of the most important groups of plant pathogens and a difficult group, taxonomically. When the last taxonomic key was published in 1990, there were only about 50 identified species; now that species number is approaching 100. This book integrates classical morphological methods with a DNA fingerprinting technique to allow speedy and confident identification of the many *Phytophthora* species.



Authors Mannon Gallegly (left) and Chuan Hong at the APS Press book-signing event at the 2008 APS Centennial Meeting in Minneapolis.

American Phytopathological Society Centennial Session

Nearly 1,900 people from 43 countries and 49 states gathered in Minneapolis on July 26-30, 2008, to commemorate the first 100 years of the American Phytopathological Society at its Centennial Celebration. Four centennial sessions addressed both the history and future of APS.

Plant pathology has come a long way in the century since APS was founded, and this was reflected in the centennial session "Plant Pathology in 1908/2008." This session included presentations on phytobacteriology and chestnut blight from 1908, followed by 2008 updates on these two topics to illustrate the progress of science in the last 100 years.

Speakers portraying scientists from 1908 presented in period costume using lantern slides. Several PPWS faculty and a former student contributed to this session, which was organized and moderated by Professor **Erik Stromberg**. Professor Emeritus **George Lacy** portrayed Erwin F. Smith and presented the 1908 paper "*Bacillus phytophthorus* Appel." **Jeff Jones**, former student and current professor in the Department of Plant Pathology, University of Florida, presented "Bacterial Systematics Has Changed From an Intuitive Process to a More Objective Approach." Professor Emeritus **Gary Griffin** presented "Recent Advances in Research and Management of Chestnut Blight on American Chestnut."



From left to right: Erik Stromberg; George Lacy portraying Erwin F. Smith, Bureau of Plant Industry, USDA; and Sandra Anagnostakis, Connecticut Agricultural Experiment Station, New Haven, Conn., portraying Flora Patterson, mycologist, Bureau of Plant Industry, USDA