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### **New Faculty Member Strengthens Honey Bee Research at Penn State**

UNIVERSITY PARK, Pa. – Discovering how honey bees and other social insects behave and interact with one another will be the focus of a new faculty member's research in the Department of Entomology in Penn State's College of Agricultural Sciences.

Dr. Christina Grozinger, currently an assistant professor in insect genomics at North Carolina State University, will be joining the department in December, bringing with her a wealth of expertise in the field of insect genomics. Genomics is an emerging science that allows researchers to study thousands of genes (their sequence, expression, function) simultaneously. Grozinger's research focuses on genomic analysis of chemical communication in honey bees and other social insect species. Chemical communication in honey bees is important for many aspects of colony organization and necessary for having healthy and productive colonies.

"I study the molecular and physiological basis of chemical communication, both in terms of production of the chemical signal and responsiveness of the receiving insect," Grozinger explains. "I'm also using functional genomics studies to identify and characterize the genes that regulate behavior, focusing on pheromone-mediated behavior and reproduction."

Grozinger's research is of particular importance as honey bee colonies continue to die the across the country from a syndrome called Colony Collapse Disorder. "Grozinger's honey bee research solidifies our department's commitment in taking a major role in finding a solution to the decline of the nation's honey bees and other pollinators, which are critical to the production of \$15 billion worth of crops in the United States," says department head Gary Felton. Grozinger will join several faculty and graduate students already researching Colony Collapse Disorder.

Grozinger was working on her Ph.D. in Chemistry and Chemical Biology at Harvard when she became interested in honey bees. "My brother started keeping honey bees as a hobby, and he would tell me fascinating stories about their behavior. It was really amazing and I started to read more about bees," says Grozinger. She decided to use her training in molecular biology in her post-doctoral research to focus on honey bees and study the mechanisms regulating their behavior.

Grozinger's work is paying off, as she was recently named a recipient of the National Science Foundation (NSF) Faculty Early Career Development Award. According to the NSF, the Career Development Award is the most prestigious award in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations. The five-year grant will allow Grozinger to expand her honey bee research to include other species such as bumble bees and paper wasps.

In addition to her research, Grozinger has taught classes related to insect genetics, genomics, neurobiology, behavior and molecular ecology and plans to continue teaching at Penn State. Grozinger says she's excited to be joining the College because of its strong commitment to chemical ecology. "There's so much opportunity for collaboration at Penn State with other researchers, I can't wait to get started," says Grozinger.

For more information on honey bee research at Penn State, visit <http://www.ento.psu.edu/HoneyBeeResearch.html>.

Established in 1963, Penn State's Department of Entomology provides undergraduate education, graduate student training and extension outreach education focusing on both domestic and international issues in insect science and pest management. Twenty-three faculty and more than thirty graduate students work on a variety of research topics providing insights into insect ecology, behavior and molecular biology as well as integrated pest management. The department is part of Penn State's College of Agricultural Sciences. For more information about solving insect problems, descriptions of research and education programs or admission to the graduate program, visit Web site at <http://www.ento.psu.edu/> or contact the department at (814) 865-1895.

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Editors Contact:  
Kristie Auman-Bauer  
PA IPM Program  
(814) 865-2839  
[kma147@psu.edu](mailto:kma147@psu.edu)