PostDoc Observer

Postdocs share their research expertise with the NC State community at the 2013 Postdoctoral Research Symposium

On June 5, 2013, more than 180 faculty, staff, administrators, postdocs, graduate students, and undergraduates gathered for the Postdoctoral Research Symposium in the Hunt Library Multipurpose Room to hear about some of the exciting postdoctoral research occurring on campus.

Co-sponsored by the Office of Postdoctoral Affairs and the NC State Postdoc Association, the Symposium showcased the research accomplishments of the postdocs in the form of an interactive poster session. It offered the postdocs an opportunity to network and share their expertise with the NC State research community. Nisha Cavanaugh, Director of the Office of Postdoctoral Affairs, explains, “Our postdocs make significant contributions to the research program of the University. They are independent researchers and often bring new, innovative ideas to the projects. These are the future leaders in research and the Symposium gives them the opportunity to show it.”

Only in its second year, the event began with a keynote presentation from Associate Professor of Biology and writer, Rob Dunn. From exploring the biogeographic distribution of various species of ants to understanding the microbes that live in our homes and how they affect our health, … Read more on “Postdocs share” on next page.

Submit your postdoc success stories to Dr. Nisha Cavanaugh, Director of the Office of Postdoctoral Affairs, at nacavana@ncsu.edu or to Dr. Emily Griffiths, Director of Communications (PDA), at ecgriffi@ncsu.edu.
**NC STATE UNIVERSITY**

**CALS Dean Postdoctoral Fellowship**

In 2012, the Dean of the College of Agriculture and Life Sciences launched a Postdoctoral Fellow for outstanding postdoctoral scholars from underrepresented groups. The fellowship was awarded to Dr. Terrence Gardner, who is the first African American postdoc in the College in over a decade. He completed his PhD at Alabama A&M and is now researching the oxidation of hazardous materials in the Department of Soil Science in Professor Owen Duckworth’s group.

**Taste tests with insects**

Household pests can be particularly difficult to get rid of if they avoid your poisoned food traps. Since the 1990s German cockroaches have been avoiding poisoned baits containing the sugar glucose. Working in the Department of Entomology, Dr. Ayako Wada-Latsumata, a postdoctoral scholar in Professor Coby Schal’s group, studied the sweet and bitter nerve cells around cockroaches’ mouths to show how the cockroaches have learned to adapt. Ayako found that cockroaches had rewired their nerves so that usually sweet-tasting glucose began to stimulate the alternative bitter nerve. Interpreting glucose as having a bitter taste caused the roaches to avoid glucose-laced poisons. The research was published in Science Magazine earlier this year (May 2013), and the authors believe the adaptation mechanism will apply to avoiding poisons in other insect pests like mosquitoes.

**Tornado or not tornado?**

Are tornadoes less common on weekends? Are they associated with levels of air pollution? If only it was that simple.

Research from Professor Sandra Yuter’s group, in the Marine, Earth, and Atmospheric Sciences department, shows that peak tornado activity occurs on no particular day of the week, and, similarly, aerosols have weak and varied cycles where the majority of tornadoes occur. Postdoctoral Research Scholar, Dr. Matthew Miller, and his colleagues recently published these findings in the Journal of Geophysical Research: Atmospheres, and received coverage in the scientific press including on phys.org (http://phys.org/news/2013-07-rest-tornado.html).

**Postdocs share cont.**

In his keynote speech, Associate Professor of Biology, Robert Dunn, challenged postdocs to pursue the surprises that may arise in research. (Photo courtesy of Roger Winstead.)

Dunn’s group incorporates field work and literature studies with engaging citizen-scientists. In his talk, he reflected on the twists and turns his research program has taken and the valuable contributions of his postdocs over the years. For more on Dunn, see website.

The poster session that followed Dunn’s seminar was comprised of 51 postdoc presenters primarily from NC State University and also included a few from Duke University and the University of North Carolina at Chapel Hill. More than 30 departments from 6 different colleges at NC State were represented in the poster session. The postdocs presented on a diverse range of research topics, including the design of thrombin-binding DNA aptamers to regulate blood clotting, the novel adaptation behavior of taste neurons in cockroaches, and a methodology for predicting hurricanes. Comments from one of the participants, Dr. Zeynep Yurtseven Avci, described the value of the symposium: “it helps postdocs to feel more connected with faculty, students, and the whole community at the university … it provides an opportunity for postdocs to share their research with each other and others at the university.”

To learn more about the Postdoctoral Research Symposium, visit go.ncsu.edu/postdocsymp.