

Purdue Students Advance Research Careers through Federal Homeland Security Scholarship Program

by Phillip Fiorini

Purdue University student Tyshia Gwin is looking to pursue a degree in biology, expanding her career options in areas of research that might someday assist the nation's homeland security efforts in combating terrorism.

The financial burden just got a little lighter for her career pursuits. The Franklin, IN sophomore is the first Purdue undergraduate to win a research scholarship through the U.S. Department of Homeland Security's Science, Technology, Engineering and Mathematics Career Development Program. "It's exciting and a great opportunity to be among the list of recipients this year," said Gwin, whose faculty adviser is biology professor David Sanders. "This will open the door for me to interact and learn with different types of people in different areas of research."

Gwin and four other Purdue students are winners of research scholarships and fellowships totaling \$300,000 through the federal program, now in its second year for developing interdisciplinary homeland security researchers with STEM backgrounds. The graduate student winners and their Purdue faculty advisers are:

- Rachel Suzanne Beard of Summerville, SC, who is studying virology under biology professor Erik Barton.
- Nwokedi Idika of Lanham, MD, computer science and advised by computer science professor Bharat Bhargava.
- Kyle Montgomery of Houston, electrical engineering and advised by distinguished electrical and computer engineering professor Jerry Woodall.
- Daniel Richardson of Springfield, Ohio, mechanical engineering and advised by mechanical engineering professor Robert Lucht.

Program co-administrator David Ebert, a Purdue professor of electrical and computer engineering, said the scholarships for the upcoming spring semester will help Purdue grow the homeland security academic field and place students in careers that are in demand today.

"We had terrific interest in this program, now in its second year," said Ebert, who also is director of Purdue's Regional Visualization and Analytics Center in Discovery Park. "With these five selections, including our first undergraduate winner, we have a team with impressive backgrounds and diverse interests in homeland security and research to support this expanding field of study."



Photo/ Timothy F. Collins

Tyshia Gwin, Rachel Suzanne Beard, Kyle Montgomery, Marti Burns, program manager for HS-STEM Career Development Program, Daniel Richardson, Nwokedi Idika, and David Ebert, professor of electrical and computer engineering, HS-STEM Career Development Program PI, and director of Purdue University Regional Visualization and Analytics Center

Recipients are eligible for \$27,600 a year, or a maximum of \$82,800 over three years. The students will attend several homeland security functions and submit semester summaries of their work and activities. They also will complete a year of service working in an approved homeland security-related position sanctioned by the Department of Homeland Security.

The federal scholarship program was launched in 2007 to encourage undergraduate and graduate students in science, technology, engineering and mathematics to pursue a career working or conducting research in homeland security. The university's program is led by Purdue's Regional Visualization and Analytics Center, a U.S. Department of Homeland Security Center of Excellence, and the Purdue Homeland Security Institute.

In the program's initial year, seven Purdue graduate students received scholarships as part of a \$500,000 federal grant. They are now participating in research projects in terrorism and infectious diseases, cyber threats, analysis of linked animal and human health data, explosive and radiation detection, border security, and cargo container detection. ♦