ABSTRACT

Rutgers University has developed a summer research fellowship program to promote pharmacology, toxicology, and environmental health sciences as careers in biomedical research. The program consists of a 10-week basic science and translational research experience for undergraduates and was also designed to include weekly events including laboratory safety and responsible conduct of research training, a field trip to a pharmaceutical company, career development and research seminars and student presentations. To assess the improvement of participants in key areas, students completed an adapted version of the Undergraduate Research Student Self-Assessment survey from the University of Colorado at the beginning and the end of the 10-week fellowship. The response rates for the pre- and post-program surveys were 100% and 71%, respectively. The survey captured changes in three key areas: Application of Knowledge to Research (data analysis, problem solving), Scientific Abilities (daily independent and group activities), and Research Abilities (laboratory and presentation activities). A 7-point scale was used by participants to assess their level of confidence on 27 competencies. Significant improvement was observed in 15 of 27 competencies (55%). The greatest advancements were made in the ability of students to identify experimental limitations (31%), to determine the next step in a research project (26%) and to understand the connections between scientific disciplines (25%). A summer research program engages undergraduate students in full-time research experiences and provides unique opportunities to promote pharmacology and environmental sciences as research areas for the next generation of scientists and enhances career development skills.

2013 SUMMER RESEARCH PROGRAM

Field Trip to Bristol-Myers Squibb

Discussions and tours with scientists were centered on General Toxicology, Operations, Veterinary Sciences, Histopathology, Clinical Pathology, Immunotoxicology, Reproductive Toxicology, and Genetic Toxicology.