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SCENE AT CCSU: Science department reaching out to community

By THOMAS R. KING

This fall, I am pleased to report that original research conducted by students - always a critical part of our undergraduate and graduate degree programs - has also become a key feature of the community outreach activities sponsored by the Department of Biomolecular Sciences. Our department's



CCSU undergraduate Richard Rydingsward guides Shaniqua King-Barrington of New Britain as she learns to analyze the proteins involved in cell migration.

educational outreach programs focus on precollege science enrichment.

Traditionally, these programs have taken a workshop approach, where a faculty member plans a series of hands-on experiences that are delivered, often with the assistance of students, to a classroom of 25 or so middle or high school students. Recently, however, new programs have been developed to offer real, basic-research opportunities to smaller numbers of high school "interns." For example, during the summer of 2007, six high school students worked full-time for six weeks in biomolecular sciences laboratories on novel, hands-on projects that aimed to characterize bacteria that secrete antibiotics or to determine the mutational basis of male sterility in mice. In the summer of 2008, ten high school interns worked on projects that aimed to map a gene that causes hair curling in mice, or to determine the pattern of gene expression in the gills of a salt-water muscle, or to test the effectiveness of bacterial viruses as a way to control *E. coli* contamination on bean sprouts. While these students worked under the supervision of biomolecular sciences faculty, they were

each guided through their respective project by an undergraduate mentor. These mentors have previous experience working in our laboratories (often for several semesters), and are well qualified to teach the techniques that they have mastered. Perhaps more importantly, they provide for the high school students a successful undergraduate role model.

This semester we are piloting a new academic-year internship program that will bring eight-to-10 high school students to campus for three hours once a week to participate in a mentored research project. For these projects (which will involve exploration of the molecules that allow cells to move or characterization of the genetic defect in a strain of mutant rats with patchy fur), high school interns were recruited from the Pathways/Senderos Center in downtown New Britain. The Center provides an

environment for inner-city youths where goal-development and skill-building are supported and nurtured. By bringing these students to campus and providing them with a college-age mentor and real research project, we hope to make a college degree and a career in science part of their future plans.

I expect that these participants - undergraduate mentors and precollege interns alike - will count their involvement in this project among the most meaningful and valuable educational experiences they will ever have. I even hope, for the high school interns especially, that this research experience will be no less than life-altering.

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