EDUCATION

Merck/AAAS Research Program Expands to Become National

In 1999, students at 15 liberal arts colleges had an opportunity to learn firsthand what it was like to conduct a research project in chemistry and biology. At Swarthmore College, Rodolphe Boulanger studied *Agrobacterium tumefaciens*, a soil-dwelling bacterium that causes crown gall in plants, and Andrew Alderete looked at the *uspA* gene, which is induced in response to virtually any stress or starvation conditions. And at Williams College, Katy Schorling researched hay-scented fern (*Dennstaedtia punctilobula*), a plant found in the forests of the Northeast that has a tendency to overtake other plants and dominate in sunny areas.

The students' research projects were part of the Merck/AAAS Undergraduate Science Research Program (USRP), which facilitates interdisciplinary research experiences for undergraduate students in chemistry and biology, and encourages students to pursue graduate education in those fields. To date, the program has been available in 12 northeastern and mid-Atlantic states, but it will be expanded in 2001 into a national competitive awards program available to colleges and universities throughout the United States. The Merck Company Foundation has approved funding for the program through 2009.

Up to 15 new awards will be made each year from 2001 through 2009. Each award will provide $20,000 per year for up to three years and is intended for joint use by the biology and chemistry departments at the college or university receiving the award.

"By taking the program to the national level, we hope to support more interdisciplinary research by students in chemistry and biology and encourage students to pursue graduate education and careers in these fields," said Shirley Malcom, director of Education and Human Resources at AAAS. "It's important that we build bridges between these two fields of science and encourage scientific advancement in those areas."

Maureen Knab, a professor of biology at Westchester University, has seen how building bridges between the two fields

have helped her students. "It's quite beneficial for them to get that research experience, especially when you tie the two disciplines together," Knab said. "It ends up being a good model, especially since that's how things work in industry, with the two fields tied together."

Knab said that of the 18 students at Westchester who have participated in the Merck/AAAS program, six have gone on to graduate studies and nine have pursued careers in industry (three have not yet graduated). Some students, for example, entered graduate studies in molecular biology while others began working in clinical trials.

Program Goals

Specifically, the program is designed to encourage graduate education in the sciences by providing undergraduate research experiences that forge interdisciplinary relationships between biology and chemistry. In addition to directly supporting student research, a portion of the annual award may be used to support related academic programs such as lectures and symposia.

The program was launched in 1993 to promote undergraduate research at the interface of chemistry and biology. It was developed to educate students in small liberal arts colleges about modern biomedical research, and to inspire students to think about careers in drug discovery. The program emphasizes that students can derive great benefit from working across research boundaries and that chemistry and biology departments can often have great impact on one another.

Public and private colleges and universities must meet certain criteria to compete. They must be located in the United States, offer an American Chemical Society-approved program in chemistry and confer 10 or fewer graduate degrees annually in biology and chemistry combined.

Applications for the Merck/AAAS awards are reviewed and rated by a panel of scientists and educators chosen by AAAS. The panel recommends award selections to The Merck Company Foundation.

Application Deadline

The application deadline for the 2001–2003 awards is 10 November 2000. Winners of the 2001 awards will be announced by Merck and AAAS in February 2001 coincident with the AAAS Annual Meeting. Winners of the 2000–2002 awards include: Smith College; The University of the Sciences in Philadelphia; Amherst College; Purchase College, State University of New York; Hamilton College; Colgate University; Lycoming College; Merrimack College; The University of Richmond; Fairfield University; Manhattan College; Indiana University of Pennsylvania; Salisbury State University; Hofstra University; and Muhlenberg College.

The program affirms the value of undergraduate research experiences in the life sciences, according to Bennett Shapiro, executive vice president, Worldwide Licensing and External Research, Merck Research Laboratories. "The chance to do research as an undergraduate can be the single most defining event in a scientist's life, introducing the nascent scientist to the thrill of discovery," Shapiro said.

CORRECTION

There has been a change in the slate of candidates for the Section on Psychology ("AAAS Annual Election: Slate of Candidates," 30 June, p. 2384). The Electorate Nominating Committee slate that will be presented to the Section members in September follows: C. Sue Carter-Porges, Univ. of Maryland; Morton Ann Gernsbacher, Univ. of Wisconsin; Milton D. Hakel, Bowling Green State Univ.; Molly V. Wagster, National Institute on Aging.