

Connecting Research Institutions with Local Communities

HHMI INITIATIVE SUPPORTS OUTREACH PROGRAMS TO ADVANCE PUBLIC UNDERSTANDING OF SCIENCE.

TO BRIDGE RESEARCH INSTITUTIONS WITH their local communities and to spark the public's interest in science, particularly among young students, HHMI has awarded \$22.5 million for educational programs at 31 institutions around the country. The grants are going to medical schools, hospitals, research institutions, a school of dentistry, and a school of veterinary medicine. Ranging from \$529,308 to \$750,000 to be distributed over a five-year period, the grants will support new outreach programs or ongoing activities with a demonstrated record of success in broadening access to science across diverse populations.

"Many of these institutions are reaching out to traditionally underserved populations," says Jill Conley, director of HHMI's precollege science education program. "They are also engaging girls in science at a particularly critical time in their educational development."

A number of the grantees aim to improve science education by enhancing teachers' knowledge of scientific concepts and how science is done. Their programs will help teachers develop hands-on, inquiry-based activities for the classroom. Other projects will target students directly, teaching them how to think like scientists. And some will strengthen parents' and other community members' understanding of scientific concepts, thereby enriching the network available for fostering children's interest in science. ■

HIGHLIGHTS OF SELECTED PROGRAMS

- ➔ **Virginia Commonwealth University** in Richmond, Virginia, will use its \$750,000 grant to educate K-12 science teachers about systems biology, an approach in which a cell or organism is studied as a whole. Workshops will bring together science teachers with systems biology graduate students and postdoctoral fellows. This training will help teachers create activities that encourage students to design and conduct their own scientific inquiries. The school also plans to create downloadable videos, teacher lesson plans, and activities.
- ➔ **Baylor College of Medicine** in Houston, Texas, will use its \$749,627 grant to bolster its SELF (Science Education Leadership Fellows) program, in which experienced science teachers—many from schools in economically disadvantaged areas—pair up with Baylor postdoctoral researchers and graduate students to form science education improvement teams. The teachers and scientists learn from one another by trading places: teachers work in a lab for three weeks and scientists briefly teach in a classroom. SELF teachers make the knowledge they've gained available to all Houston teachers via online virtual workshops, and dozens of program alumni are now leading teacher professional development across the nation. The program has demonstrated remarkable success. For example, one SELF school saw its students' success on the science portion of the Texas Assessment of Knowledge and Skills rise from 28 percent to 82 percent after participating in the program for just one year.
- ➔ **Purdue University School of Veterinary Medicine** in Lafayette, Indiana, will use its \$749,755 grant to create computer-based "field" trips to give middle school students in rural Indiana schools with limited resources the opportunity to learn about the laboratory environment. Purdue is targeting students in grades 6 through 8 because middle school is considered an especially crucial time to nurture children's interest in science. Students will be able to view online animations, live demonstrations, and experiments as well as interact with working scientists.
- ➔ **The Queen's Medical Center** in Honolulu, Hawaii, will use its \$747,644 grant to create a series of health science evening programs aimed at improving health literacy and increasing the enrollment of Native Hawaiian and Pacific Islander students in the biomedical sciences. Scientists at the center suspect that parents working more than one job in addition to struggling against a language barrier may need help supporting their children in school. The programs will bring students, their families, and their teachers together with biomedical professionals with diverse ethnic and cultural backgrounds. A typical evening might include hands-on research activities and discussions of biomedical careers and resources available to help students prepare for such careers. To increase family involvement, onsite child care will be provided and transportation costs reimbursed.