Ripple Effect

the small New Jersey town where I grew up, outside Philadelphia, was wonderful, but its schools were lacking. Academically speaking, they were behind the curve. Two fantastic teachers are the reason I began demonstrating ability in math and science in junior high and high school. My math teacher, Mr. Adams, and my chemistry teacher, Mr. Curry, saw my potential.

After I completed his classes, Mr. Adams, recognizing that I could handle more, sent me to the Franklin Institute in Philly for after-school instruction in advanced math. And in science, I studied molecular biology and paired up with another student to carry out a research project, looking at chromosome aberrations—something I would not have attempted without encouragement from Mr. Curry. These two teachers really pushed me, and for that I am grateful.

My tale is not unusual. Most scientists can name one or two standout teachers who were early influences. But in the United States today, there’s a shortage of good science and math teachers in classrooms. We must take steps toward change to replenish this country’s star teachers, teachers who can move students to explore and love math and science. That’s why it’s especially exciting to me that HHMI is awarding a $22.5 million, 5-year grant to the National Math and Science Initiative to expand UTeach, an established training program aimed at preparing science and math majors to become teachers.

Started at the University of Texas, Austin (UT), in 1997, UTeach is now in place at 34 universities. Its record of success—80 percent of students who came out of UT’s program are still teaching after five years, for example—speaks to its effectiveness. The HHMI grant will extend UTeach’s reach to 10 additional major research universities. Those universities are expected to produce more than 1,700 math and science teachers during the next decade, increasing the number of UTeach graduates in U.S. classrooms to more than 14,000 by 2022.

Lending support to a model that’s working, rather than trying to reinvent the wheel, just makes sense, and it’s something we are eager to do. Such efforts complement the Institute’s other long-standing initiatives in science education, including the Exceptional Research Opportunities Program, or EXROP, whose 10th anniversary is highlighted in the cover story of this issue of the HHMI Bulletin. Created to attract outstanding students from underrepresented minorities to the sciences, the program provides mentored summer research experiences in the labs of HHMI investigators. Being immersed in a top-notch research lab can give students the confidence to see themselves as scientists and the skills to get there.

I’ve hosted a number of EXROP students in my University of California, Berkeley, lab, and I can attest that it’s an extremely rewarding experience for all involved. Nothing pleases me more than to see a student from California’s Central Valley farmlands be the first in her family not only to attend college but to pursue a graduate degree in the sciences.

This summer, a group of 77 EXROP students will be conducting research in HHMI labs across the country. We believe these students will go on to inspire others, as exemplified by Kelley Harris-Johnson, one of EXROP’s first graduates whom you’ll meet in our Bulletin feature article. Much more needs to be done, without a doubt, so we do not miss out on the raw talent we know exists among this country’s underrepresented minorities. But we hope that our small efforts, just as Mr. Adams and Mr. Curry realized back when I was in school, will ripple, like raindrops on water, to carry far and wide.