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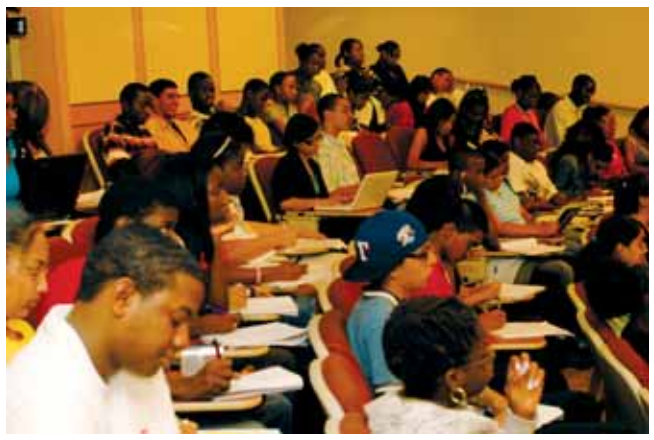
From the Streets to the Science Lab



Students chosen for Harlem Children Society internships attend lectures and workshops presented by top scientists, some of whom are Nobel laureates.

Dr. Satyajit Bhattacharya knows some potential Einsteins and Marie Curies exist among the world's underprivileged children, but their poverty inhibits their chances for becoming scientists. This molecular geneticist and cancer research scientist also has an abiding spiritual belief: The purpose of souls is to assist each other.

Putting his belief into action, Bhattacharya reached out to these students—some of whom were literally living on the streets of New York City—while working with Memorial Sloan-Kettering Cancer Center. He founded the Harlem Children Society (HCS), a nonprofit science education program that places these students in paid internships in the laboratories of top research scientists around the world.

Bhattacharya—known as Dr. Sat—says without the aid of organizations like HCS, underserved students entering college have a dropout rate of 50% or higher. "Their financial circumstances at home make them less inclined to finish school," he explains. And though they may think they're "the cream of the crop" in high school, "at the university, they're just one of the crowd, and they feel they don't fit in."

How HCS Began

In 2000, Dr. Sat contacted principals of high schools with underserved students and asked if some of their bright students could work in his lab. HCS' summer internships began with three students from two schools, one in Harlem and one in New Jersey. Interns studied DNA and molecular genetics, isolated cancer cells, and learned about new ways of treating cancer.

At summer's end, Dr. Sat arranged for students to present their research papers at a meeting of Sigma Xi, The Scientific Research Society. Dr. Sat serves as president of the society's Rockefeller University chapter.

By 2004, HCS had expanded to 50 students in 25 schools. This year, it has "close to 700 students"—nearly 250 in New York, 50 across the country, and about 400 around the world, says Dr. Sat. Annual webcasts connect the three groups in "a world community" of science.

The program has produced future scientists. "I became intrigued by the idea that my work could contribute to the scientific community, and that other people could use my work to develop their own theses," says Paolo Lizano, a former participant now studying at the University of Medicine and Dentistry of New Jersey.

How HCS Works

HCS accepts students in grades 8–12 and some undergraduates. To qualify, students' families must earn incomes below their country's poverty line. While principals and teachers nominate students, Dr. Sat reviews the nominations and personally interviews each student. This year, he interviewed about 1,500 nominees.

In the United States, the HCS population is "40 to 45% African American, 25% Hispanic, and 10 to 15% Native American," he notes, while "the rest are immigrants." About 58% are female.

Internships span a range of science fields: biomedicine, space science, robotics, environmental science, and social science. HCS helps students "gain a wider knowledge of what fields there are," says Dr. Sat. "It creates dreams in their minds."

And he makes their dreams a reality. Last year, he flew 50 students to Orlando to present research papers to scientists attending Sigma Xi's annual convention. This year, he plans to send about 100 students to Washington, D.C., to present their work. He also has arranged for students to conduct space science research at a NASA center. The program's success has brought him invitations to implement HCS worldwide.

During summer internships, the New York City-area students attend weekly meetings Dr. Sat holds at Cornell Medical Center. These meetings include lectures, student presentations, and talks by guest experts, some of whom are Nobel laureates. HCS also offers after-school internships, enabling students to continue their work during the academic year. Some earn university credit for their efforts.

The students also earn stipends of $800 to $1,700 for the eight- to 10-week internships. HCS interns receive more money than they would at "menial jobs," which are often the only options for underrepresented students, says Dr. Sat. To provide the stipends and fund other aspects of the program, HCS has obtained a three-year grant of nearly $1 million from the National Science Foundation "for encouraging hands-on research in information technology and bioinformatics," says Dr. Sat. Support also comes from New York Community Trust; foundations such as Charles Hayden, J.E. & Z.B. Butler, Pinkerton, Helena Rubinstein, American Honda, Altman, The Hyde & Watson, Achilles Bodman, Boehringer Ingelheim; and Dr. Sat's personal donations.

Taking Science to the Streets

Each September, HCS holds science street fairs and festivals in Harlem so students can share their work with their families and the local community. Students participate in on-street science competitions judged by Dr. Sat's colleagues.

HCS also holds a "science boat cruise" around New York City to reward students for their summer labors. Dr. Sat organizes these events because he believes scientists have a responsibility to their community to "take complex ideas out of the lab and into the field."

An Enduring Love of the Field

Most HCS interns continue studying science in college, claims Dr. Sat. He estimates about 80% pursue science careers.

Consult *www.harlemchildrensociety.org* to learn more. ●