

# The Science of Dr. Sat

September 28, 2010 by [Daniel Bergner](#)

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When Dr. Sat Bhattacharya walked into a Harlem high school several years ago to interview candidates for his summer science program, the principal apologized to him. One of the students Bhattacharya was due to meet had been shot and killed that morning.

It was a stark lesson in the realities of his students' lives, Bhattacharya recalls as we talk on the elegantly groomed campus of

Rockefeller University, 40 blocks south of Harlem. At 41, with curly dark hair

and delicate animated hands, Bhattacharya is a cancer research specialist at Rockefeller, one of the most prestigious research institutions in the world. A decade ago, he founded an organization, the [Harlem Children Society](#), that every summer places as many as a few hundred New York City-area high-schoolers in the labs of elite scientists and teaches them the rigors and pleasures of rarified research. Just this morning, in Rockefeller's perfectly appointed auditorium, his teenaged scientists -- almost all of them poor enough to qualify for free lunch at their schools -- have delivered lectures on the roles of nature and nurture in the structure of songbird vocalizations, on prime number theory and on the use of bioinformatics -- a field combining molecular biology and computer science -- in understanding the metabolisms of autistic children.

When this all began in 2000, Dr. Sat -- as the students call him -- was working at New York's revered Memorial Sloan-Kettering Cancer Center, seeking methods for the early detection of tumor cells. Nothing in his past pointed to a future of philanthropic outreach. The son of a military doctor, he grew up within a family of privilege in India. "I never had to do anything in my life," he says. "I just made a wish and it came true."

He doesn't recall any altruistic tradition in his family's history. But he was disturbed by the racial imbalance in Sloan-Kettering's hallowed labs; according to the National Science Foundation, blacks and Hispanics make up fewer than six percent of U.S. doctoral candidates in the sciences. One day he simply opened a phone book and called a public high school in

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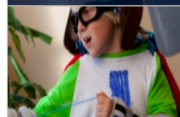


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Harlem, with the idea that he could mentor a student or two.

"This diminutive fellow came into my office," Gregory Hodge, who is still the principal of that first high school -- the Frederick Douglass Academy -- remembers. "He told me all about his scientific and academic credentials, and I looked at him and thought, 'What does all that have to do with the inner city and these kids?'" But Dr. Sat won him over -- "he's exuberant, colorful, exciting" -- and that summer one promising Frederick Douglass student, along with two from a beleaguered high school in New Jersey, joined Dr. Sat in his lab. Today, two of those three are physicians and the third is a nurse practitioner. In the years since, Dr. Sat's program has helped Frederick Douglass seniors go on to such colleges as Harvard, Dartmouth and the Massachusetts Institute of Technology.

From those three initial teens -- from "a small whim of mine, nothing major," Dr. Sat says -- the program took off without much planning. He invited colleagues to speak with the three, and the colleagues soon asked about mentoring students of their own. The numbers grew, year by year; the Society's reach radiated outward. The organization now stages an annual science fair on the streets of Harlem, where students display their findings on poster boards and deliver presentations to the passersby. And it has

extended its mission of democratizing science to a Hopi reservation in Arizona and a mushroom farm in Tanzania, where the Society has aided or created programs to steer young Native Americans and Africans toward medical and agricultural investigation.

"There was no eureka moment," Dr. Sat says, meaning no instance when he realized that his organization had largely displaced his own research and become the core of his life. "But this is my passion now."

Listening in Rockefeller's auditorium to the presentation about bioinformatics and autism, it's hard not to feel infused by the program's energy. The talk is given by Laura Rivera, a 16 year-old from the South Bronx, the daughter of a disabled Dominican mother and a Puerto Rican father who died when she was 11. Her interest in scientific research dates back to elementary school, she says. "During recess, I was the kid alone in the corner playing with the ants, letting them crawl on me to see what they would do." Now, because she's found her way to Dr. Sat, or because he's found his way to her, Rivera stands behind a podium describing a faint genetic pattern she'd come across in her mentor's lab that could, she asserts, be linked to the causes of autism. The slim likelihood that the pattern would prove meaningful is, for the moment, irrelevant. Wearing a



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cardigan and a white collared shirt, she declares to her audience of fellow students, "These genes are related, which is awesome!"

The exuberance that permeates the program, and the improvisational way it has bloomed, can sometimes make for chaos. Not every presentation is anywhere near as coherent as Rivera's, and sometimes Dr. Sat, who insists on interviewing every one of his New York candidates himself, can seem scattered, as though he's been driven a little mad by his educational experiment. And some problems run deeper. Nascent scientists have been hard to find among African-Americans, especially among boys. It's been much easier to locate budding researchers among the children of immigrants from Ghana and Haiti and Guyana. But Dr. Sat is driven to solve this problem, and events like the street fair may help.

In addition to genetic markers, Rivera's speech touches on her volunteer work with autistic children, which is what first led to her choosing to do research on autism. Near the podium hangs a banner with the program's motto, a bit of instruction from India's ancient Jain religion, words beloved to Dr. Sat: "The purpose of souls is to help each other." At the center where Rivera volunteers, she says afterward, there is a boy who recently bit her. Tearing up, she talks about her connection with him -- and about the fact that he cannot speak. "If there's a way through bioinformatics to help him talk, that would be amazing."

*Daniel Bergner is a contributing writer for The New York Times Magazine. He is the author of In the Land of Magic Soldiers: A Story of White and Black in West Africa.*