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## One-man army promoting science among poor kids

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Charity begins at home. No one understands it better than Dr Sat Bhattacharya, a cancer research scientist, Molecular Cancer Genetics at Memorial Sloan Kettering Cancer Center, New York. Many Indians donate to charities in India or write checks or build schools and colleges, but Dr. Bhattacharya serves the local backward community that he had adopted as his homeland.

He has spent his hard earned money to reignite hope in over 1,500 economically backward and minority children. The 'Harlem Children Society' (HCS) he founded has helped them perform one-on-one hands-on science research in myriad of fields in science, technology, math & engineering (STEM) with accomplished mentors in leading universities, hospitals, research centers like Cornell, Columbia, Memorial Sloan Kettering, NASA to name a few.

Dr Bhattacharya, a native of West Bengal, was born in Allahabad, Uttar Pradesh, lived and had his education extensively all over India from Punjab to Andhra Pradesh, from Gujarat to Arunachal Pradesh. He has since settled in New York for over two decades, and evolved a unique scientific hands-on research based program that creates opportunities for under-served and under-resourced students.

The internship program provides a much needed entry point into disciplines at a time when innovation and research are targeted as solutions to improving and transforming our economy at the highest levels of leadership.

The program helps students to get into



**Dr. Sat Bhattacharya, the pioneer in educating the poor and the downtrodden**

top universities and Ivy Leagues such as Cornell, Columbia, Stanford, MIT, Dartmouth, Penn State and others. It also helps get credit for their graduate studies and prepares them for graduate studies in science disciplines even when they are in high school. This is thanks to the mentors and labs they work part time after school hours and full-time in summer and spring breaks.

"At a time when people are losing interest in science, engineering, and technology careers, the HCS hopes to revitalize these fields with some of our most gifted youth from such under-privileged communities,"

Dr Bhattacharya said. "The craze for business education has dwindled with the crash of Wall Street and America needs more scientists and researchers to maintain the pre-eminence in the arena of innovation."

It's an open-ended program and it prevents school dropout rates very much. The students get scholarship ranging from \$1500 to \$2000 per month during the program as in the absence of scholarship they are forced to get jobs in McDonalds or Starbucks by their parents."

The program started in Harlem, New York, 12 years ago by Dr. Bhattacharya is now being replicated and implemented all across the US in cities such as Detroit, New Orleans, Washington, Arizona, and several Native American Reservations across the USA, and has extended beyond the shores and gone to 12 countries such as Canada, Mexico, Honduras, Kenya, Tanzania, Ethiopia, Ghana, Algeria, Egypt, Moldova, Ukraine, India and Nepal.

Dr Bhattacharya has been praised by several Nobel laureates, senators, Congressmen and federal government education officials for opening such programs to Native American habitats and reservations where the students are taught basic skills for a comfortable living. Many Native American youth come out of the reservations and wallow in poverty unable to find suitable jobs.

The Harlem Children Society internship program founded by him serves approximately 250 students from over 75 schools in New York alone. The internship program is a global concept and has served approximately 96 percent of students from minority backgrounds, and over 60 percent girls.

The program consists of hands-on experience in research labs and scientific centers for four to five days in a week, attending

lectures by Nobel laureates and scientists, presentation of research papers to develop aptitude in conducting independent research and higher learning. The students are chosen from very poor background living on welfare often struggling to complete the high school education.

Parents, school principals and science teachers and administrators, mentors - scientists, engineers and doctors from leading institutions are giving the necessary support to help achieve his dream of developing scientific pursuit among children. The students are also taught financial management and basic skills such as communication, public relations and resume writing.

The HCS 2012 Induction Ceremony held last week witnessed over 250 under-resourced & under-served students - 96 percent of minority backgrounds of which 40 percent are African Americans, 26 percent Hispanic, and 9 percent Native American; and also 60 percent young women from over 75 schools from all New York boroughs - Manhattan, Bronx, Brooklyn, Queens, Staten Island and Long Island gathered in New York and at sister sites across the country and globally.

An overwhelming proportion - 90 percent - of students come from families receiving public assistance and a high proportion of students in the New York program also happened to be first generation. Over 250 students from over 75 schools were initiated in the program that will perform research with over 1500 mentors - all seasoned scientists, engineers and doctors in over 150 institutions throughout the summer and year-around after-school program.

Now in its 12th year, since Dr. Sat Bhattacharya founded the program in his laboratory at Memorial Sloan Kettering Cancer Center with just three students from two high schools - who are now doctors - MD and MD/PhDs - doing research in his laboratory, the highly regarded national and globally recognized program, at the height of the program, it has expanded involving over 1,500 active mentors (from a resource of over 15,000 scientists, engineers and doctors), 1000 partner institutions, and over 800 students from 300 schools worldwide.

He had so far spent \$1.5 million, mostly from his income, grants and some donations from friends. But now due to the economic meltdown, the income for the program has dropped to \$400,000 affecting the future of the program. "Students will not take any interest if there is no stipend and go back working menial jobs like working as laborers and odd jobs to support their families, therefore losing another generation of bright young scientists, engineers and doctors."

In India, the program is being implemented in Bhuj, Gujarat, slums of Kolkata and the suburbs of Chennai. He has launched 'Association of Science and Society' in Kolkata, West Bengal, to bring back scientific knowledge and inquest to the forefront, along with working with the Punjab Government, to develop such a program. Punjab Chief Minister Prakash Singh Badal was so impressed with the work of Dr. Bhattacharya, when he visited his programs in New York, learning first-hand his success, that he invited him as a state guest to implement his program in his state. "I am also working on science tourism where Nobel laureates, scientists, academicians from the US will go on a lecture tour of Indian two tier cities and villages to rev up the scientific spirit," said Dr Bhattacharya.

