



**Davidson Fellow
Sheela Krishnan**

(\$25,000 Scholarship Recipient)



Personal Info

Sheela Krishnan
Age: 17
Suffern, New York

School, College and Career Plans

Sheela is a recent graduate of Suffern High School and will be attending Brown University as a member of the eight-year Liberal Medical Education program. She hopes to major in both anthropology and biology and then go on to become a doctor.

Davidson Fellows Submission (*Science*)

In her project, "Isolation and Characterization of a Potential Probiotic Cocktail for the Control of American Foulbrood in Domestic Honeybees," Sheela analyzed *Paenibacillus larvae*, the bacterium that causes American Foulbrood Disease (AFB), a fatal disease that attacks honeybee larvae. Sheela used the antimicrobial properties from the bees' honeystomachs to create a safe, non-invasive and inexpensive preventative measure to protect honeybees *in vivo* from AFB. Because honeybees are critical to the pollination of flowering plants, including agricultural crops valued at billions of dollars per year, their continued survival is essential to ecosystems and economies worldwide.

Biography

Sheela has been captivated by science throughout her education especially the intricacies of the natural world. Her passion for science led her to Cornell University to work in the Food Science department to study the antibacterial properties of honey. From the study of honey, Sheela's research evolved into studying the bacterial flora in the honeystomachs of the bees and testing the bacteria against pathogens, including American Foulbrood Disease (AFB).

Sheela also enjoys studying history, and feels it has taught her the significance of analytical objectivity, the importance of social interactions and the ability of relatively small events to have far-reaching implications. Sheela's culture has also taught her an appreciation for foreign languages and the importance of being able to communicate with people on a higher level.

Sheela has always felt profoundly influenced by books, especially those that inspire her to attain new heights. Public speaking is also a favorite pastime, Sheela has consistently placed in the top three in the Original Oration category for her school's forensic league team since the ninth grade. Sheela enjoys studying music, specifically Carnatic (South Indian classical music) and western classical violin.

Please see next page.

The Davidson Institute for Talent Development

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(Cont.)

Honors/Awards

- 2006 Davidson Fellow
- 2006 Daughters of the American Revolution Scholarship for Excellence in Academics in New York State
- 2006 Intel Science Talent Search Finalist
- 2006 National Merit Scholarship
- 2005 New York State Science and Engineering Fair, 3rd Place in the Medical Category
- 2004 REACH Scholarship Winner
- 2003 Eleanor Roosevelt Girls' Leadership Workshop at Val-Kill Workshop

Community Activities

Sheela is the founder of her school's Model United Nations club and is a leader in both the United Students' Organization and the History Honor Society. Sheela has been volunteering for the Association for the Visually Impaired and the Good Samaritan Hospital for four years. Sheela is also the Concertmistress of her school's orchestra and chamber orchestra as well as a performer in the String Quartet and she plays varsity tennis.

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