Jamie Rubin

Intel Science Talent Search Winner 2003

When Jamie Rubin addressed the 1,500 health professionals attending the 2003 National HIV/AIDS Update Conference in Miami, Florida, she was the youngest person in the room. At 16, she was completing her final year of high school and preparing to start at Harvard University in the fall. Just a few weeks before the conference she'd been named the top winner at the Intel Science Talent Search for her work on a unique treatment for a deadly infectious disease. The fungal infection she studied, *Candida albicans*, is particularly virulent in people with compromised immune systems, such as those with cancer, HIV and AIDS.

Rubin's speech highlighted the magnitude of the problem; more than 90 percent of the 42 million people living with HIV will have at least one Candida infection, and it can easily become life-threatening. At the same time, the Candida fungus is developing resistance to existing treatments. Rubin's research isolated protein molecules that effectively target the infection.

While most of her time and effort were spent in a biochemistry lab at the University of Florida, Rubin's volunteer work at the Hope Hospice near her home in Fort Meyers, Florida is what gave her insight into her work. "My initial interest in this project was limited to a detached sense of scientific curiosity," she said in her speech. "I did not truly understand the magnitude of my work until I realized the importance of the people whom my work would affect. My experiences at Hope Hospice now provide the true motivation and inspiration for my scientific research." Her next step is to publish the research so that other labs can apply it to further treatment.

During the week of final judging for the Intel STS, Rubin was pleasantly surprised by the camaraderie among the finalists. "The atmosphere is not overly competitive...Everyone is very encouraging of each other." She was delighted to be spending time with people as passionate about research as she is. She advises future finalists to "learn to relax and appreciate the opportunity to form lasting friendships with incredibly intelligent people."

At school, Rubin studies chemistry, math and physics, plays percussion in the Harvard Wind Ensemble and is a member of the competitive ballroom dance team. She also does community service work with children suffering from cerebral palsy. This summer she'll do more research, possibly in crystallography at the St. Jude's Medical Center. She's leaning toward a major in chemistry or chemical engineering and hopes to direct a research lab herself one day. As for the notion that researchers are isolated and scientists are not sociable, she says, "Science is making so many advances so quickly, we need to communicate these new ideas effectively, and I love talking about science."