

A Passion for Science

by Tom Keane



This passion I have for science began when I was a young boy growing up in the Bronx. The windows of our fifth floor walk-up faced a churchyard, a majestic oak tree and Ewen Hill Park.

Gazing from my living room window, my father would point to what seemed like a speck of starlight moving across a velvet sky. "Know what that is?" he asked. "That's a satellite!" My mind raced to imagine a tiny spaceship in Earth's orbit. My mother cultivated my appreciation for the beautiful and sublime, and both would foster a love for music, but the ol' man definitely got me hooked on science.

With college came the decision to major in a discipline while being enamored with seemingly disparate fields like biology and astronomy. The Viking missions to Mars sealed my enthusiasm and my decision to pursue a career in science crystallized as I stood at the same window that had been my boyhood observatory.

My college adventure focused on studies in biology and chemistry. In graduate school at Rensselaer, I found professors who not only understood science, but were able to explain it. As a NASA Fellow with professor Jim Ferris, I simulated the atmospheric photochemistry on Jupiter. One of my most memorable experiences was when Carl Sagan served as a "peer" reviewer for an article we published on the Galileo probe to Jupiter.

A brilliant theoretical physical chemist, Professor Henry Hollinger, would become my very good friend. Thanks to Jim and Henry, I witnessed the joy felt by those whose privilege it is to uncover a glimpse of how the universe works. I began to appreciate science as part of the gorgeous tapestry of human knowledge.

Here at Sage, the support of faculty, administrators and alums has allowed me to initiate research in astrobiology. A 37-meter radio telescope located at the MIT-Haystack Observatory is remotely controlled from a PC in my lab in Troy. Two previously undetected regions of star formation within the galaxy have been co-discovered with colleagues Dr. Preethi Pratap of MIT and Sarah Sterling, RSC '05. Another project with ties to NASA's Jet Propulsion Laboratory involves laboratory experiments designed to unlock the secrets of the reddish-brown haze enveloping Titan, the largest moon of Saturn.

The interdisciplinary nature of this research provides a perfect blend of laboratory experimentation, theoretical analysis and astronomical observation. Professional interactions consist of an eclectic mix of chemists, biologists, astronomers and geologists, all focused on the origin of life.

My experience represents a passion for an understanding of the universe that began when was a boy staring at the heavens from an apartment window in the Bronx, and the fulfillment of a dream. As a professor, it is an honor to share my excitement and the wonder of discovery with my

students. I strive to emulate all those whose shoulders I stand on, while encouraging my students to find their passion, whatever it may be, and to follow it through.