NATURALLY OBSESSED: THE MAKING OF A SCIENTIST
Students and Scientists Dialogue - Brookhaven National Lab

Brookhaven National Laboratories, Brookhaven, New York
Date: October 10, 2009
Program: A regular Friday lunchtime seminar, arranged by Lisa Miller, a staff scientist
Discussion moderated Richard Rifkind and Carole Rifkind
Attendees: About 70 – 25% college and graduate students, plus department heads; staff and visiting scientists, technicians and administrators. Mona Rowe, head of Public Affairs, Kendra Snyder, staff writer

How the film portrays science
"This is an incredible portrayal of my world, my community, I want to take it home and show it to my family so they can understand what it's like"
'Everyone here cares passionately about their work it's gratifying when someone else cares about it enough to make a movie about it"
"Science is a fringe profession, you've brought it to center stage"
"It shows the real life of graduate students, the ups, the downs, the ups - if you're lucky and stay at it long enough."
"It shows that science isn't just memorizing, it's the principle, the process, the personalities, not the fact."
"The boss doesn't tell you what to do, and if you are the kind of person who waits for the boss to tell you what to do, you're probably not going to make it. You see it in graduate students, usually those who fail can't make the big transition to independence."
"I think the film is for graduate students, who are depressed by the pressures of grad school and overwhelmed by how the toughness of it, but who can be encouraged when they see that 'it's not just about me', other students are struggling in the same way. I was almost in tears the whole time. (This quote from a student who returned to grad school after a serious depression)

Brookhaven National Laboratories, Brookhaven, New York
Date: December 10, 2008
Program: public outreach officer Kendra Snyder and BNL staff scientist Lisa Miller
Discussion moderated by Richard Rifkind and Carole Rifkind
Attendees: about 200 - BNL staff and three high school classes

A second invited screening of *Naturally Obsessed* at Brookhaven National Laboratories drew Brookhaven scientists who had previously seen the film and this time brought their families to see it too. The visitors also included local high school science classes whose teachers had spotted the opportunity for their students to put themselves in the shoes of working scientists.

“I wanted to show my students what it’s like to be in science and this film showed three different directions you could go,” explained Donna Edgar, a teacher at Bay Port Blue Point High School. She saw the opportunity to show students the road that will lead them to the science they enjoy.

The discussion following the screening of the film was led by the directors, Richard Rifkind and Carole Rifkind. Posing a series of questions to the audience, they succeeded in creating an open dialogue between high school students and senior scientists that sparked insightful criticisms of the way science is taught in high school classrooms.

“I think half the reason why there’s a lack of people signing up for the sciences is because in high school you’re not exposed to this sense of exploration,” offered one high school student. “High school science is about memorizing facts and following instructions. You don’t get that sense of freedom to explore that you get from working in a lab.”

Alex, another student that Donna Edgars brought, explained, “I think people are turned off from science because they don’t see the creativity in it, and that’s what intrigues me the most about science: -- the freedom and creativity to explore.”

Another student chimed in with: “I knew from my classes in high school that I liked science, but it wasn’t until I volunteered in an actual lab that I actually knew I wanted to be a scientist.”

Senior scientists offered encouraging advice to students with a passion for science about finding summer internships or volunteering in a lab. “Learning from failure is an important aspect of science: a lot of important discoveries come from failure and the ability to analyze those failures,” explained Dr. Allen M. Orville a senior scientist at Brookhaven. “Out of the 25 years I’ve been doing science I’ve probably had about five spectacular days and those were great… What keeps you going on the non spectacular days is knowing that you are supporting other scientists who might be having spectacular days.”

Another senior scientist offered an encouraging word to students who might be deterred by having to deal with the threat of failure in X-ray crystallography. “It’s ‘jackpot science’ where if you don’t get the crystals you don’t get anything. Not all science is that way. I work in a ‘continuum science’ where I get something every day that is satisfying with lots of small encouraging successes along the way.”

Fear of failure didn’t seem to deter these eager high school students from following a career in science. “It’s obvious what drives scientists,” commented one student. “You find a question that you want to answer so badly, it’s exciting. I enjoy being obsessed by curiosity – it makes me different."