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Q&A Nancy Hopkins

A passion for science without barriers

In 2005, Nancy Hopkins sparked a firestorm of controversy by walking out during a presentation by Larry Summers, then-president of Harvard University in Cambridge, Massachusetts. He had suggested that innate differences might account for the lack of women in high-achieving roles in science, and Hopkins, a well-known champion of gender equality in science, wanted to register her outrage. This May, the biologist at the Massachusetts Institute of Technology (MIT) in Cambridge, whose career has mirrored the growth and diversity of molecular genetics, will retire from laboratory research and from most public speaking on women and science.

You worked in Nobel laureate James Watson's lab at Harvard University as an undergraduate. What did you take away from that experience?
Jim would come in at teatime and talk about what he had learned that day. It was so breathtakingly exciting you couldn't ask for more. It was Jim who pushed me to pursue a career as a scientist and professor. Later, when I was at MIT and confronting obstacles, I realized how much his influence had protected me from overt discrimination because he was such a powerful person.

Are we in a new era when it comes to women advancing in science?

We are in a new era in that women now expect to have careers that are equal to men's. But are they making it to the top? Not at very high rates. It is still a man's world in terms of who is in charge. We all believe that science is a meritocracy, that being a great scientist takes brains and hard work, but that isn't the whole story.

You changed your research focus many times. What was the driving force behind those shifts?
Part of the reason is the astonishing speed at which science moves. When I started, the focus was on the secret of life, discovering how genes and their expression are regulated in viruses. By the time I finished my PhD in 1971, you could actually work on the molecular biology of cancer, so I switched. I eventually became disillusioned about how I and other women were being treated in the cancer field, and I switched again, to study the genetics of early vertebrate development, a field with more women. Different fields of biology have different levels of acceptance for women.

What motivated the landmark 1999 study that you championed on gender bias at MIT?

It was a final straw. At age 50, after 20 years as a scientist, I found that it was impossible for me to get the supplies and lab space I needed to do my work. I thought, 'I'm not going to tolerate this

any more.' I told another woman, and she said she was experiencing the same thing. We talked to other women scientists at MIT and realized that we were all hitting the same roadblocks.

What was the reception like from your male colleagues when you began to speak out?

It was not too good. Some in my department were downright hostile and that was a problem for me. But suddenly I had eight women and four men on the study committee, and also Robert Birgeneau, then dean of science, whom I could actually talk to about this.

Reports like this often fall on deaf ears. What made the difference here?

We put in a huge amount of work, 5 years, just to try and understand the scope of the problem, before we wrote the report. The internal report on which the 1999 report was based was very long, and detailed enough that if you were a scientist and read it, you could see how what was happening to us would make your life as a scientist very hard. It was also a miracle that Charles Vest [then president of MIT] realized that there was a problem and was willing to publicly endorse the report.

Walking out during Larry Summers' talk was a decisive act. Are there other times you wish you had acted about gender equality but did not?

This is an issue I've been grappling with this year as I look back on my life. Why did I allow myself to be treated this way for all those early years? I think that when you are young, you just have this driving energy, you love the science so much and you find excuses to put up with it all because you want to do the science.

Do you think others should speak out about discrimination?

I increasingly have trouble with established women who don't speak out. At one point I asked Harvard president Drew Faust to give a talk to students about how Larry Summers' comments about women being genetically inferior were erroneous. She wouldn't do it and that bothered me. ■

INTERVIEW BY ADRIANNE APPEL

CORRECTIONS

The News Feature 'The long shot' (*Nature* **480**, 308–309; 2011) gave the wrong affiliation for Adam Burrows. He is chair of the US National Research Council's physics and astronomy board.

The News Feature 'The cell division' (*Nature* **480**, 310–312; 2011) incorrectly stated that Ireland's government does not allow research on human embryonic stem cells. In fact, the government only does not allow it to be funded with public money.