

Ben Barres

Neurobiologist Ben Barres may have a successful career, but he knows exactly what discrimination looks like. And over the years, he has learned to fight back.

Ask Ben Barres whether women in science are treated fairly. But first make sure you have plenty of time to hear his answer.

Barres is a successful and busy neuroscientist at Stanford University, but this is a topic close to his heart. Despite his many responsibilities, he tirelessly champions women and minority scientists, speaking out against injustice wherever he sees it—and he sees plenty.

Most recently, Barres wrote letters criticizing comments made by Harvard University President Larry Summers (*Nature* 434, 697; 2005) and helped revise a US National Institutes of Health (NIH) award scheme that unfairly favored male scientists. “I think as I have gotten older I have realized that I don’t have to sit back passively and take it any more, that people have a responsibility to speak out against discrimination,” he says.

The most recent data say that most male scientists don’t notice the hostility their female colleagues face (*Science*, 309, 1190–1191; 2004). But Barres has first-hand knowledge of what it means to be a member of an underserved group.

You see, until 1996, he used to be a woman.

Having experienced discrimination first as a woman, then as a transgendered individual, Barres says he is acutely aware of people’s prejudices. In high school, Barbara, as he was called then, was the math team captain and planned to attend the Massachusetts Institute of Technology (MIT). But the guidance counselor said Barres could never get in and should aim lower. “Fortunately I had sense enough to ignore him and applied only to MIT, where I was accepted early decision,” Barres recalls.

Things weren’t much easier at MIT. Barres was one of few women in math classes and once again faced blatant bias. “I was once told by a mathematics professor that the reason I was the only one in the class to successfully complete an exceptionally complex homework problem was because my boyfriend probably helped me,” he says.

Despite those obstacles, Barres completed an MD from Dartmouth University and a neurology residency at Cornell University. Driven by his interest in research, he then went on to a PhD program at Harvard University, where he spent 15-hour days in the lab, moonlighting weekends as a clinician to pay off his school loans. “I was always tired,” he says.

At the end of nearly 14 years in training, Barres went to work as a postdoctoral fellow in Martin Raff’s lab at University College London. During his three years there, he developed a new technique to isolate oligodendrocytes—central nervous system cells that support the development of neurons—and made many contributions to their study. “After he left, we routinely used his purification method and spent years following up his important findings,” says Raff.

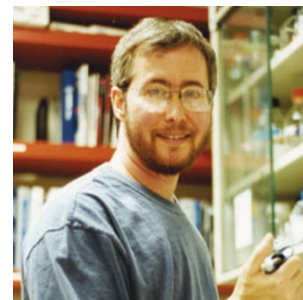
Barres launched his own lab at Stanford in 1993, where he is now vice-chair of neurobiology and co-director of the university’s Neuroscience Institute. “This is the greatest job—I feel so lucky to have a lab,” says Barres, whose research focuses on the degeneration of nerve cells in injury and disease. “If I could do one thing before I die, I would like to discover something that could help patients,” he says. “Right now we don’t have any drugs that can slow the progression of any neurological disease.”

Barres says the disconnect between clinical and basic research is a big obstacle in developing treatments for many diseases, and MD-PhD programs aren’t successfully filling this need. “Unfortunately, many MD-PhDs do a short-track PhD and have less of a chance of doing well in research,” he says. “It takes about ten years in the lab to really become successful on your own.”

Barres is setting up a new Stanford program—which he will direct—that would allow PhD students to sit in on the first two years of medical school coursework and begin thinking about how their research relates to disease. He has also helped launch a nonprofit foundation that aims to develop drugs for multiple sclerosis.

As passionate as he can be, Barres also makes time to lead his lab members on hikes in the mountains, and to keep up with the Harry Potter books. Lab members say he ran out and bought the latest book in the series the Saturday it went on sale and had read it by the following Monday. Much to his delight, his students last year modified a Harry Potter movie poster, replacing Harry’s face with his own. “I think he somehow relates to Harry,” says postdoctoral fellow Beth Stevens.

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Barres also has a “mini-laboratory” in his house, where he experiments with roasting coffee beans. “Ben is crazy about coffee,” says Stevens. “He is always bringing us samples of his latest batch of beans. He’s getting pretty good.”

But his mind never strays too long from neuroscience.

“Ben doesn’t sleep, he works nonstop,” Stevens says. “You’ll come into work in the morning to find that he sent you ten emails at 4 am, all with new ideas for your project.”

Still, he gives his students and postdoctoral fellow plenty of intellectual freedom. “Ben thinks about the big picture, but lets grad students run with their own project,” says fifth-year graduate student Rick Daneman. Barres says researchers should even allow students to take reagents and mice with them when they start their own labs.

He also wants the NIH to maintain a record of where trainees from each lab end up. “That way, students and postdocs can look at the labs and see which ones will let them best develop as an independent scientist,” he says.

And there again, Barres is committed to creating an even playing field. As one of the judges for the NIH Director’s Pioneer Awards, Barres—along with several others—criticized the program for giving out awards only to men, compelling the agency to revise the scheme (see page 912). “Half the people in my lab are women,” he says, “and I just want to see them have a chance at getting these things.”

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