

## YSM Intranet

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## From bench to blackboard

October 22, 2007

*Joanna Price, Yale's new coordinator for community science programs, aims to inspire the next generation of researchers by bringing cutting-edge science into the classroom.*

Ten years ago, the National Science Foundation (NSF) simplified its criteria for reviewing the merits of grant applications from four items to two. Applications would be assessed on their intellectual merit and also on their relevance to society. These "broader impacts" criteria, as they came to be known, were half the equation.

Not every scientist appreciated the importance of broader impacts, so in October 2002, the NSF adopted a new policy to encourage their inclusion: it began returning, unread, any application that lacked a broader impacts plan. Other large grant-makers such as the NIH and NASA also require grantees to think about how their findings can be disseminated and communicated to school children and the public at large, and to come up with an outreach plan.

To help Yale scientists with outreach and continue the university's longstanding tradition of involvement in the local schools, Yale created a full-time position earlier this year to support education and dissemination efforts. Joanna Price, who has a Ph.D. in molecular biology and biotechnology and researched stem cell plasticity as a postdoctoral associate in the laboratory of Diane Krause, is the university's new coordinator for community programs in science.

So far, Price has helped develop four basic science grant applications, sharpening their broader impacts statements and matching interested Yale faculty members with specific programs in the schools. Yale faculty, staff and students were already running science outreach programs that brought more than 10,000 New Haven young people into free Yale-sponsored programs each year. The NSF broader impacts requirement meant that hundreds more researchers would be getting involved in science outreach.

Price is launching other programs as well, including a series of science talks at Career High School in New Haven, which offers a health professions curriculum and has a 15-year history of cooperative programs with the medical school and university. She's also working on a \$1million project to enhance science education in public schools, a program undertaken as part of the university's purchase of the former Bayer facility in neighboring Orange and West Haven.

The federal initiative and Yale's support for science outreach are in part a response to a decline in the number of students going into the sciences. According to Kathie Olsen, the NSF deputy director and chief operating officer, the proportion of science and engineering degrees awarded to U.S. undergraduates dropped in the last two decades from 40 to 38 percent. Among those students graduating with science and engineering degrees, the number continuing to study science and engineering beyond the master's level dropped from 23 percent in 1995 to 15 percent in 2003.

If cutting-edge science is brought into the classroom and presented by enthusiastic researchers in a compelling way, more students might be enticed to choose science careers, says Claudia Merson, the public school partnership coordinator in the Office of New Haven and State Affairs, who recruited Price to the new position. The federal requirements have helped speed the process, she adds. "Suddenly, researchers were coming to me saying, 'I want to do some outreach. What can I do?' It presented us with a golden opportunity."

"We have a lot of terrific programs, but there were areas of need that nobody was working on," Merson said. Now that Yale has a conduit between researchers and K-12 educators, she is confident that up-to-date information on a full range of science-related topics will reach and excite the scientists of tomorrow. "We have always had amazing people here doing world-class research," she said. "Now we have an organized way to share that with the community."

—Jennifer Kaylin

*Photo by Michael Marsland*

### Related links:

A list of services for grant writers can be found at [http://www.yale.edu/onhsa/science/info\\_fac.html](http://www.yale.edu/onhsa/science/info_fac.html) ([http://www.yale.edu/onhsa/science/info\\_fac.html](http://www.yale.edu/onhsa/science/info_fac.html))

A website detailing the university's science opportunities went online in mid-August at [www.yale.edu/scienceoutreach](http://www.yale.edu/scienceoutreach) (<http://www.yale.edu/scienceoutreach>)



Joanna Price, coordinator for community programs in science, talks with students at the citywide science fair sponsored by the New Haven public schools.

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