## DMS's North stars as a mentor for women

In 1990, nearly half of all women undergraduates arrived at Dartmouth interested in science, but only 12% graduated with a science major. Within less than a decade, that percentage had doubled. The turnaround came about thanks to an initiative called the Women in Science Project (WISP). And key to its success has been the involvement of hundreds of faculty members like Dr. William North, a professor of physiology at DMS.

WISP was cofounded by the late Dr. Karen Wetterhahn, a professor of chemistry, and Dr. Carol Muller, former associate dean at Dartmouth's engineering school. They recognized that women were underrepresented nationally in the sciences and realized that changing that would require intervention at the undergraduate level. WISP's key intervention was recruiting first-year women to work in labs all across campus, exposing them to scientific mentoring before they had committed to a major. The program has been so successful that it has been replicated at colleges across the U.S.

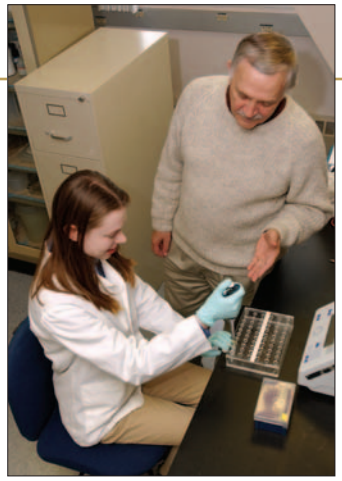
Today, more than 60 women have such an experience each year. And 275 members of the Dartmouth faculty—from DMS, Thayer, and the undergraduate science departments—have had WISP interns since 1990.

But over WISP's 15 years of existence, only one of those 275 faculty members has had at least one trainee every year: DMS physiologist North. In fact, by doubling up a few years, he has mentored a total of 18 interns. For that contribution to the program's success, he was given a special award this year at the annual Karen Wetterhahn Science Symposium. During the event, WISP interns share the results of their experiences in the form of poster presentations.

It is not only North's constancy that makes him a star of the program. Of his 18 trainees since 1991, only two selected nonscience majors. In 2005, 14 of the 18 responded to a survey conducted by the program; of them, three were in medicine and seven in other health-science fields. And North believes even those who chose other careers "had a good experience in the program, and that it will be with them all their lives."

He has been impressed with "the maturity of the WISP students, their preparation for what is to come, and their ability to walk into a strange laboratory and almost immediately go to work." Funding for WISP permits the interns to be paid a modest stipend—ensuring that students who must work as part of a financial aid package can take part—but the faculty who participate are not reimbursed for their efforts. "The only reward," North says, "is having a young person in the lab with a mind like an open book, ready to learn and to contribute."

**Joys:** He hopes trainees take away firsthand experience about what it is like to conduct original research—including all of the joys of discovery and frustrations of failure. "For the first time, they are able to be part of a credible project," he says, "and it seems to be something that they value a great deal. It also helps them to see their formal course work in an entirely new light."



FLYING SQUIRREL GRAPHICS

**Physiologist Bill North guides Grace Snow, a first-year student at Dartmouth, in the fine art of pipetting.**

North's very first student, Michelle Serlin, DC '94, has no doubt about the impact of the experience. When she was interviewed for admission to the University of California at San Francisco (UCSF) Medical School "by a world-renowned cardiologist," she recalls, "he happened to be experimenting with the then-still-fledgling technology of literature searching via the web. He demonstrated for me its wonders by typing in my name and viola—there [was] an impressive-looking article about vasopressin" she'd worked on while she was in North's lab. "I was off to a great start at UCSF."

And Danielle Chang, DC '99, says, "I still remember my WISP internship as one of the most important learning experiences of my time at Dartmouth."

Roger P. Smith, Ph.D.

## Terrorism response training—available anytime, anywhere

As most people walk or drive through their communities, they see houses, businesses, schools, hospitals. Terrorists see targets. They see patterns and connections, causes and effects. An explosion on a chlorine tanker *here* sends a toxic cloud downwind *there*, toward a crowded stadium and an adjacent hospital. The release of a virulent biological weapon *here* spreads disease *there* and *there* and *there*.

**Casualties:** Such events would lead to mass casualties, and they would thrust senior health-care providers into roles to which they may not be at all accustomed. Such officials would need to collaborate closely with first-responders—EMTs, firefighters, and police officers—and with federal agencies using command structures defined by the National Incident Management System. Indeed, public health officials and medical leaders could find themselves assuming primary leadership roles during mass-casualty incidents, especially following a biological attack.


**DMS's Interactive Media Lab is creating virtual terrorism response training.**