



Chemistry Professor Garner's Prestigious CAREER Achievement Grant

By [Sue Angell](#) / Photo By Rebecca Lammons

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In his seven years at Oberlin, Associate Professor of Chemistry Manish Mehta has authored numerous grant proposals, many of which have resulted in high-tech equipment not often found on a liberal arts campus. Mehta's current coup, a \$500,000 CAREER Achievement Grant from the National Science Foundation (NSF), builds on these past awards and gives him five years of personal research funding, plus the freedom to hire student assistants to work in his lab during the summer months.

Mehta will use the funding to focus on research, curriculum development (which will be decided with other members of the chemistry department), and community outreach, all scheduled to take place at different times over the next five years. This summer, Craig Betchert '06, Robert Hartley '08, and Amelia Hadler '08 will begin working with Mehta, helping him chemically synthesize peptides—which are small chains of amino acids—and study the variables that cause them to take on different shapes at the molecular level.

After using the chemistry department's NMR spectrometer to gather data about the peptides, Betchert and Hartley will model interactions between the compounds and a series of different solvents with the Science Center's new super computer. This process will allow scientists to predict the shape of naturally occurring peptides, and to potentially manufacture new ones, which could influence the future development of many drug therapies.

"No other scientist at a small liberal arts college is able to do research like this," says Mehta. "Our NMR spectrometer makes this level of science possible, giving us all the advantages of a large research institution right here at Oberlin."

Although Mehta will begin the bulk of his community outreach activities in June 2006, he plans to work with Lorain County Community College Professor Terry Green and his students during the fall semester. The majority of his outreach activities, however, will be focused on the local high schools, where both he and his students will talk about NMR spectroscopy and other modern developments within the field of chemistry.

In addition to these activities, Mehta plans to organize a three-day workshop for area high school science teachers that will give them the opportunity to learn more about new developments and allow them to gain hands-on experience with the College's NMR spectrometer. Mehta also plans to open his lab to one high school student for the next five summers. The student will be fully integrated into the lab, and will be expected to work alongside Mehta's college assistants on current research projects.

"The idea behind these outreach activities is to make modern chemistry accessible to both high school students and their teachers," Mehta says. "And, just as importantly, to ensure that the grant has an impact on the larger community, not just on my students and me."

The CAREER Achievement Grant, part of the NSF's Faculty Early Career Development (CAREER) Program, "recognizes and supports the early career development activities of those teacher-scholars who are most likely to become the academic leaders of the 21st century." Recipients of this grant are selected on the basis of creative career development plans that integrate both research and education, and foster the natural connections between learning and discovery.

"The CAREER Achievement Grant is usually given to people at large research universities," Mehta



Associate Professor of Chemistry Manish Mehta

says. "Out of the 350 grants made last year, only seven were awarded to people at small colleges. For me to have received this grant speaks to the strength of the science program at Oberlin College."



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