

Of Mice and Mentoring

April 26, 2011 12:00 PM

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Nandini Vasudevan received a \$1 million Faculty Early Career Development Program grant from the National Science Foundation. (Photo by Paula Burch-Celentano)

In her Tulane laboratory, Nandini Vasudevan is busy studying how hormones such as estrogen influence the social behaviors of mice. It's a \$1 million project funded by the National Science Foundation, but this summer she also will step into the classroom to encourage high school students toward careers in science.

Both projects are key to Nandini's new grant, part of the NSF's Faculty Early Career Development Program.

The early career awards are intended not only to further basic research, but also to encourage high school students, especially those from minority and underrepresented groups, to become scientists.

To this end, Nandini, who is a neuroendocrinologist, has teamed with the Tulane University [Science Scholars Program](#). "This program gives economically disadvantaged high school students from all over the city an opportunity to spend two weeks in the summer at Tulane, doing experiments. We typically do a lecture in the morning, and then they do experiments all day," Nandini says.

The grant provides funding for the students to study science in lieu of working a typical summer job. It also pays for undergraduate mentors to assist.

Meanwhile, the funding makes possible Nandini's laboratory research into estrogen and aggression.

"We are looking specifically at how estrogen controls aggression in males," says Nandini, an assistant professor of cell and molecular biology. Her [laboratory](#) is unraveling a maze of molecular pathways deep within cells in search of an answer.

"I am investigating how reproduction, aggression and other social behaviors are influenced by the binding of a molecule, the hormone estrogen, to a receptor within cells — the estrogen receptor," she says.

Hormone receptors within cells have a role in regulating behavior of the whole animal by activating genes that generate other chemical compounds, a process called signaling. The study will trace novel coupling between several chemical signaling pathways in mouse cells and behavioral patterns in mice.

