Emily Rosowski didn’t always know she wanted to attend graduate school in molecular biology. Now, after completing an undergraduate research fellowship and obtaining her bachelor’s degree in biology, she’s a doctoral candidate at the Massachusetts Institute of Technology.

Rosowski ’07 of Arlington, Mass., is one of many Carolina alumni who test the waters of their chosen field through research. More than half of College of Arts and Sciences’ class of 2007 graduates completed research efforts, said Pat Pukkila, director of the Office for Undergraduate Research and professor of biology. Private funding for undergraduate research — a Carolina First priority — has enabled scores of students to experience a wide range of studies.

Rosowski, who received the Herbert and Amelia Brown Undergraduate Research Fellowship in Botany in summer 2006, credits her experience for her decision to pursue a graduate degree. Herbert Brown Mayo ’65 AB of Ringoes, N.J., created the fund in 2004 in memory of his grandparents, who immigrated in the 1890s from England to Richmond, Va., and opened a florist shop.

Father’s name at Kenan-Flagler Business School.

Pukkila said that research can help undergraduates learn what it would be like to be a graduate student and research scholar and perform the work every day.

That is exactly what Nancy Hanes White ’70 of Raleigh, N.C., wants undergraduates to get from fellowships.

“They’ll experience something and a lightbulb will go off, and they’ll think, ‘I really like this,’” said White, who with her husband in 2003 established the Monty and Nancy White Summer Undergraduate Research Fellowship.

But on Rosowski’s road to biology, she made a stop along the way: a physics lab.

Though it was still a good experience, Rosowski said she didn’t enjoy it nearly as much as the biology lab.

Pukkila thinks these experiences are equally as valuable. She acknowledged that a student might work with a faculty member but then discover that they don’t like the research as much as they thought they would, allowing them to try it out before making a huge commitment.

White echoed Pukkila’s sentiments, saying that students who find that they don’t like their chosen field can find out early and switch to something they do like.

“Even if you start doing something you don’t like, you’ll learn from it. It’s not wasted,” White said.

Andrea Martin ’07, a recipient of White’s fellowship in summer 2006, learned a lot about the process of scientific work during her first independent research experience at the Smithsonian Tropical Research Institute in Panama, where she studied the hormonal influence on the calling behavior of the tropical tundra frog. Martin gathered frogs into soundproof boxes and examined their hormone levels and responses to stimuli.

“It’s pretty much experience that relates almost directly to work you’d do in the field as a professional biologist,” she said.

Another benefit for Martin was that some of the professionals she worked with were scientists whom she had referenced in her work.

It is this collaboration that helps bridge the gap between undergraduates and graduate students, who are more commonly expected to complete research.

“There is no rule that says an undergraduate can’t have an incredibly important idea,” Pukkila said.

And the research community reflects that.

“In professional discussion, there is wonderful egalitarianism, so it’s not who you are; it’s what you’re doing now,” Pukkila said.

White, whose passion for research was ignited by a botany field trip she took as an undergrad, thinks young people’s important ideas are especially needed in matters facing society today, such as the environment.

“I do think the sooner, the better. The younger, the better. That’s why it’s so important to have undergraduate research.”

Undergraduate students pursue research thanks to private funds

An economics and finance professor at the College of New Jersey, Mayo created three more undergraduate research funds — each named for family members — in arts and sciences for students interested in economics, music and art, in addition to a fund in his