

use this money is to fund meritorious proposals that could not previously be funded. The NIH also plans to issue calls for new proposals.

However, both new grants and earlier proposals will receive only two years of funding, rather than the standard four years associated with the NIH's so-called RO1 grants. (RO1 grants are awarded to a single investigator, in contrast to the agency's multi-investigator or multidisciplinary award mechanisms.)

"There are a lot of things we can't control," says Friend, noting that questions remain about how funding for biomedical research will change in years to come. That's why she thinks it's important to focus on what DMS can control—ensuring that every grant proposal has the best possible chance of success.

**Opportunities:** Green says, for example, that there are opportunities for DMS to gain ground in multidisciplinary areas, like the two Centers of Biomedical Research Excellence already funded at DMS by the NIH, in lung biology and immunology. "I think we need to do a better job at trying to take advantage of those opportunities," he says.

At this point, Friend cautions, it might be a bit late for recent changes to affect funding for the current fiscal year, but she is hopeful that things will get better given the Obama administration's professed commitment to scientific research. "We certainly have reason to be optimistic that the environment will improve," she says.

AMOS ESTY

## INVESTIGATOR INSIGHT

In this section, we highlight the human side of biomedical investigation, putting a few questions to a researcher at DMS-DHMC.

**James DiRenzo, Ph.D.**

**Assistant Professor of Pharmacology and Toxicology**

*DiRenzo studies the biology of mammary stem cells with the goal of determining if these cells are the site of breast cancer initiation. He is scientific director of the Comprehensive Breast Program at the Norris Cotton Cancer Center and came to DMS in 2001.*

**When you were very young what did you want to be?**

I was convinced that I would be a park ranger at Acadia National Park.

**Are there misconceptions people have about your field?**

The minute some people hear the words "stem cells" they think of the political and cultural controversies surrounding research involving human embryonic stem cells. Currently my work does not involve embryonic stem cells, and I really try to avoid the debates surrounding this area because they are fueled by intense personal beliefs that are very unlikely to change.



**What is the greatest joy in your work?**

Training the people in my lab and sharing in their success.

**And the greatest frustration?**

The amount of time I spend finding and retaining funding. The last several years have been difficult in terms of federal funding, but I'm fortunate that there are many private foundations that support breast cancer research, and they have been exceedingly generous.

**Of what professional accomplishment are you most proud?**

My lab was among the first to isolate mammary stem cells and show that they are capable of regenerating a functional mammary gland. I still love doing that experiment.

**If you could travel anywhere that you've never been, where would you choose to go?**

Patagonia. There is such an incredible variety of terrain, and between the active volcanoes and the constant flow of the glaciers you almost get the sense that this is a part of the planet that is still evolving in a largely undisturbed way.

**What about you would surprise most people?**

I occasionally take a short nap in my office. I get up very early to work on papers or grants, and as a result I tend to hit a wall around midafternoon. For me, a 20-minute nap is the only way to salvage any productivity in the latter part of the day. I guess it is one of those rare times when professionalism and productivity diverge.

**Do you always have a working hypothesis in the lab?**

Yes! I find it hard to develop good, focused experiments without one. The danger, of course, is that a hypothesis can start to seem so attractive that it gets transformed into a model before there is sufficient data to warrant that. The risk is that you "marry the model," which can blind you to specific pieces of data because they don't fit the model. In the past three to four years there have been many surprises that serve as a reminder to remain critical of our models.

**What do you admire most in other people?**

Passion and determination. It amazes me what a single person can achieve when they get behind something they truly believe in.

**What three people would you like to have over for dinner?**

I'm lucky because I get to have dinner with the three most important people in my life every night. But if we're talking about guests, I would choose Barack Obama, Lance Armstrong, and Greg Mortenson. Anyone who's unfamiliar with Mortenson should read *Three Cups of Tea*.

**Hollywood is doing a movie of your life. Who plays you?**

I really like Kevin Spacey because of his versatility, though I think that versatility would be pushed to its limit in an effort to make what I do seem glamorous enough for Hollywood.

