

## CLINICAL OBSERVATION

In this section, we highlight the human side of clinical academic medicine, putting a few questions to a physician at DMS-DHMC.

**John Seigne, M.B.**

**Associate Professor of Surgery (Urology)**

*Seigne (pronounced "sing") was educated in Ireland and has been at Dartmouth since 2004. A urologic oncologist, he focuses on kidney and bladder cancer and has research interests in immunotherapy, metastatic kidney cancer, and physician-patient communication.*

**When did you decide to become a doctor?**

On some level, I always wanted to be a doctor. What I like is the combination of personal relationships and science. One moment you can be talking about what it means to be an organic egg farmer and the next thinking about how a tumor alters the immunological function of a dendritic cell. Not only is medicine fascinating, but you get the chance to make a material difference in someone's life.

**How did you decide on urology?**

By mistake. As a medical student in Ireland, I thought I wanted to be a general surgeon and so did an elective rotation in surgery at the Massachusetts General Hospital in Boston. When I finished, I still had to complete two weeks of additional clinical work to meet my medical school requirements. I had met a urology resident and he was so enthusiastic that I rather reluctantly agreed to spend the two weeks with the urology service. It was my experience during those two weeks that showed me the breadth, fascination, and satisfaction of urology. I have not looked back.

**What are you proudest of and why?**

My family. They make it all worthwhile.



**Finish this sentence: If I had more time I would . . .**

Get home early, get that research project off the ground, play another game of squash, read that pile of journals, fix the tractor, leave work with a clean desk, dig the asparagus bed, learn to type . . .

**What famous person, living or dead, would you most like to spend a day with?**

Winston Churchill. He had periods of incredible political success alternating with periods of political oblivion from which a lesser man would not have recovered. He understood the importance of when to stand up and be counted. He learned from hard experience how and when to use military power. He enjoyed food, wine, and conversation, so I imagine the day would be at minimum entertaining.

**What's your favorite nonwork activity?**

I am an enthusiastic though mediocre squash player.

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

That it took me three attempts to pass my driving test.

**What do family and friends give you a hard time about?**

I tend to be a little dogmatic.

**What music is in your CD player right now?**

We have a five-CD player with the following on shuffle: The Proclaimers' "Sunshine on Leith," Black 47's "Fire of Freedom," Van Morrison's "Back on Top," "The Tommy Makem Song Bag," and Leonard Cohen's "I'm your Man." Next up is Verdi's "Attila," but that will not be on shuffle.

**Who or what inspires you?**

Witnessing the successes, both small and large, of the residents I have helped to train.

**What advice would you offer someone new in your field?**

Listen to your patients. What they tell you will be the most important clue to what is wrong, even in this highly technological world.



## Cervical cancer vaccine is ready for market, after 20 years of work

She's practically bouncing out of her chair as she speaks. Dr. Diane Harper is ecstatic about the fact that a vaccine she's been testing against human papillomavirus (HPV), which can cause cervical cancer, works. It works so well, in fact, that the Food and Drug Administration (FDA) has stepped up the approval process to get the vaccine on the market by 2006—instead of waiting until 2010, when Phase III clinical trials will be completed.

Two pharmaceutical companies, Merck and GlaxoSmith-Kline, have already begun manufacturing cervical cancer vaccines. Merck's is Gardasil and Glaxo's is Cervarix.

"There has never been such a big development in women's health in the past 50 years," says Harper. "It's incredible!"

**Types:** The vaccine has the potential to greatly reduce deaths from cervical cancer, one of the leading causes of cancer death among women worldwide. It's targeted to immunize against two different types of high-risk human papillomavirus (HPV-16 and HPV-18), which cause about 70% of cervical cancer cases, and against two viral subtypes that cause 90% of anogenital warts. HPV is transmitted by skin-to-skin contact, most often through sexual activity.

Although most cases of HPV resolve themselves through natural immunity, some progress to



JON GILBERT FOX

**Diane Harper headed a vaccine trial whose results she terms "incredible."**

cancer. About 500,000 cases of cervical cancer are diagnosed worldwide each year, and an estimated 280,000 women die from it, mostly in developing countries. In the U.S., about 20 million people are carriers of HPV, which causes more than 10,000 cases of cervical cancer and nearly 4,000 deaths a year.

Harper, an associate professor of community and family medicine, has spent 20 years researching cervical cancer. "The first discovery that HPV was even related to cervical cancer was published in 1975," she notes. In 2004, Harper was optimistic that a cervical cancer vaccine would be available by 2010, based on the results of successful clinical trials, including one that she led between 2000 and 2003, with 1,113 women, ages 15 to 25 (see the Winter 2004 DARTMOUTH MEDICINE for the results of that trial, published in the British journal the *Lancet*).

**Trials:** But the results of three Phase III clinical trials, one of

which she's directing, have been so promising that the FDA decided to accelerate the approval process. "The very first of that data was reported and showed that the vaccine was a hundred percent effective and completely safe," says Harper. "There were no adverse effects other than having pain in your arm from getting the shot. And that is based on a trial of 20,000 women." Other large trials, with thousands of women all over the world, have shown results that are just as promising.

**Teens:** Harper anticipates that the vaccine, which is administered in a series of three shots over several months, could be ready as early as the summer. Ideally, it would be given to girls aged 10 to 13 years, before they become sexually active. HPV infection typically occurs in the late teens and early twenties. "So when you take your daughters in for their school physicals next summer, they should be asking for the vaccine at the same time," she says.

Harper is one of the physician-researchers on Merck's and Glaxo's scientific advisory panels, which are responsible for the independence of the studies. She is not paid by either company but helps to design the studies, review and analyze the data, and publish the papers.

Harper shared another piece of exciting news: "The *Lancet* called me," she confides in hushed tones. "They woke me up and said, 'We want to publish your next results.' We're really excited about it."

Laura Stephenson Carter

## From resident of the NICU to NICU resident

**D**r. Bethany Lovejoy Ames started life as a four-pound preemie in Dartmouth-Hitchcock's Neonatal Intensive Care Unit (NICU), under the care of Dr. George Little. Today, she's back in the NICU—as a second-year pediatrics resident, caring for babies far smaller than she was. And her preceptor is none other than her former caregiver, George Little.

**Twin:** Ames and her twin brother came into the world six weeks early, at 34 weeks' gestation. "Thirty years ago, 34 weeks was considered high-risk," she observes. "Now, we're caring for babies [born at] 24 weeks."

The stronger of the twins, she needed only three weeks in the NICU, but her brother stayed there for four months. Both are now healthy adults, and they grew up hearing about the critical role Little and others played in the first weeks and months of their lives. "My parents think the world of George Little," says Ames, a 2004 graduate of Dartmouth Medical School. "There's even a picture of him in our baby books. That's how I recognized him when I started my residency!"

Though it might seem that Ames was born to be in pediatrics, it wasn't until her freshman year in college, at Brown, that she realized she wanted to care for sick children. After graduation, she taught chemistry and physiology for two years before entering DMS.

**Hope:** While she's proud of her history with Dartmouth's NICU, Ames doesn't mention it to her patients' families. "The baby is the focus, not me," she says. But if parents learn of her story and bring it up, she's happy to talk about it. "It's a nice connection I have with families that other residents don't get to experience," she observes. "It gives them hope. They often say, 'If you turned out this well, maybe my baby can, too.'" A.P.



ETHAN SQUIRREL GRAPHICS

**Beth Ames, left, started life in the NICU in the care of George Little, right.**