

# MOVERS

**Joyce DeLeo, chair, Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, New Hampshire**



**2003-present:** Professor of anaesthesiology and pharmacology, Dartmouth Medical School, Hanover, New Hampshire, USA

**2002-present:** Director, Neuroscience Center, Dartmouth Medical School

**1998-2003:** Associate professor of anaesthesiology and pharmacology, Dartmouth Medical School

Once a budding neuroanatomist, Joyce DeLeo made her mark by harnessing her interests in psychiatry and biology to search for novel pain treatments. As chair of Dartmouth Medical School's pharmacology and toxicology department, she now plans to use the same integrative approach to make progress in the department.

After a BS in biology and chemistry from the State University of New York in Albany, DeLeo was torn between graduate school and medical school. The independence she was given as a research assistant at Oral Roberts University in Tulsa, Oklahoma, helped her make up her mind.

DeLeo's dissertation, at the University of Oklahoma, focused on neuropharmacology related to stroke, and resulted in a patent for a drug to treat chronic pain. As the university's first Fulbright scholar, she next studied the electrophysiology of ischaemia at the Max Planck Institute for Psychiatry in Martinsried, Germany. The fellowship proved career-defining, as she studied the role of glial cells (the central nervous system's maintenance and support cells) in ischaemic stroke, under the leader of the field, departmental head Georg Kreutzberg.

A postdoc at Dartmouth Medical School's department of anaesthesiology began what has become a 20-year career so far. "Staying in one place doesn't limit you any more, technologically or collaboratively," she says. In fact, she says, it has afforded high-profile leadership opportunities.

DeLeo says she made her greatest progress once she began to read outside the pain field's specialist journals. She incorporated findings on the adaptive and innate immune systems into her search for novel agents to suppress the glial changes that produce chronic pain.

"Early on, Joyce was at the front of the pack, determining how the immune system might influence sensory perception and signalling in the spinal cord," says Michael Vasko, chair of the department of pharmacology and toxicology at Purdue University in Indianapolis, Indiana. He says DeLeo is up to the challenges of her new position, notably balancing basic versus translational research and bringing in funds.

"We want to find creative ways to fund our research, such as exploring new ways to partner with industry through patenting and licensing opportunities," DeLeo says. She plans to continue her pursuit of novel targets to treat and prevent pain by modulating glial function.

"It's important for chairs to lead by example — and she does that well in all areas," says Vasko. ■

**Virginia Gewin**

## NETWORKS & SUPPORT

### The gender imbalance

The US National Institutes of Health (NIH) this month launched a study into the root causes of gender disparity in scientific research. The study, which is being run by the National Institute of General Medical Sciences (NIGMS), has allocated between \$2 million and \$3 million to fund up to eight grants.

"At the lower level, women and men are about equal," says NIGMS director, Jeremy Berg. "But as you get farther and farther up the ladder, the number of women drop at each stage."

The issue of disparity is reasonably well documented, and previous studies have identified a number of reasons for this, such as women taking time off to have children. The NIGMS study aims to dig deeper to find out why there are differences between the career paths taken by men and women, says Berg. It will look at possible causes, such as family leave, institutional recruiting practices and the efficacy of programmes aimed at reducing gender discrimination.

The study follows in the wake of a report issued last year by the National Academy of Sciences. *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering* made a number of recommendations on how to increase

the participation of women in science. These included encouraging department heads at universities to be more accountable for their hiring policies, and for there to be campus programmes to help faculty members care for their children without stepping off the career ladder.

Berg notes that the NIGMS already has several programmes in place to help decrease ethnic disparity in sciences. Funding more research into gender disparity will help the agency see how it can adapt these approaches to women's issues, he says.

Janet Koster, executive director of the Association for Women in Science, has mixed feelings about the NIGMS study. She notes that the gender disparities have already been documented and that many organizations — including the National Academy of Sciences, the National Science Foundation and her own association — have issued recommendations to combat it. "It's great that the NIH has recognized the need to do something about the number of women who are leaving science," says Koster. "On the other hand, you can question the need for more research." ■

**Paul Smaglik**

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#### POSTDOC JOURNAL

### 'Force'-full wisdom

"Do. Or do not. There is no 'try'." That's the advice Yoda gave Luke Skywalker in *The Empire Strikes Back*. This quote from the diminutive Jedi master sustains me as I head into an area beyond the expertise of my lab.

In addition to my ongoing work, I am now responsible for an unrelated mouse project. A postdoc friend initiated these studies, but due to various delays, he had to leave before the mice arrived. So I have inherited these animals — and the accompanying mountain of incomplete paperwork. The challenge is amplified by the fact that I've never worked with mice before; nor has anyone else in my lab.

I am immensely grateful for help from friendly mouse-geneticist neighbours, who have generously shared their expertise and time. I am excited to learn new skills, especially as biological research increasingly demands *in vivo* experiments as proof of physiological relevance. However, I am apprehensive about how this new project will turn out and how it will fit into my long-term career plan. Past experience with *Drosophila* and zebrafish projects has taught me that the knowledge and skills that I acquire are meaningless if no publication results from my work. So as I tackle yet another new model organism, I recall Yoda's words and fervently hope that the Force will be with me. ■

**Amanda Goh is a postdoctoral fellow in cell biology under the Agency of Science, Technology and Research in Singapore.**