



CMAJ's first fellowship editor melds humanities and medicine

Dr. Caralee Caplan is that exceptional hybrid: a scientist with a passion for the humanities. It's an ideal combination of talents for her new position as *CMAJ*'s first editorial fellow (see page 502). "I'm always looking for ways to bring together medicine and writing, to keep writing in my life," says Caplan, who will spend the next year as a member of the journal's editorial team.

She is a Montreal native who earned an English degree from Harvard University — her thesis, appropriately enough, was on surgeon and poet John Keats — before graduating from medical school at McGill in May. She has written for Harvard's student newspaper and a series of travel books. In 1994 she became an editor at the *McGill Journal of Medicine*, where she learned to evaluate scientific articles. She eventually launched "Crossroads," a section of

essays devoted to the interface between medicine and the humanities.

In her final year at McGill she did an elective in internal medicine with Dr. Ken Flegel, an associate editor at *CMAJ*, and met Editor-in-Chief John Hoey. After some rapid negotia-

tions, Caplan accepted the inaugural fellowship.

During the 1-year term, which began in July, the 26-year-old Caplan will edit scientific articles, communicate with authors and conduct research on medical editing or research. She's also signing up for courses in epidemiology and biostatistics — areas of expertise she thinks are essential for a medical editor. After her fellowship, she will complete her residency; she hopes to pursue a career in internal medicine. Writing will be part of it all, she says.

Only a few weeks into her new job, she says she's already learned a lot. "It's become increasingly important for physicians to be able to look at the medical literature critically, not just take it at face value. After a year, I'll be able to pick up any medical article and figure out if it's valid and if it's applicable to my practice. These skills will always help me." — *Barbara Sibbald*



Clue to cancer treatment found in urine

Every morning for the past 3 years, University of Toronto researcher Jeffrey Charuk has started his day at home by urinating into a cup. He then starts his day at work by purifying compounds from his urine that could potentially be used to treat cancer patients.

Charuk is no eccentric. Working with team members Drs. Reinhart Reithmeier and Arthur Grey, he discovered that a substance found in some automatic dishwasher and laundry detergents, contraceptive foams and insecticide formulations — nonylphenol ethoxylate, better known as nonoxynol — is finding its way into the human body; their findings were published in a recent issue of the *American Journal of Physiology* (1998;274:F1127-F1139). Charuk and his team have also determined that this detergent has the capability of fighting cancers that have become drug resistant.

It has been known for a long time that nonylphenol ethoxylate is entering the food chain. Its widespread use and effective action as a spot remover for dishes during rinse cycles also meant that it clings to the dishes as residue, which is then consumed. Studies have indicated that 80% of the chemical is effectively removed from the body, but it is not known what happens to the remaining 20%.

In the early 1970s, Canadian scientist Victor Ling discovered how cancer cells become resistant to chemotherapeutic drugs by the action of a drug pump he called P-glycoprotein. This pump is also found in the kidney, where it removes toxic substances from the body. Charuk and his team wanted to discover what type of toxic substances P-glycoprotein in the kidney was removing from the body and they discovered that it was primarily nonylphenol ethoxylate. As Charuk explains, the researchers observed that "this detergent preoccupies or overwhelms the pump, allowing chemotherapeutic compounds to do a better job killing cancer cells."

The pump is so preoccupied trying to remove the nonylphenol ethoxylate from cells when it is used in conjunction with chemotherapy agents that the toxic drugs cannot readily be removed from cancer cells. "This is what makes our findings so exciting," says Charuk. "The chemotherapy drugs become 100 times more powerful when used in combination with this detergent." This means "the treatment will be more effective and less expensive as nonylphenol ethoxylate is cheap and easily available." — © *Peter Wilton*