

think the impact [of the decision] is as high in medical research as it is in other areas." She cites agriculture technology and biomanufacturing as 2 examples.

Although researchers are generally bullish, there are some concerns. Kothary is worried that very broad patents, covering large areas of technology, will limit further research. He cites a technology patented by a large US chemical company that allows researchers to activate a gene in any animal model. Since this applies to more than one animal, or one strain of animal, it means that no other researcher can use the technology freely to create a new animal model.

The Canadian Environmental Law Association is also concerned about the

broad nature of such patents. "What a lot of people don't realize is that Harvard got a patent on all nonhuman mammals" that it can modify in the same way that it has modified the mouse, says Michelle Swenarchuk, a spokesperson for the association. "It applies to all mammals, from a shrew to a whale."

In Canada, the ruling was very clear: patenting does not apply to humans because it is a property-based concept, and humans cannot be considered property. The Environmental Law Association is concerned about considering any form of life as property that can be owned. "This is the commodification of life," says Swenarchuk.

Russell points out that patent pro-

tection only goes part way in solving the key problem with developing transgenic animal models — the lack of financial support. Granting agencies support only the associated research projects, and reviewers often say that industry should support the animal models, a suggestion that Russell finds naïve. He is left wondering whether to feed and breed his expensive rats, or send them to the US, where the rats would be maintained, but would be harder to acquire for Canadian research. — *Carolyn Brown, CMAJ*

#### Reference

1. *Harvard College v. Commissioner of Patents* (2000), Linden J.A., Isaac J.A., Rothstein J.A. Available: [www.fja.gc.ca/en/cf/2000/orig/html/2000fca27094.o.en.html#ftn4](http://www.fja.gc.ca/en/cf/2000/orig/html/2000fca27094.o.en.html#ftn4)



New CMA president-elect from Quebec

Dr. Henry Haddad, a professor of medicine from the University of Sherbrooke, will head the CMA in 2001/02. A former vice-dean at the university, he was named president-elect during the CMA's annual meeting in Saskatoon in August. A 1963 graduate of the University of Ottawa, he is a past president of the Quebec Medical Association and former chief of gastroenterology at the University of Sherbrooke. Haddad's main interests within the CMA have involved physician resources, post-graduate training and issues such as the privacy of health information.

## World water crisis in the offing?

The world is facing a critical shortage of fresh water in the next 2 decades, according to a report from the World Commission on Water ([www.worldwatercommission.org](http://www.worldwatercommission.org)). The report, *A water-secure world: vision for water, life and the environment*, predicts that the use of water will increase by 40% in the next 20 years due to growing demands from agriculture, industry and urban areas. Today, 1 billion people don't have access to safe water and another 2 billion don't have adequate sanitation. The commission, whose sponsors include the World Bank and UN, was created to recommend ways to achieve "global water security." Many countries will be looking to Canada for help, since it is to fresh water what Saudi Arabia is to oil.

About 70% of the world's available water is now used in agriculture and the remaining 30% is used for households and industry. With population growth, the amount used in agriculture alone is expected to increase by 17%. Industry and cities will also require more. This "gloomy arithmetic" adds up to a burgeoning crisis for all humans, the commission states. Compounding this are existing, and worsening, environmental-degradation problems. For example, 10% of the world's agricultural food production now depends on mined groundwater that is causing a resulting drop in water tables by as much as a metre a year in parts of China, India, Mexico and elsewhere. "Our attitudes on managing water must change," says Ismail Serageldin, the World Bank's vice-president for special programs. — *Barbara Sibbald, CMAJ*

