



Winnipeg becoming leader in MRI-based research

The first made-in-Canada, head-only, functional magnetic resonance imaging scanner is expected to give a Winnipeg research centre a leading edge in MRI capabilities. The St. Boniface General Hospital Research Centre in Winnipeg will use the \$3-million MRI scanner, which was custom-built by the National Research Council's Institute for Biomedicine in Winnipeg, at its new Centre on Aging.

Its powerful magnet, at 3 T compared with the more standard 1.5 T, allows researchers and clinicians to obtain considerably more information about patients, explains Dr. Blake McClarty, professor and chair of the Department of Radiology at the University of Manitoba. "We can look at blood flow during brain activity and we can see when increased blood flow occurs during [specific] activities and in what portion of the brain." Its many uses include providing information on where brain activity occurs in poststroke patients or in patients with dementia.

"This MRI looks at how the brain functions rather than looking at the anatomy," explained Dr. Ian Smith, director general at the Institute for Biomedicine. "If a recovered

stroke patient is paralysed on the right side, so activities on the left side of the body aren't happening, we can see how after about a year in [some] patients, the brain starts using its right side for these activities. We can see how the brain promotes recovery." This understanding could lead to the development of an artificial process to "recruit" brain activity.

Winnipeg's head-only MRI means that the research centre now has 3 MRI scanners. One is for conventional diagnostics and the other is a C-shaped, 0.2 T scanner manufactured by Siemens for an integrated system of robotic-guided neurosurgery. Developed by Mark Torchia, a research scientist at the centre, that system integrates MRI with laser technology and robotics.

This integrated system lets a surgeon "image" the patient, view the tumour, determine the best way to gain access to it and then program the computer to guide the device to the tumour.

With 3 MRI machines, the St. Boniface research centre is poised to advance its diverse research projects and move them closer to clinical applications and possible commercial opportunities. — *Jane Stewart, Winnipeg*



An MRI scanner at St. Boniface

Blood-donor ban for UK visitors stems from Krever report

Justice Horace Krever's emphasis on "preventive" action to ensure safe blood products is directly responsible for Health Canada's recent decision to ban blood donations from Canadians who spent a cumulative total of 6 months or more in the United Kingdom between 1980 and 1996. The ban was imposed to avoid donations from people infected with variant Creutzfeldt-Jakob disease.

In making the announcement Aug. 18, Dr. Doug Kennedy of Health Canada's Bureau of Biologics and Radiopharmaceuticals quoted from Krever's report: "Preventive action should be taken when there is evidence that a potential disease-carrying agent is or may be blood borne, even when there is no evidence that recipients have been affected." He also stated: "If there are no measures that will entirely prevent harm, measures that may only partially prevent transmission should be taken."

That is precisely the tactic pursued under the Health Canada ban, which Canadian Blood Services (CBS) put into effect Sept. 30 — 5 months before the government deadline. The new directive is a "compromise" between risk and benefit, said Kennedy. It is "strictly a precautionary measure" given that there is only a theoretical risk of

contracting the fatal brain disorder through the blood supply. The US has introduced a similar ban.

The years between 1980 and 1996 were selected because that is thought to be the period when bovine spongiform encephalopathy (mad cow disease) evolved in the UK. The 6-months' cumulative time was based on data that indicated "we would get rid of 80% to 90% of the risk but only defer about 3% of donors across Canada," said Kennedy. "We want to avoid blood shortages," he added.

CBS estimates the deferred 3% of donors donate 20 000 units of blood annually. CBS has launched a publicity campaign to increase the number of donors and frequency of donations to make up for the anticipated shortfall.

"Our greatest concern is that people will stop donating without reason," said CBS chief executive officer Lynda Cranston. Donors are urged to contact their local CBS blood centre or call 888 760-8545 to determine if they are still eligible. CBS will also be monitoring hospitals to determine the policy's impact.

No cases of variant CJD have been reported in North America. There is no known treatment and no way to screen blood donors for it. — *Barbara Sibbald, CMAJ*