Spending spree to end Canadian 'brain drain'

In a move to stem the exodus of researchers to the US, Canadian Prime Minister Jean Chrétien is "to provide exciting opportunities for Canadian researchers and to attract the best academic researchers in the world to Canadian universities" by creating 2,000 "21st Century Chairs of Research Excellence."

Until now, Chrétien has dismissed as "a myth" concerns that diminished funding was fueling a southward intellectual "brain drain." Only 0.2% of newly qualified PhDs went south in 1995, according to Statistics Canada. But a report by the Conference Board of Canada this summer, which surveyed more-established professionals and those whose short-term sojourns became permanent, indicates that US migration rose drastically from 17,000 in 1989 to 98,000 in 1997. Even Statistics Canada predicts that 250,000 Canadians between the ages of 20 and 34 will leave the country by 2001.

Those on the research front lines attest to a talent drain. "Of my last ten postdoctoral fellows, two are faculty in Canada, six are faculty in the USA, one is faculty in the UK and one has gone to Israel," says University of Guelph's Terry Beveridge, one of Canada's science stars who elucidated the mechanism of gram staining. The Conference Board's Charles Barrett says, "professionals…are leaving the country at a rate higher than their rate of entry into the Canadian labour force…which could jeopardize the pool of highly skilled [workforce]."

By 1990, funding shortfalls had fueled a 30% net migration loss of "star genetic researchers," according to the National Biotechnology Advisory Committee. Harry Mangalam, a molecular biologist, bioinformatician and CEO of T A C G Informatics of Irvine, California, to leave Canada a decade ago to begin PhD studies in the US. Although he applauds the current initiative, he says it will not prompt him to consider a return. "A real research resurrection is going to take a confluence of researchers, certainly, but also the facilities and infrastructure that will allow them to do what they need to do."

The funding slump has continued. Per capita funding for the Medical Research Council of Canada has declined from CAN$9.09 (US$5.80) in 1994–1995 to CAN$8.23 in 1997–1998. In contrast, per capita funding from the US National Institutes of Health increased from US$57.41 to an estimated US$66.64 in the same period.

Chrétien's 21st Century Chairs plan will commit CAN$180 million to 1,200 research chairs over three years. And a further 800 chairs will be created "as soon as possible thereafter," bringing the annual federal bill to CAN$300 million. Although details of this program are sketchy at present, 40% of the funds are slated for chairs in biomedical research. Promising young researchers will receive annual support of CAN$100,000 for five to seven years and for established scientists will receive CAN$200,000 for salaries and teaching replacements.

Brian Hoyle, Nova Scotia

Ethicists bemoan shortened clinical trial approval time

Officials at Health Canada have unveiled a proposal to change several of the government's rules for clinical trials, substantially shortening the review process in what would be a boon to Canadian contract research organizations (CROs) seeking to draw additional business from multinational pharmaceutical firms. But some bioethicists have attacked the proposal, saying it puts profits ahead of the public interest.

Under the new rules, a Phase I study that has been approved by a "qualified" research ethics board (REB)—the equivalent of an Institutional Review Board in the US—could be approved by Health Canada in a massively accelerated 48-hour review, rather than the 60-day government review required in the current system. The review time for approval of all other clinical studies would also be shortened from 60 days to 30 days. In addition, the new rules would add an "audit" function to allow Health Canada to investigate REBs at random.

The rapid review and audit processes would require a significant increase in funding for Health Canada, and it is unclear whether Parliament will approve a budget increase for the agency. If it does, Health Canada officials expect to have the new clinical trial rules in place by the spring of 2000.

Canada is home to several CROs that run clinical trials for new drugs and medical devices, and data from Canadian studies, as from other countries, are used to support applications for approval in the US and EU. The Canadian CRO industry earns an estimated US$3.5 billion annually.

"The motivation was to bring the turnaround times and standards to international levels, and also to increase the effectiveness and efficiency of Health Canada," says Francis Rolleston, director of ethics at Canada's Medical Research Council. Rolleston, who supports the changes, says that Health Canada will still be held responsible for maintaining the ethical standards of Phase I trials, and adds, "I'm convinced that the net effect of the whole thing is a higher level of protection of human subjects."

Others disagree, arguing that allowing REBs to handle the bulk of the ethics review process is a mistake. "We have for-profit REBs that will give an ethics review for several thousands of dollars—we don't know whether [these REBs] are conducting themselves properly…or whether their approval can just be bought for a fee," says Charles Weijer, a bioethicist at the University of Dalhousie, Nova Scotia. Weijer asserts that Canada is engaging in a "race to the bottom race of the ethical ladder" with other nations to draw more CRO business into the country.

The Canadian proposal is similar to a plan considered by the US Food and Drug Administration in the early 1980s, which abandoned the idea, at least in part because of objections such as Weijer's.

Alan Dove, New York

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