



What? A leading scientist immigrating to Canada?

Charlotte Gray

It was hard to miss the contradiction between 2 stories carried in Canadian newspapers last September. The first dealt with the arrival in Canada of Dr. Roger Gosden, a distinguished scientist from Leeds University. The 51-year-old biologist, who has done pioneering work in ovarian physiology, joined McGill University as research director in the Division of Reproductive Biology, part of the Department of Obstetrics and Gynecology. Gosden told reporters he was happy to leave behind the “antiscience backlash” taking place in Britain. He referred particularly to the public hostility toward biomedical research involving animals and to genetically modified foods — “Frankenstein foods,” as the British tabloids call them.

A few days later, the same Canadian media outlets covered a demonstration organized by Greenpeace and the Council of Canadians in which Loblaws, the country’s largest grocery chain, was urged to remove all genetically modified (GM) foods from its shelves.

Gilbert Normand, Ottawa’s new secretary of state for science, research and development, lashed out at the “hysteria” surrounding genetically modified foods. He predicted that the same hysteria is about to explode here too. So has Gosden arrived in Canada at precisely the wrong moment?

Let’s deal with Gosden first and, in particular, his reasons for coming to Canada. His arrival coincided with the publication of his latest research breakthrough. Because of his work at Leeds University’s Centre for Reproduction, Growth and Development, women made infertile by chemotherapy or early menopause will be able to start producing eggs again, thanks to a graft of frozen ovary tissue. Announcement of the breakthrough created a stir, since

the tabloid “take” was that postmenopausal women will now be able to have babies. Columnists and editorialists rushed to argue whether women in their 50s or 60s should be getting pregnant. This was not the focus of the British research, of course, but the speculation nevertheless called attention to Gosden’s career move to McGill.

However, that move had far more to do with various federal initiatives than

environment for scientists here, which you don’t find elsewhere,” he said in an interview from Montreal. “The US is a highly competitive environment for scientists, particularly for those in the private sector where the commercial implications of their work is crucial. In the UK, medical researchers are often forced to compete for patients because the research centres are bunched together geographically. In Canada, researchers collaborate between centres and between disciplines.” As yet there is no “Institute of Reproductive Medicine,” says Gosden, “but we would like to see one.”

He is confident that in joining McGill’s Reproductive Centre he is coming to “the best such centre in Canada, with the potential to become world class.” The centre is headed by Dr. Seang Lin Tan, McGill’s chair of obstetrics and gynecology, and the man who hired him.

The renewed investment in biomedical research in Canada was an additional incentive for Gosden. Although the percentage of the gross national product devoted to research in Canada remains low relative to Japan or the US, “the graph is going in the right direction.” This is a contrast to what is happening in Britain, where the science budget is unimpressive and “our share of publications globally is slipping.”

He thinks the stagnant science budget back home and the limited opportunities open to young researchers discourage candidates. “One of my 2 sons was described as a ‘natural physicist’ when he was at school,” Gosden remarked, “but he could see that research positions often lead nowhere. So he is now in the financial-services sector.”

Gosden’s optimistic view of the situation here received further confirmation in October’s Speech from the



Dr. Roger Gosden: “Talented youngsters feel there is no future in science [in the UK].”

with postmenopausal reproduction. In the federal government’s last budget, there was a renewed commitment to increased spending on health research. By 2001, the government will be investing \$484 million in research annually, double the amount available in 1997/98. Much of the new money will be spent creating the Canadian Institutes of Health Research, which will replace the Medical Research Council of Canada and provide a framework for coordinating health research already under way in Canadian universities, hospitals and the private sector. The institutes themselves are not brick-and-mortar buildings but networks that link researchers and facilitate funding.

Gosden is impressed with the concept: “There is a very good collaborative envi-



Throne, when the Liberal government promised to establish “chairs for research excellence” across the country. Gosden is convinced that “there are more career openings here — more pathways to the top of the profession.”

Canadian initiatives to boost science compare favourably with those in Britain, says Gosden. “I’ve always been very proud of the scientific tradition in Britain: the tradition of Newton and Darwin. During my own training at Cambridge, I used to see stars such as [Nobel Prize winner] Dorothy Hodgkin in the coffee room. However, the British establishment has never represented science well. Very few physicians or engineers enter public life, unlike countries such as Germany. The British establishment doesn’t understand science, but science depends on government grants from public institutions. Too often, this means that senior scientists have to spend all their time raising money and writing grant applications rather than in the laboratory. Talented youngsters feel there is no future in science.”

Gosden thinks that the neglect of research and young scientists means that Britain will “lose [its] competitiveness as a nation. The UK is still strong in the biomedical sciences, but that’s largely because of the pharmaceutical industry these days. And some pharmaceutical companies are starting to question whether Britain is a good place to invest.”

Gosden came to McGill because he felt confident that he would be better placed to pursue his own research here, but the hysteria surrounding science in Britain was also a factor in his decision. Ever since the “mad cow” disaster of the mid-’90s there has been widespread public suspicion of scientists, and this has inflamed the current debate about genetically modified foods. And the press, in turn, has played up those suspicions. “No British newspaper has welcomed GM foods,” says Gosden, “and most of them have stoked the debate with poor science and huge publicity. Our media is so competitive that reporters whip up stories in order to attract readership.”

At the moment the GM food issue is one of the most controversial stories, but the same suspicion and sensationalism

has also overshadowed research in which Gosden has a more personal interest: animal experimentation and stem-cell technology. Public confusion about the latter and about issues related to it has led to a moratorium on stem-cell research despite its potential use in the treatment of Parkinson’s and other diseases.

The public outcry about animal experimentation has meant that few scientists will speak in its defence, even though most researchers acknowledge the need for it. Death threats were made against Colin Blakemore, the eminent professor of physiology at Oxford University, after he defended the humane use of animals in laboratories. “The extremist animal fringe is really dangerous,” argues Gosden. “Fortunately, there have been no deaths yet. But they will come.”

He is particularly disappointed that Britain’s Labour government has backed away from controversial research projects in response to ill-informed public opinion. “The whole field of research on GM food is in disarray.”

But has Gosden leapt from frying pan to fire? Is Canada about to erupt with the same antiscience hullabaloo that has swept Britain, as Gilbert Normand predicted?

Probably not. The only issue related to biotechnological manipulation of foodstuffs that has captured the imagination here until recently has been the use of bovine growth hormone. However, that may be changing. The federal department of agriculture and most major farm organizations insist that genetically modified foods are safe and that it is not necessary to ensure that they are specially labelled when sold to consumers. As much as one-third of Ontario corn and about 60% of the canola grown in Canada is thought to be genetically manipulated.

So far, Canadians appear immune to the kind of emotional demonstrations popular in Europe. Greenpeace has not ripped out crops or dumped large quantities of genetically engineered soybeans in Saskatchewan or Manitoba, as it has done in France. Purina Chow has not begun to market a dog food that is free of “genetically modified ingredients,” as a British pet-food manu-

facturer has done. And no high-profile Canadians have followed the lead of the Prince of Wales or Paul McCartney, who have vowed to avoid genetically modified food. However, the pressure may be mounting in Canada. Five weeks ago, McCain Foods Ltd. of New Brunswick, one of the world’s largest producers of frozen french fries, announced that it will no longer purchase GM potatoes. “We think genetically modified material is very good science [but] at the moment very bad public relations,” said Harrison McCain, the company chair. “We’re in the business of giving our customers what they want, not what we think they should have.”

Overall, Gosden says Canada has provided a refreshing change from the European biotech wars. He also observes that the Canadian press does not seem nearly as eager as its British counterpart to indulge in speculative reporting.

Nevertheless, the debate is warming up here. Gilbert Normand’s angry reaction to antiscience “hysteria” is one example — it prompted indignant letters to editors across Canada. “I want real corn,” a letter writer told the *Ottawa Citizen*. “Not genetically engineered corn, not corn that has been modified to preserve the Roundup market, not corn marinated in pesticides and not even nutritionally improved corn. Just corn.”

Roger Gosden has no hesitation about eating genetically modified food and he does not worry about its impact on his own health. “But I think people are right to have concerns about the ecological and environmental impact of the technology, about the risks of cross-pollination between species, for instance, or the development of antibiotic-resistant diseases.”

However, he wants to see such potential threats identified with good scientific research rather than destructive sensationalism. And he is hoping that he will be able to pursue his own research in Canada without science bashers distorting his achievements.

Charlotte Gray is a contributing editor at CMAJ.