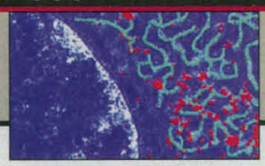
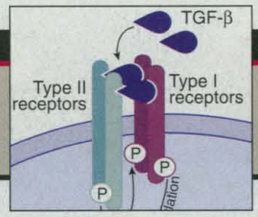




cleavage occurs. Either way, the presenilins could be potential targets for Alzheimer's drugs, says Selkoe.

Even without knowing the actual identities of any of these enzymes, drug companies have been developing compounds that block their activity. Bristol-Myers Squibb plans to start clinical trials next year on a drug that interferes with γ-secretase activity, though it's not clear if this drug blocks the enzyme itself. Molecular biologist Barbara Cordell says her biotech company, Scios Inc. in Sunnyvale, California, has "both β- and γ- secretase inhibitors and compounds that inhibit [amyloid] by a mechanism we don't understand." Scios has formed partnerships with two large pharmaceutical companies that hope to test some of these drugs in people.

In addition, now that researchers have actual secretase enzymes in hand, they can look for more specific and powerful inhibitors. BACE, for example, is similar to the HIV protease in the AIDS virus, and many compounds have been already developed to inhibit that enzyme.

Alzheimer's researchers hope such compounds will not just prevent new plaques from forming but will also help the brain rid itself of those already present. But whether that can be done without unacceptable side effects remains to be seen. And there's still the big question of whether these drugs will actually make a difference for patients.

Even so, such inhibitors could "provide an excellent opportunity to [affect] Alzheimer's disease in a profound and important way," says Steven Younkin, a neuroscientist at the Mayo Clinic in Jacksonville, Florida. "If we don't isolate the secretases and develop inhibitors, it's totally irresponsible."

–ELIZABETH PENNISI

SCIENCE POLICY

Science Supporter John Porter to Leave Congress

One of the strongest congressional supporters of biomedical research, Representative John Porter (R–IL), announced last week that he will not run for reelection next year. He is the third strong voice for biomedicine who will soon leave a high-profile position.

Porter, chair of the House appropriations subcommittee that drafts the annual funding bill for the National Institutes of Health (NIH), made the surprise announcement on 12 October. After 21 years on Capitol Hill, Porter told reporters, he wants to pursue "other opportunities and challenges." He's one of a handful of Capitol Hill leaders who have worked to put the NIH budget on a path toward doubling between 1999 and 2003. Porter played a pivotal role in 1995, for example, when a draconian plan drawn up by the new Republican-led budget committee proposed a 5% cut in NIH funding for each

Retiring. Representative John Porter.

of the next 5 years. Porter ushered a delegation of researchers and biotech executives into the office of then–Speaker of the House Newt Gingrich (R–GA) to make a plea for sparing biomedical research. Afterward, NIH got a 5.7% increase, and Gingrich became a research champion, too.

Since then, Porter has spoken out several times about his frustrations in dealing with an increasingly fractious federal budget process. Porter's press officer, David Kohn, says his own view is that the "tenor and atmosphere" of congressional debate has become more acrimonious and that his boss seemed to grow tired of the "continual battles with the right wing of his party" over gun control, abortion, and the environment. Kohn adds, however, that new rules adopted by the Republican leadership in 1995 require Porter to step down as chair of the Labor, Health and Human Services, and Education Subcommittee in any case after 2000, and "it was the right moment for a change." There's no "hidden motivation," Kohn says: Porter really does want to spend more time with his children and grandchildren.

Porter's decision to step out of national politics comes on the heels of similar actions by two other key players in biomedical politics. NIH director Harold Varmus revealed last week that he will resign in December to become president of the Memorial Sloan-Kettering Cancer Center in New York City (*Science*, 15 October 1999, p. 382). And Senator Connie Mack (R–FL)—another advocate of doubling NIH's budget by 2003 and a member of the Senate Appropriations Committee—announced in March that he will not run for reelection in 2000.

It might not be worrisome if just one of these figures were leaving, says Michael Stephens, lobbyist for the Federation of American Societies of Experimental Biology. But to have all three depart at the same time, he says, "could create a real problem" by depleting the ranks of officials who care about biomedical research.

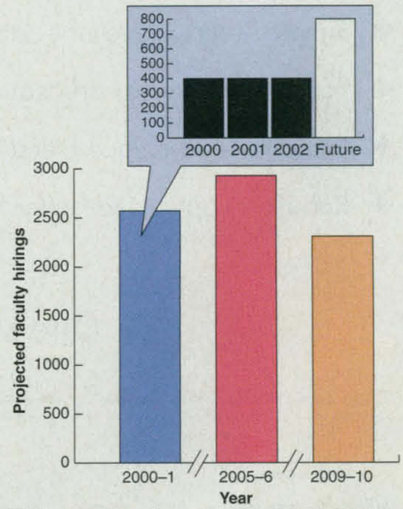
–ELIOT MARSHALL

CANADIAN UNIVERSITIES

Massive Hiring Plan Aimed at 'Brain Gain'

OTTAWA—Canadian universities will soon be turned loose on a massive shopping spree for scientific talent. Prime Minister Jean Chrétien last week unveiled a US$205 million program to create 2000 new research chairs, calling it a "plan for brain gain" aimed at reversing a flow of talent to the United States. University officials applaud the initiative, even if it derives more from a desire to outflank political foes than to strengthen academic research.

The issue of "brain drain" is a political hot potato in Canada. Business leaders have



Sitting pretty. Canada's plan to fund 2000 research chairs (inset) will help universities cope with projected vacancies from retirement and rising enrollment.

CREDITS: (TOP TO BOTTOM) SAM KITTNER; SOURCE: AUCC

lobbied hard for tax relief, saying that high taxes have driven Canadian high-tech talent across the 49th parallel. Chrétien has resisted that argument, declaring just last month that such flight is "a myth." Indeed, demographers say that Canada actually enjoys a favorable intellectual trade balance, and that the outflow to the United States in particular has shrunk by one-third since the 1950s. But last week, Chrétien appeared to acknowledge the existence of a brain drain without endorsing the business community's solution. Rather than lower taxes, he reasoned, why not give universities the wherewithal to attract the necessary talent to compete in a global market. "Our goal is for Canada to be known around the world as the place to be," Chrétien told Parliament. "That's particularly [true] at a time when U.S. universities benefit from both permanent endowments and the generosity of private foundations out of all proportion to those of our universities."

The new investment—400 new research chairs in each of the next 3 years and an additional 800 "as soon as possible thereafter"—couldn't have come at a more critical moment for universities, science administrators say. "It's like having the capacity to build a hockey team with several [Wayne] Gretzkys on it," says Social Sciences and Humanities Research Council president Marc Renaud. "It gives [universities] the feeling that they can grow and compete with the Americans." Medical Research Council president Henry Friesen called it "a stunning announcement in positioning Canada's economy to compete on a world stage."

Each research chair will be awarded for 5 to 7 years and will be renewable. The allocation will be based on an institution's success in obtaining competitive research grants. To prevent major research universities from gobbling up all the funds, however, small institutions will be guaranteed at least one chair. The biomedical and natural sciences are each projected to receive a 40% share, while the social sciences have been promised 20%.

Two types of chairs will be created. The first, intended to liberate senior scientists from teaching duties, will provide roughly $140,000 a year for "star researchers with a proven track record." Universities can spend the money to hire a new investigator, to top up an existing salary, or to absorb costs associated with replacing the star in the classroom. They may also funnel it into indirect costs such as lab operations and utilities. The second category, which provides about $70,000 for so-called "rising stars," is intended to attract younger faculty to aging departments.

Whether the new monies will actually stem the brain drain is not clear, however. In fact, some argue that the problem may not even exist. Only 1.5% of postsecondary graduates in 1995 went to the United States for some period of time, says Statistics Canada director of education statistics Scott Murray, and only one in eight of them held a Ph.D. Overall, Canada is a net beneficiary of university graduates, gaining 33,000 university-educated immigrants annually while losing 8500 to the States. Immigrants are also three times more likely to hold a master's, doctoral, or medical degree than the Canadian-born population. "All of us know some people who've left," says Canadian Association of University Teachers executive director Jim Turk, noting the impact of budget cuts on university staffing. "But the plural of anecdote is not data. At most you can argue there's a trickle, primarily in the area of health care."

But there's no doubt that Canada has lost some exceptional talent over the years. For example, seven Canadians who moved south have subsequently collected Nobels. One of them, Stanford physicist Richard Taylor—an Alberta native who came to the United States in the 1950s for graduate school and never returned to work in Canada—takes issue with the notion that his career path is a "myth." Taylor, who shared the 1990 Nobel prize for electron scattering experiments that documented the existence of quarks, says the factors underlying the exodus are complex. They include insufficient spending on research, a relative lack of major research facilities, an unwillingness by Canadian industry to invest in research, and a culture that disdains elitism and risk. "It's not greed that drives people to the United States, it's ambition," he says. If the U.S.–based Canadian Nobelists had stayed in Canada, he says, "few of them would have won the prize."

Although he welcomes the additional chairs, Taylor says they will be insufficient without a change of attitude. "It's very hard for a government, especially a Canadian government, to be elitist," he says. "But that is what you should be if you want to do a good job." **–WAYNE KONDRO**

NUCLEAR SAFETY

Secret of Soviet-Era Nuclear Blast Revealed

MOSCOW—For the past 3 decades, rumors have circulated here that in the early 1970s an accident at the Kurchatov Institute of Atomic Energy, in a residential suburb of Moscow, released a cloud of gas that drifted over the city, exposing the population to potentially harmful radiation. Late last month at a nuclear safety conference in France, a senior Kurchatov researcher discussed these events in public for the first time: There were two blasts at the institute in the early 1970s, he said, but although two technicians were killed, as far as Kurchatov scientists could tell, no radionuclides were released over the

ScienceScope

Double Vision? India now has two science ministers. Last week Prime Minister Atal Bihari Vajpayee retained physicist Murli Manohar Joshi, left, as cabinet minister overseeing the civilian science portfolios and education; the space and atomic energy agencies still report directly to Vajpayee. At the same time, the PM appointed lawyer Santosh Kumar Gangwar, right, to the new junior post of minister of state for science and technology.

Joshi says the ministry plans a 2-day brainstorming session later this year to prepare an S&T agenda. The plan may tilt toward applied projects: Gangwar, who will tend to the science portfolio on a daily basis, told *Science* that research institutions must work harder on problems that address national needs.

Dead End Kennewick Man, the 9000-plus-year-old remains found on the banks of Washington's Columbia River 3 years ago, does not appear to be related to modern-day American Indians or Europeans. The skeleton's analysis, released last week by a government panel, weakens Native American claims to the remains, which are at the center of a court case brought by researchers who have been denied access to them. Kennewick Man was probably part of "an early migration of Asian Pacific peoples into the Americas who left no descendants," says panel member Jerome Rose of the University of Arkansas, Fayetteville.

The government, which last month finally sent out some bone samples for more exact radiocarbon dating, must now settle the question of Kennewick's "cultural affiliation." That's going to be a tough task, because the only cultural evidence is a broken basalt projectile point embedded in the pelvis. And if officials want DNA tests to shed more light on Kennewick's lineage, they'll have to act fast: A court order requires a custody decision by March.

Polygraph Retreat Protests from scientists at the nation's three nuclear weapons research labs have apparently convinced Energy Secretary Bill Richardson to scale back controversial plans to polygraph some 5000 employees in a bid to boost security (*Science*, 3 September, p. 1469). But protest leaders are withholding comment until they see the new rules, which are due out on 1 November and reportedly cover fewer than 1000 people.

CREDIT: PALLAVA BAGLA