RUSSIA

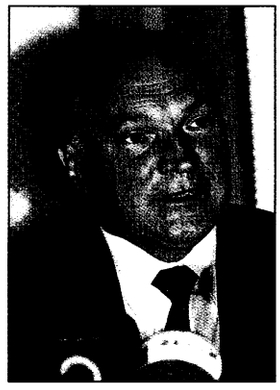
Reformer Named Science Minister

Russian President Boris Yeltsin and his young premier didn't have to look far to find their new science minister: He was the previous chief's boss. Last week Yeltsin and Prime Minister Sergei Kiriyenko announced that Vladimir Bulgak, a deputy prime minister in the previous Cabinet, will head the science ministry. Although Bulgak may be primed to push overdue changes to Russia's frayed scientific establishment, some observers worry that basic research could be the ultimate loser in any overhaul.

A communications engineer by training, Bulgak last year suggested, among other things, limiting Russian research to a handful of important areas and closing or merging some of the Russian Academy of Sciences' (RAS's) roughly 350 institutes. But an anxiously awaited blueprint for Russian science reform, drafted by the science ministry under Bulgak's guidance and released last October, offered few concrete steps (*Science*, 14 November 1997, p. 1220).

Observers say it's unclear how much power Bulgak will have to carry out major reforms. Although his new role amounts to a demotion, Bulgak will no longer be counterbalanced by ousted Science Minister Vladimir Fortov, a physicist who fought for RAS's interests. Bulgak could not be reached for comment.

Other experts worry about the fate of basic research under Bulgak. Last year, the state science budget was slashed 55%, to $2.2 billion, under a government-wide effort to close a gaping deficit. The 1998 budget has been kept to that austere level, which Bulgak has called "the optimum" for Russian science. Bulgak's enthusiasm for the belt tightening, as well as his calls for greater commercialization of research findings and for getting science programs to pay for themselves, worry some observers. His tenure, says one, "could be disastrous for fundamental science."



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Bottom line. Bulgak wants science to pay dividends.

Applied science programs, particularly the international space station, will get most of his early attention. Even with strong government support, sluggish payments for work on the station are likely to delay until this fall the first module's launch. "This is an issue that [Bulgak] has got to face and deal with," says policy analyst Charles Vick of the Federation of American Scientists. Indeed, that's one of many crumbling edifices that need shoring up in a bleak scientific landscape.

–Richard Stone

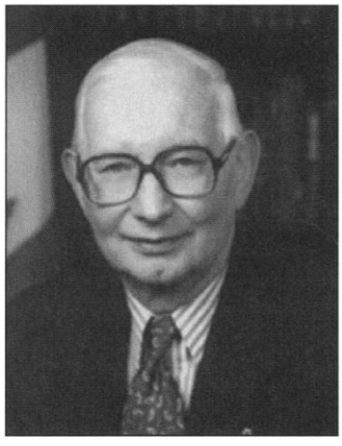
With reporting by Vladimir Pokrovsky, a writer based in Moscow.

CANADA

Plan Would Link, Bolster Health Research

OTTAWA—Canadian health officials are seriously considering a plan that could double federal spending on university-based medical research next year by creating a national framework that would supplement the current bottoms-up approach to funding research. Such a system would give the ruling Liberal government a way to invest in health care without stepping on the jurisdictional toes of the provinces and to inject $375 million a year into a biomedical and health research community now strapped for cash.

The architect of the plan is Henry Friesen, president of the Medical Research Council (MRC), whose $187 million annual budget represents the bulk of federal funding for academic health research. Last week Friesen laid out the idea in embryonic form at the annual meeting here of the Association of Canadian Medical Colleges (ACMC) and the Association of Canadian Teaching Hospitals. He has already won the tacit endorsement of Health Minister Alan Rock, who in March invited the council "to pursue exploration of the idea." Rock also agreed to host a meeting in November aimed at uniting the community behind one plan, putting the weight of his office behind the idea.



Among the ideas now under discussion is one to create a dozen or so virtual institutes, grouped by field or disease, that would operate like the extramural component of the U.S. National Institutes of Health (NIH). Unlike NIH, however, there would be no intramural program and no central campus. Although the researchers would be hired by existing organizations—medical schools, teaching hospitals, research institutions, and the like—the MRC might provide the necessary administrative and financial support. In addition, the virtual institutes would be free to support computer networks, databases, and other elements of a research effort now outside the scope of MRC operating grants.

"A 21st century Canadian Institutes of Health Research [would create] a national effort for innovation in health."
—Henry Friesen

Friesen says the new entity, which he calls a "21st century Canadian Institutes of Health Research," could have an impact on the country similar to that of the railroad in the 19th century, "stretching from coast to coast and addressing what's most important to Canadians." Its creation, he adds, would transform Canada's 16 major academic health sciences centers, 50 teaching hospitals, 65 affiliated research institutes, and peripheral health care facilities and agencies "into a national effort for innovation in health."

The governing Liberals are openly shopping for initiatives to demonstrate a federal commitment to health care on par with the recent $1.75 billion millennium scholarship fund for students (*Science*, 6 March, p. 1445) and the $600 million research infrastructure program for universities (*Science*, 28 February 1997, p. 1256). Those two initiatives are meant to showcase Ottawa's dedication to postsecondary education while avoiding direct meddling in areas viewed as the exclusive domain of the provinces.

Many academics see Friesen's proposal as a similar "millennium investment" in health care. "There is probably a one-time opportunity to get a significant federal investment in health, through health research," notes ACMC Executive Director David Hawkins. "And the window is fairly tight."

Although such details as the governance,

structure, location, operations, financing, and programming of the institutes are sketchy, medical school deans at the meeting were practically salivating over the financial prospects alone. "Such new investments are imperative," says McGill University Dean of Medicine Abraham Fuks. Adds University of Alberta Dean D. Lorne Tyrrell, "I see this as an opportunity to establish a network across the country that would link medical schools and research institutions into a network that would elevate all aspects of research."

The institutes could offset Canada's comparative disadvantages in size and geography while helping universities to satisfy government pressure to specialize, says University of Ottawa Dean of Medicine Peter Walker. "The provincial and federal governments are telling the universities to differentiate. So that means university A and B are going to have to focus on different areas ... and collaborate so that there are no big loopholes." Ian Bowmer, dean of medicine at Newfoundland's Memorial University, says the concept allows room for programs that meet national needs, such as the research problems associated with health care delivery in rural communities.

The sketchy nature of the scheme has everyone viewing it through the filter of their own desires. But Friesen has proposed some guidelines to address what the MRC sees as critical needs. One would have the institutes provide support for direct costs of research that are not now supported by federal grants, such as investigators' salaries. Friesen also would like to see 20% of the money used for electronic networking and as much as 40% for basic biomedical research.

Operational details will be fleshed out over the summer by a blue-ribbon advisory committee, with input from the academic community. After that lies the difficult task of garnering the necessary political support. Any successful plan "must serve some Canadian need other than just research for its own sake," says Jon Gerrard, the former federal science minister and current MRC scholar-in-residence who has been helping Friesen develop the initiative. "It will be weighed in terms of the difference it will make on the whole health care system."

–Wayne Kondro

Wayne Kondro is a free-lance writer in Ottawa.

WOMEN IN SCIENCE

EU Moves to Decrease the Gender Gap

BRUSSELS—European politicians and researchers have long warned about the R&D spending gap between Europe and the United States. Last week, a meeting here heard disturbing reports of an R&D gap of a different kind: the gender gap. Europe is lagging badly behind the United States in terms of equal opportunities for women scientists, according to several recent studies described at the meeting. "The situation is deplorable in the natural sciences," says chemist Godelive Quithoudt-Rowohl, a member of the European Parliament from Germany, where more than 94% of full university professors are men. "One of the key problems is a lack of good, comparable statistics at the European level," says sociologist Hilary Rose of the University of London. "Without statistics, there is perceived to be no problem and therefore [there is] no policy."

Some help may be on the way, however. At the end of the meeting, Edith Cresson, head of research at the European Commission, announced plans for a new initiative to help tackle the problem. She said the commission plans to establish a new unit, called the Observatory of Science and Technology, to gather statistics on the position of women in science throughout Europe and create a new network for women and science. The new unit will also advise the commission on policies to improve the status of women in European science.

Several participants welcomed the announcement. "It's a scandal that the European Union doesn't collect gender-related data," said cell biologist Mary Osborn at the Max Planck Institute for Biophysical Chemistry in Göttingen, who has tried to gather such data from national agencies. Her figures show that fewer than 10% of full professors in most European countries are women, but she has found it difficult to gather comparable international statistics for specific fields. Others pointed out that statistics are even more sparse on the status of women in European industry. "Looking only at the position of women in universities is just looking at the tip of an iceberg. We're totally ignorant about the overall position [of women]," says Rose.

But Osborn's figures do show just how male-oriented the commission's own science advice is. She found that women made up only 4% of the initial members of one of the commission's senior advisory assemblies. Even after the assembly was reconstituted last year, women still held only 8% of the posts. And all 24 members of the commission's senior industrial science advisory body are male, she adds. She notes that the commission requires that "the members represent an even geographical spread from across the union, because this was stipulated in the conditions. What we need now," she said, "are policies to ensure sufficient women are included."

Better numbers. Edith Cresson wants improved data on women in science.

A number of recent studies reported at the meeting have begun to shake up entrenched European attitudes. A study by biologists Christine Wenneras and Agnes Wold at the University of Gothenburg in Sweden found that three factors had a big influence on the assessment of "scientific competence" of candidates for the award of postdoctoral fellowships run by the Swedish Medical Research Council: the number of published papers, being male, and knowing the reviewers. "Women needed to be 2.6 times as productive in terms of publications to rank equally with a male colleague," says Wenneras. Another study in Denmark found that women were consistently awarded smaller sums from one grant program than were men. Such findings prompted swift procedural changes in these organizations and sent warning signals throughout Europe.

Europeans are increasingly taking their cues from the United States, where policies to support women have been in place for many years. Nearly 18% of U.S. full professorships are now held by women. And in Australia, tough measures to ensure that women are promoted and represented on advisory and policy bodies have helped increase the proportion of women in the ranks of full professors to 14%. "The time is now right" for Europe to promote equal opportunities, says Rose. Britain's science minister, John Battle, agrees. "We need a scheme that looks for the very best practices in attracting women and promoting their careers in science," he told the meeting.

The meeting was timed to precede the final negotiations on the Fifth Framework Program, the multibillion-dollar European research effort scheduled to start up later this year and run until 2002. Participants overwhelmingly agreed that the Framework plan should include specific measures to increase the involvement of women. "Women do not yet have the role they should in European science, and that is damaging," says Cresson.

–Nigel Williams