

SYNOPSIS

NEWS

• ANALYSIS

• PRACTICE

INFECTIOUS DISEASE

Canada finally begins long journey to an HIV vaccine

The therapeutic HIV vaccine trial launched by Canadian academics in Montréal and Ottawa this spring is the first such trial to be supported by key research organizations in Canada and the private sector.

It is the kind of cooperation envisioned by the Canadian HIV Vaccine Plan, a fledgling initiative aiming to accelerate progress in vaccine development.

But Canada is woefully behind many other developed nations in its support of this research, says Dr. Michel Klein, chief executive officer of the Canadian Network for Vaccines and Immunotherapeutics (CANVAC), which receives about \$700 000 a year from the federal government for HIV vaccine research.

The \$1.5-million phase 1 therapeutic vaccine trial has funding from CANVAC and the Canadian Institutes of Health Research, but was made possible mainly because 2 companies agreed to donate vaccines, which represent about half the cost of the trial, Klein said.

“The failure to invest in vaccine research is really a serious human rights failure,” says Ralf Jürgens, executive director of the Canadian HIV/AIDS Legal Network. The network pushed Health Canada to establish an HIV vaccine plan, a draft of which was supposed to be ready next month. But the plan is far from ready, and Health Canada recently refused funding.

Worldwide, the search for an AIDS vaccine has faced a host of challenges including the fact that until recently pharmaceutical

companies have not been interested in supporting costly vaccine research and trials in a significant or consistent way. In addition, promising research has not always been followed up, and governments have not launched organized and focused efforts.

In 1984, scientist Robert Gallo, co-discoverer of HIV, infamously predicted that an AIDS vaccine would be ready for testing in 2 years. Today, up to 46 million people have been infected with HIV, and most researchers agree that an effective vaccine is probably at least a decade away. This is largely because of the timelines required for completing clinical trials of any vaccine. “The road to a vaccine is long and winding,” agreed Ken Rosenthal, professor with McMaster University’s viral vaccine division and former president of the Canadian Association of HIV Research.

The vaccines being used in the Canadian trials were developed a decade ago. “We are dealing with antique vaccines and this is part of what is discouraging.”

The new Canadian trial aims to determine if the combination of 2 vaccines from Aventis Pasteur and the Immune Response Corporation will fortify the immune system better than either vaccine has separately, said Klein, who was formerly in charge of HIV vaccine trials for Aventis. The combination vaccine will be tested on 60 patients who are now successfully being treated on highly active retroviral therapy, to see if they can take a drug holiday.

CANVAC has proposed a stream of discovery research in



HIV/AIDS affects countless people, including these orphans in Poland.

parallel with clinical trials, and Canadians have developed a research niche in the area of mucosal immunity. In the early stages of infection most activated T cells are in the mucosa. Rosenthal, for example, has been testing a vaccine to promote mucosal immunity in mice. But further development is unlikely to be promoted by Canadian money, Klein said. “I expect we’ll have to go to the US. There is nothing in place here to support moving a vaccine into humans ... producing clinical lots alone will cost at least \$1 million.”

Canadian funding for all AIDS research has been eroded over the past decade. Public research money is channelled primarily through the Canadian AIDS Strategy, which has been frozen at \$42 million a year for 11 years. Funding for the strategy was expected to more than double in this spring’s federal budget, but no new money was announced.

“We have internationally recognized talent here, but our researchers are under supported,” said Rosenthal. — *Ann Silversides*, Toronto