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THE HOT ZONES

Two labs get dramatically different receptions

Dateline: Winnipeg

They will be housed in a six-storey brick building under construction in central Winnipeg, and a 30-year-old glass and stone-faced structure on the outskirts of Toronto. For the first time in Canada, governments are preparing to open heavily protected medical laboratories, known as Level 4 Containment Facilities, where scientists will be able to examine the world's deadliest viruses. But public reaction to the two labs has been strikingly different. In Winnipeg, hardly anyone seemed alarmed at the prospect of killer viruses next door. "The lab will be modern and efficient," says Adele Guenther, a retired seamstress who lives near the building. "I trust the government to make sure it's safe." But in Toronto, news that a similar, provincially run laboratory was about to open in the suburb of Etobicoke led to horrified protests and demands for a public review of the project. "There is a lot of concern," says Etobicoke Mayor Doug Holyday. "People are going to bed at night worrying about the unknown."

The fury in Etobicoke forced Ontario's New Democratic Party government to postpone the opening of the new \$5-million lab, which was scheduled to begin operations before Christmas. Now, the facility is in political limbo while the province mulls over its next move. Meanwhile, the controversy raised questions about the surprising lack of communication by the province's health ministry, which resulted in nearly all of the municipality's senior officials learning of the lab from a recent spate of breathless Toronto media reports. Government officials insist they were preparing to tell the public about the lab when the media broke the news. "Bull—pure unadulterated lies," responds Alan Harris, an Etobicoke lawyer who spearheaded protests by local residents.

In Winnipeg, where the new building and its Level 4 lab are due to open in 1997, federal officials attribute widespread local acceptance to their efforts to keep people informed. But Dennis Cooley, a University of Manitoba sociologist, says that the role played by the media probably explains the dramatically different attitudes in the two cities. "The Toronto media got the ball rolling there by creating a public issue," says Cooley. "That hasn't happened in Winnipeg."

Government officials and scientists maintain that the Level 4 laboratories are needed to test and study the so-called emerging viruses--lethal life-forms that have appeared in developing countries and can be swiftly transported to industrialized nations by infected jet-borne travellers. Currently, suspected Level 4 viruses cannot be handled in Canada and would have to be sent for analysis to the U.S. government's Centers for Disease Control (CDC) in Atlanta. "Canada has to have its own capability of diagnosing these infections," says Dr. Jay Keystone, director of the tropical disease unit at The Toronto Hospital. "If an outbreak were to occur on both sides of the border, the CDC's priority is the United States, not Canada."

In Etobicoke, the new facility is located in the province's Central Laboratory building, which stands near a tangle of highway interchanges six kilometres from Toronto's Pearson International Airport. The nearest homes are about half a kilometre away. Since 1965, the building has housed laboratories that currently process more than three million specimens a year in the search for dangerous bacteria, parasites and viruses.

Mohamed Mahdy, the Egyptian-born, U.S.-trained scientist in charge of the Level 4 lab, extols the facility's virtues as he takes a Maclean's reporter on tour. A visitor passes through four different levels of air pressure designed to ensure that any leaks within the system move inward and not towards the outside world. At the innermost level, Mahdy points out the stainless steel and glass cabinets--they "provide the highest barriers, absolute tightness"--in which viruses will be handled by scientists using built-in plastic gloves. The chances of a dangerous virus escaping and infecting anyone in Etobicoke, says Mahdy, "are zero. They are nil. This laboratory is totally safe." In the event of an emergency, scientists would don protective "space suits" with their own air supply.

Mahdy also rejects a claim by Harris that the new lab does not meet federal guidelines. According to Harris, an analysis of test data by an independent laboratory safety consultant showed that the leakage rate in the Etobicoke lab was 20 times greater than is permitted under Ottawa's guidelines. Harris says the laboratory was "tested in March and it leaked and they worked on it, but test results in June still were 20 times greater than permitted federal levels." Mahdy insists that the claim is unfounded. "The airtightness of the laboratory," he says, "is consistent with the federal guidelines."

Part of the Etobicoke laboratory's problem stemmed from unlucky timing: emerging viruses are currently a prime media topic, largely because of a best-selling book on the subject, Richard Preston's *The Hot Zone*. It describes events in 1989 at a private laboratory in Reston, Va., where monkeys imported from Africa for experimental purposes began dying of a virus infection. The virus closely resembled the deadly Ebola strain, which killed hundreds of people in outbreaks in Zaire and Sudan during the 1970s. As it turned out, the Reston strain proved harmless to humans. But *The Hot Zone* pointed to a horrific possibility: what if the strain infecting the monkeys had been Ebola and had spread into the densely populated suburbs around nearby Washington?

Many Etobicoke residents say that is what they fear could happen in their community. And their anxieties are compounded by the suspicion that the Ontario government tried to keep the laboratory secret. "Nobody knew about this thing," says Frank Sgambellone, an Etobicoke health-food store owner who lives with his wife and three children near the laboratory building. "Why? Is there something they're scared to tell us?"

Health ministry officials in Toronto insist that there was no attempt to cloak the laboratory in secrecy. When construction of the new lab began, the ministry informed Etobicoke officials, and a few articles appeared in the local press. After that, there was sporadic coverage by Toronto newspapers, but little interest was generated in Etobicoke. During the early 1990s, as the Westbury, N.Y.-based firm MRLabs conducted tests of the new laboratory, information about the Level 4 facility made up part of an Ontario health ministry display at Toronto's Ontario Science Centre. But no effort was made to inform Etobicoke residents about the display.

The Winnipeg experience provides a stark contrast in public relations. Officials in charge of the \$142-million federal project say they went out of their way to inform Winnipeggers about the new building, which will contain a Level 4 facility and five other labs designed to do analysis and research into microbes that cause disease in animals and humans. Federal officials say that, starting in 1989, they mailed literature to local residents and staged educational open houses. "From the very beginning, we knew that this was the way to go," says Hermy Lior, a federal microbiologist who is project leader for the Winnipeg building.

Defenders of the controversial labs point to the operations of the CDC's Level 4 facility in Atlanta. The CDC laboratory is adjacent to the campus of Emory University as well as residential neighborhoods. "In about 30 years of Level 4 operation," says CDC spokesman Bob Howard, "there has never been an accident or a leak here, and I have never received a single call from a concerned resident." But in Etobicoke, some residents are so concerned that they think the Level 4 laboratory may have to be put somewhere else. "Canada is a huge country," says architect Branko Sarcanin, who lives near the lab with his wife and six-year-old daughter. "Why not put it somewhere up north where there aren't many people?" Now, provincial officials face the difficult task of convincing Etobicoke residents that the laboratory is safe enough to be left exactly where it is.

PHOTO: Mahdy in Etobicoke lab

PHOTO: Scientist wearing protective clothing: 'the highest barriers--absolute tightness'

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By Mark Nichols with Donald Macgillivray

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