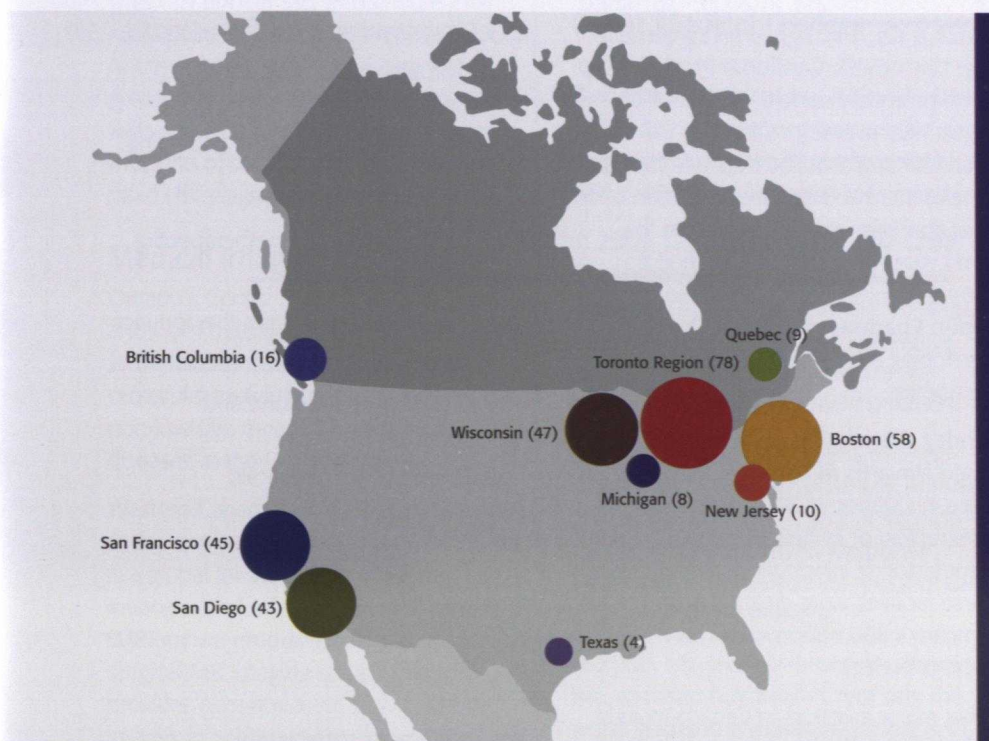




Winnipeg, Manitoba is an international centre for vaccines R&D. Not only is Winnipeg home to the Public Health Agency of Canada and the International Centre for Infectious Diseases, it also houses Canada's only Level 4 containment laboratory, one of just 15 in the world. An example of Canadian expertise in infectious diseases was the role played by this facility in sequencing the H1N1 virus in 2009. Within weeks of receiving samples, Canada was the first country to have completed the full genome sequencing of this virus—an important first step that helped in the creation of an H1N1 vaccine.

### Canada has some of the largest clusters of central nervous system and regenerative medicine research in North America



#### NORTH AMERICAN STEM CELL RESEARCH ACTIVITY, NUMBER OF PRINCIPAL INVESTIGATORS

Data completed by the Toronto Region Research Alliance.

Source: MaRS and Government of Ontario. *Expecting the Unexpected: Regenerative Medicine Asset Map—An Analysis of Ontario's R&D Excellence and Commercialization Capacity*. 2009. p. 4.

Notes: (1) Institute for Scientific Information (ISI) citation analysis, as of August 2008; research association reports; primary research. (2) Capacity for Maryland, New York and Pennsylvania was not plotted, as there are fewer than four PIs in these jurisdictions.

In 2008, **Sanofi Pasteur Limited**, the vaccines division of France's **Sanofi-Aventis Group**, invested \$100 million to expand its vaccine R&D facility in Toronto. This facility is the company's only R&D centre outside of France.

#### Central Nervous System (CNS)

British Columbia is an important centre for multiple sclerosis (MS) clinical trials and home to a province-wide tertiary MS clinic, the second-largest in North America, with over 4,500 registered patients. Vancouver, British Columbia is the fastest-growing biotech cluster in Canada and is home to several industry leaders such as **QLT Inc.**, **Angiotech Pharmaceuticals, Inc.** and **Cardiome Pharma Corp.** Metro Vancouver-based **Xenon Pharmaceuticals Inc.**, a clinical genetics-based drug discovery and development company, has established multi-million-dollar drug development deals with Merck & Co. Inc., Novartis AG, F. Hoffman-La Roche Ltd. and Takeda Pharmaceutical Company Limited.

In 2007, the Canadian division of Europe-based **AstraZeneca plc** invested \$10 million in expanding its pain control research centre in Montréal. This investment builds on the company's long-standing commitment to R&D in Quebec, a commitment that has translated into more than \$400 million for scientific research and development over the past ten years. The site now employs 125 scientists.