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BIOTECanada

Biotechnology in Manitoba

While Manitoba has only 4% of Canada's population, it is home to 8% of the national biotech activity. The industry is characterized by a strong entrepreneurial spirit, with recent start-ups representing more than one-third of existing companies.

In fact, *Ernst & Young's Resurgence: Global Biotechnology Report 2004* ranked Manitoba as the fastest growing biotechnology sector in Canada. The province also recently became home to the Public Health Agency of Canada.

Some of Canada's largest life sciences companies, including Biovail, Cangene and Monsanto, have established facilities within the province to further their worldwide biotechnology research programs.

Dominant activities in the province include pharmaceutical & biopharmaceutical R&D and production (speciality hyperimmune plasma products and recombinant therapeutic products, sustained release pharmaceuticals, monoclonal antibodies, fermentation, downstream processing and purification) and agricultural biotechnology (development of crop varieties with improved pest resistance and enhanced qualities, cereal and oilseed quality and pathology, cereal genomics, identification and extraction of high value materials from crops).

With the mandate set by the Kyoto Protocol and human encroachment of natural ecosystems, environmental biotechnology development has the potential of emerging as one of the leading life sciences sectors in the future.

Such initiatives would lead to the development of environmentally friendly sources of energy, including geo-thermal heat pumps, ethanol blended fuels, and wind, solar and hydrogen-based electrical generation to supplement Manitoba's hydroelectric energy resources.

Manitoba achievements:

The Canadian Science Centre for Human and Animal Health is the first and only global centre with level 4 bio-containment capabilities for the study of both human and animal disease.

Winnipeg scientists Dr. Steven Jones and Dr. Heinz Feldmann have developed vaccines that fully protect monkeys against two of the world's deadliest viruses, Ebola and Marburg. In the United States, the discovery is being hailed for its promise to defend against germ warfare.

Located in Winnipeg, The National Research Council's Institute for Biodiagnostics is the most advanced facility in Canada for studying and developing non-invasive diagnostic tools such as NMR and MRI technologies.

Manitoba enjoys a global leadership position in the development of cereal and oilseed crop varieties. The University of Manitoba's Faculty of Agricultural and Food Sciences is recognized for the leading role it played in developing canola. The Cereal Research Centre, located at the University, is Agriculture and Agri-Food Canada's lead centre for cereal genomics.

Source: *Manitoba Industry, Economic Development and Mines*
<http://www.gov.mb.ca/iedm/profiles/biotech/index.html>



LSAM

Life Science
Association of Manitoba

Statistics

Companies	41
Employees	4200
Revenues	\$440 million
R&D expenditure	\$120 million

Manitoba firms by sector

Biomedical	26
Agriculture	13
Environmental	2

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