

---

NCE research projects are subjected to rigorous scientific selection and evaluation. Not only do the projects have to meet strict scientific criteria, they also have to contribute to Canada's economic well-being and enhance the quality of life. Some of the projects being undertaken by NCEs in the biomedical sector are listed below.

*The Canadian Bacterial Diseases Network*

The Canadian Bacterial Diseases Network (CBDN) links top researchers in universities and government laboratories in the investigation of key aspects of bacterial attack and host response in humans and animals. The Network's program responds to the pressing demand for new vaccines, antibiotics and novel approaches to diagnostics. Through the CBDN, the biotechnology and pharmaceutical industries gain access to a unique source of expertise and intellectual property in current research. A notable recent advance by the CBDN includes the discovery of a new biochemical approach that may block the onset of chronic infections that kill most cystic fibrosis patients.

*The Canadian Genetic Diseases Network*

The Canadian Genetic Diseases Network (CGDN) brings together world-class researchers and industrial partners to focus on devastating and common genetically transmitted diseases. Network projects involve the investigation of genetic predisposition to diseases such as cancer and heart disease, and the identification of specific genetic abnormalities that can cause diseases such as cystic fibrosis, muscular dystrophy and Huntington's disease. Researchers within the CGDN have confirmed that a specific genetic error is associated with almost all cases of Huntington's disease.

*The NeuroScience Network*

This Network provides a unique spectrum of research capability to explore and test new strategies for neuronal repair in Canada. Canada has a long-standing reputation for world-class neuroscience research, and this Network has created a unique R&D resource by linking 125 research participants from 18 universities and research institutes across Canada. This linkage provides access to the leading neuroscience being developed in Canada and to the opportunities for developing products for a wide range of brain and central nervous system disorders.

*The Protein Engineering Network of Centres of Excellence*

The Protein Engineering Network of Centres of Excellence (PENCE) dedicates itself to co-operation and collaboration with industrial clients, particularly in the pharmaceutical and biotechnology sectors. It links 51 scientists from 18 institutes, companies and universities involved in protein engineering. For all companies, PENCE is a fertile source of new ideas and technologies. Current R&D is focussed on the medical applications of protein engineering. As a consortium of the leading applied protein engineers in Canada, it is able to provide assistance to industrial processing, and to many areas of drug discovery and early development.

*The Respiratory Health Network (Inspiraplex)*

This Network concentrates on respiratory health, as well as the development of innovative solutions and technologies for the treatment and prevention of breathing problems that are caused by diseases and environmental factors. Ongoing projects include a collaboration with industry to create drugs to overcome airway blockage in people with cystic fibrosis and asthma, and kits to test lung and diaphragm functioning.