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GenomeCanada

Improving Bioremediation of Polluted Soils Through Environmental Genomics

Status	Approved
Competition	2010 Large-Scale Applied Research Project Competition
Sector	Environment
Genome Centre	Genome Quebec
Project Leaders	B. Franz Lang and Mohamed Hijri, Université de Montréal

Project Description

Reclaiming polluted land sites. Mining activities, oil and gas extraction, agriculture and industrial processes can all contaminate soil, creating a significant world-wide problem. Efforts are underway to reduce the production of industrial and agricultural pollutants at their source, but this does not address the enormous legacy sites containing trace metals that can remain in the soil for millennia. Genome Canada is funding research into phytoremediation - a promising new biotechnology that uses plants to clean up pollutants in the soil. Part of the research involves sequencing selected microbes that are most effective in soil detoxification, which will place important new data in the public domain.

Remediation services represent a market of over \$30 billion in Canada and this sector has grown every year for the past decade. This project will, therefore, yield significant economic benefits for Canada, rehabilitate soil and create a healthier environment. The project will also develop a step-by-step methodology for sustainability assessments for site rehabilitation, including a toolkit for boards of directors and legal guidelines for governments and corporations.