

INNOVATION NOW

A MONTHLY SHOWCASE OF CANADIAN RESEARCH THAT IS TRANSFORMING OUR DAILY LIVES

At work for the economy

Safer brain surgery

A Canadian-made intraoperative magnetic resonance imaging (MRI) system which helps guide surgeons by taking images of a patient's brain *during* surgery, has been making waves in operating rooms around the globe since 2005. Developed by researchers at the **University of Calgary** and the National Research Council, the invention led to the creation of IMRIS Inc., a Winnipeg-based company that now employs 170 people.

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Testing landfill technology pays off

The City of Barrie saved its taxpayers \$10 million using technology tested at **Queen's University's** GeoEngineering Centre. Barrie wanted a long-term solution to protect the aquifer feeding its drinking water system, located under an aging landfill in the middle of the city. The Queen's group showed that geosynthetic liners performed better than natural clay liners. This helped Barrie get clearance from the province to use the material and saved it the \$10 million it would have cost to transport thousands of truckloads of clay to the site.

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Supporting aquatic farming

Newfoundland's fish, shellfish and aquatic plant farming industry has been growing steadily since 2003 and was worth more than \$100 million in 2010. The industry's market value rose by more than 240 percent from 2005 to 2010, giving a vital economic boost to a number of small towns affected by the North Atlantic cod moratorium. The Ocean Sciences Centre at **Memorial University of Newfoundland** is the sole provider of young Atlantic cod for the province's aquaculture industry, which directly employs about 700 people. [READ MORE](#)

Spotlight on research

The high-tech hunt for Canada's history in the Arctic *Canada Foundation for Innovation funded technology leading the search for the remains of the Franklin expedition*

From coast to coast to coast, Canada's status as an ocean nation has never been more important to its identity, history and economic growth. The Ocean Technology Lab at the University of Victoria is creating next generation technologies to perform research and analysis in the depths of Canada's oceans. These technologies are currently in use by the team hunting for the remains of the Franklin expedition in Canada's Arctic.

Sir John Franklin was a British naval officer and well-known explorer who led a 128-man expedition through Canada's Northwest Passage in 1845. Franklin and his crew were lost after their two ships became icebound near King William Island in Nunavut. The two ships, *Erebus* and *Terror*, have never been found. [READ MORE](#)

STATS AT A GLANCE

National Forest Week is September 23-29



The global recession, slumping U.S. housing market and high Canadian dollar have led to significant revenue and job losses for the forestry industry. But the industry recognized the need to innovate and adapt. Since 2007, it has been boosting its investments in new value-added products in pulp and paper and wood product manufacturing. The Canada Foundation for Innovation has contributed more than \$47 million to equip forestry researchers with the tools they need to help the industry reinvent itself.

[Read the full story...](#)

CFI-funded research in the news

AGRICULTURE — A small London, Ont., company is working on compounds that could produce new super crops without affecting their genetic makeup. (*London Free Press, August 13, 2012*)

[LINK TO STORY](#)

HEALTH — Technology detects infections before doctors know preemies are sick. (*The Globe and Mail, August 12, 2012*)

[LINK TO STORY](#)

NEUROBIOLOGIE — Des chercheurs de l'Université Laval ont mis au point une lumière bleue qui permettrait aux travailleurs de nuit de demeurer éveillés et de trouver le sommeil plus rapidement à la fin de leur quart de travail. (*Radio-Canada.ca, le 12 août 2012*)

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GÉNÉTIQUE — Des chercheurs découvrent l'origine génétique du tremblement essentiel. (*U de M Nouvelles, le 2 août 2012*)

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Outfitted with sonar, this self-guided robotic sub will map the seafloor in an effort to locate the ships from the long-lost Franklin expedition.

Look for the next issue of *Innovation Now* in mid-October.

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