January 2015

*The numbers are **impressive.***

*The impact is **breathtaking.***

NSRIT
Nova Scotia Research and Innovation Trust

OUR 2015 SNAPSHOT

With a New Year Comes New Innovation Opportunities

There is fantastic life-changing, economy-building research being carried out at Nova Scotia's post-secondary institutions. The Nova Scotia Research and Innovation Trust, with significant support from the Province, is working hard with partners to ensure our talented researchers have the best equipment possible to turn their discoveries into commercial innovations.

In this snapshot we offer just a taste of the important research work being carried out in Nova Scotia. On our website (www.nsrit.ca) you can find dozens of other inspiring stories about NSRIT funded projects and the ways the collaborative research we fund impacts the economy, benefits society, and supports key priorities such as ocean sciences, information and communications technology, natural resources industries, and health and wellness.

Throughout the coming year, I invite you to return to the website frequently to continue learn about our noteworthy researchers and the leading-edge skills they are passing on to the next generation of Nova Scotians.

On behalf of my NSRIT colleagues, I wish you the very best in 2015.

Lois Levine
Executive Director
Nova Scotia Research and Innovation Trust

From Wastewater to Workforce: New Skilled Jobs

Dr. Rob Jamieson's wastewater research is doing more than just helping build better treatment systems. It's furthering careers, improving government services, stimulating the economy and creating a safer environment.

The Dalhousie Associate Professor says a key to the broad-based success can be traced back to the way his team of highly qualified student personnel learn to operate sophisticated equipment in both the laboratory and in full-scale wastewater treatment systems. Read More

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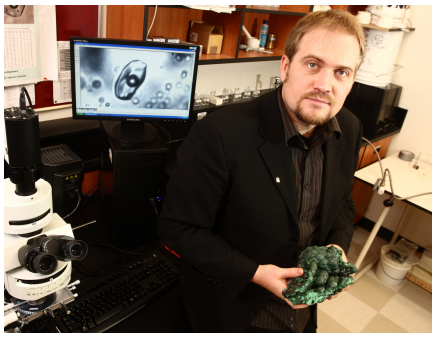
New Ways of Searching for Gold



As Nova Scotia companies revisit historic mining sites to drill for gold that was formed here more than 300 million years ago, new technologies will have far-reaching implications for mineral exploration, both in and beyond Nova Scotia.

"Modern equipment has the potential to make it easier to predict where gold will be found, says Dr. Jacob Hanley, a Geology Professor at Saint Mary's University." It can also eliminate some of the guesswork in offshore drilling for oil and gas." Read More

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Using Plants as a Window on Climate Change

When Mount Saint Vincent University Professor Mirwais Qaderi is looking for evidence of climate change, he need only to walk from his office to the university's Physiological Plant Ecology Lab.

By examining seeds germinating in special chambers in one corner or by comparing the leaf structure of two similar plants grown in slightly different conditions across the lab, the Assistant Biology Professor can use small plants to document the big impacts of the world's changing environment.
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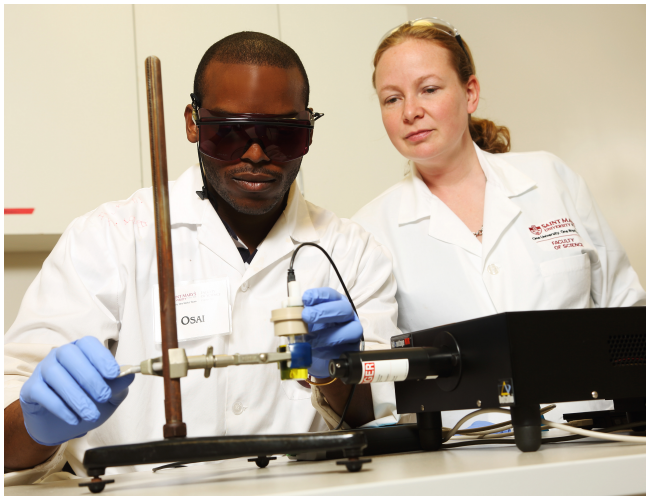
Researchers Hooked on Zebrafish

Dalhousie University Professor Jason Berman uses zebrafish to understand the mysteries of how cancers, blood disorders, and rare genetic conditions manifest-and should be treated-in individuals.
His lab is the only one in Canada, and one of only a few in the world pioneering testing drug treatments in fish.
"Right now there is a big push for personalized medicine. Different drug treatments are needed for individual cancers and testing responses of these cancers in the fish can help direct therapies," says Dr. Berman. Read More

Fighting Disease One Instrument at a Time

There's a special place in Christa Brosseau's heart for the Raman spectrometer.



"It's the most heavily used piece of equipment in our laboratory," says the Saint Mary's University Chemistry professor. "We've forged many partnerships as a direct result of this instrument, including a collaboration with a researcher in South Africa on early detection of preeclampsia (a pregnancy disorder), the world's second leading cause of maternal death."

Dr. Brosseau purchased the Raman spectrometer, as well as a Langmuir Blodgett Instrument and an ultrapure water system, with funding received in 2010 from the Nova Scotia Research and Innovation Trust (NSRIT) and matching funds from the Canada Foundation for Innovation. Read More

Sniffing Around for a Sustainable Future in Agriculture and Forestry

Dr. Kirk Hillier is passionate about bugs... especially the way they communicate. A pest management expert, the Biology Professor at Acadia University says insects, like other animals, secrete chemicals - pheromones - for communication and sexual attraction.

"If we can control pests by interrupting their communication, mating and reproduction, we can reduce wide-spread pesticide use in agriculture and forestry," says Dr. Hillier. Read More

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