

Collège Montmorency and INRS are proud to contribute to the development of sustainable and circular agriculture

A promising first-time collaboration aimed at training the next generation of scientists

Laval, October 14, 2022– Collège Montmorency and the Institut national de la recherche scientifique (INRS) have partnered for the first time in implementing an innovative approach to circular economy through a Natural Sciences and Engineering Research Council of Canada (NSERC) research grant.

This Innovation Links grant, obtained at the beginning of the year, will support the research project “Composite Hydrogel-Based Biostimulant Systems” led by professors Maritza Volel at Collège Montmorency and Philippe Constant at the INRS Armand-Frappier Santé Biotechnologie (AFSB) Research Centre, in partnership with the company Technologies Ecofixe, Inc.

NSERC research grant represents \$54,000 per year over three years, with an additional \$162,000 contribution from its industrial partner.

An innovative approach to the circular economy

The future of the planet depends on waste management and the preservation of natural resources, such as water and soil. This project will involve cleaning water and enriching the nutrient profile of soil: two key elements that are equally necessary for eco-responsible and sustainable agriculture. Organic and inorganic hydrogel-based composite materials, combined with selected microorganisms, are the basis of this innovative approach.

Through this innovative process, research partner Technologies Ecofixe hopes to establish a recovery channel for wastewater treatment residuals, resulting in biofertilizers that improve the growth of various crops and replace traditional fertilizers.

In the context of globally expanding green technologies based on the circular economy and sustainable development, this project will generate significant economic benefits.

A multidisciplinary project contributing to train young scientists

Materials chemistry researcher Maritza Volel and soil microbiology researcher Philippe Constant will co-supervise the doctoral thesis of INRS student based at the AFSB Research Centre. They will also lead the participation of three Collège Montmorency students each year as part of this project.

“I am very excited about this opportunity to be involved in this innovative water treatment and sustainable agriculture project. My work will consist of re-employing composite hydrogels from Technologies Ecofixe in order to promote soil health for sustainable and circular agriculture. I will be supervised by professors Philippe Constant and Maritza Volel, and their combined expertise will be invaluable to my training. Technologies Ecofixe’s commitment to sustainable development makes me excited to

collaborate with the company to achieve their objectives,” said **Xavier Baril**, a doctoral student at INRS.

“I am very pleased with this new collaboration with Professor Constant from INRS. Merging of our respective expertise in this multidisciplinary project will create an excellent opportunity to enrich the pool of knowledge on biostimulants, and catalyze growth for Technologies Ecofixe,” said **Maritza Volel**, professor at Collège Montmorency.

“Technologies Ecofixe is proud to collaborate once again with Collège Montmorency and Dr. Volel on a new research project, that aligns perfectly with the company’s strategic development and, most important, with our deep-rooted values of sustainable development. It is with great enthusiasm that we are also collaborating for the first time with the INRS, Philippe Constant and his team. Technologies Ecofixe strongly believes in the importance of the circular economy, and this partnership with both institutions will help showcase the virtues of that approach. Technologies Ecofixe is a Quebec-based company specializing in biological wastewater treatment, and the first and only certified B Corp in this field in Canada,” added **Marisol Labrecque**, President, Technologies Ecofixe, Inc.

“This new collaboration with Professor Maritza Volel and Marisol Labrecque will provide an exceptional training environment for doctoral student Xavier Baril. The research will contribute to the growth of sustainable and circular agriculture while strengthening Technologies Ecofixe’s role as a leader in sustainable development,” said **Philippe Constant**, professor at the INRS.

About Collège Montmorency

To learn more <https://www.cmontmorency.qc.ca/>

About INRS

[INRS](#) is an academic institution dedicated exclusively to research and graduate training. Since its creation in 1969, it has actively contributed to the economic, social and cultural development of Quebec. INRS is the leading research-intensive centre in Quebec. It is composed of four interdisciplinary research and training centres located in Quebec City, Montreal, Laval and Varennes, which focus their activities on strategic sectors: [Eau](#), [Terre Environnement](#), [Énergie Matériaux Télécommunications](#), [Urbanisation Culture Société](#) et [Armand-Frappier Santé Biotechnologie](#). Its community includes over 1,500 students, postdoctoral fellows, faculty and staff.

About Technologies Ecofixe inc.

Technologies Ecofixe specializes in biological wastewater treatment. We develop and design systems that prioritize treatment performance and positive impacts, providing municipalities and industries with cost-effective, eco-friendly, and energy-efficient solutions. To learn more www.ecofixe.com

Contacts :

Marilyn Doucet

Associate Director of Communications
Collège Montmorency
marilyn.doucet@cmontmorency.qc.ca

Marisol Labrecque

President
Technologies Ecofixe inc
mlabrecque@ecofixe.com

Julie Robert

Communications and Public Affairs
Institut national de la recherche scientifique (INRS)
julie.robert@inrs.ca