PRESS RELEASE
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GÉNOME QUÉBEC ANNOUNCES AN OVERALL INVESTMENT OF $18.4 M IN INNOVATIVE RESEARCH PROJECTS ON THE ENVIRONMENT

GENOMICS TOOLS TO BOOST THE RESILIENCE OF THE NATURAL RESOURCES AND ENVIRONMENT SECTORS IN RESPONSE TO CLIMATE CHANGE

Montréal, July 22, 2021 — Génome Québec announced today a total investment of $18.4 million in innovative projects on the environment. The Board of Directors of Genome Canada approved funding for eight Canadian projects under the ***Genomic Solutions for Natural Resources and the Environment*** competition with a budget allocation of $58.6 million. Six of the eight projects involve Québec researchers, which means Québec is receiving 31% of the overall budget available nationwide.

The projects will receive close to $4 million in co-funding from Génome Québec, which will be managing them in partnership with Genome British Columbia, Genome Alberta and Ontario Genomics. A total of 19 Québec researchers from various universities are working on these innovative projects that will advance our understanding of biodiversity in Québec and Canada and develop technologies for bioremediation and plastic waste recycling.

Decisions on natural resource management made by Québec, Canada, Aboriginal peoples, industries and regulators require timely and relevant information about the risks and impacts of human activities, particularly in the context of climate change. According to Stéphanie Lord-Fontaine, Vice President, Scientific Affairs at Génome Québec, the natural resources of Québec and Canada are globally recognized assets, and among our population there is growing awareness of the importance of biodiversity, sustainable development and distinct ecosystems. “Génome Québec is proud to help fund these projects that will improve the impact of environmental DNA (eDNA) technology. This approach will produce key information to help us enhance the understanding and respect we have for our ecosystems to ensure their optimal management in the context of climate change.”

For example, the project *iTrackDNA: Non-destructive precision genomics for environmental impact tracking in a global climate change era*, led by Valérie Langlois, Institut national de la recherche scientifique (INRS), Caren Helbing, University of Victoria, Jérôme Dupras, Université du Québec en Outaouais and Louis Bernatchez, Université Laval, will build end-user capacity through innovative, accessible, socially responsible eDNA tools.

Evaluated at more than $12 million, this collaborative pan-Canadian research effort will provide governments, First Nations, non-governmental organizations and industry with important new information on standardization of eDNA data. The development of standards will support informed decision-making on ecological surveys for monitoring species-at-risk, managing invasive species, and granting permits and permission for energy, mining, forestry, manufacturing and infrastructure projects.

“By 2025, eDNA will undoubtedly be a mainstream assessment tool as many countries are currently investing in eDNA technology,” said Valérie Langlois, PhD, a professor of ecotoxicogenomics at INRS. The iTrackDNA project is poised to help Canadians reach high environmental quality standards and position Canada as an international frontrunner on eDNA standards adoption, policy development and testing.”

The benefits of the research are considerable and include better monitoring tools to help detect live pinewood nematodes and improve efficacy testing for wood treatment, thereby facilitating the trade in Canadian forest products (worth $33.2 billion in 2019), to yield a substantial reduction in the cost of managing invasive aquatic species ($3.6 billion annually in Ontario alone) through early detection, and to protect valuable ecosystems.

About Génome Québec

Génome Québec's mission is to catalyze the development and excellence of genomics research and promote its integration and democratization. It is a pillar of the Québec bioeconomy and contributes to Québec's influence and its social and sustainable development. The funds invested by Génome Québec are provided by the ministère de l'Économie et de l'Innovation du Québec (MEI), the Government of Canada, through Genome Canada, and private partners. To learn more, visit www.genomequebec.com.

About Institut national de la recherche scientifique (INRS)

INRS is a university dedicated exclusively to graduate level research and training. Since its creation in 1969, INRS has played an active role in Québec's economic, social and cultural development and is ranked first for research intensity in Québec and second in Canada. INRS is made up of four interdisciplinary research and training centres in Québec City, Montréal, Laval, and Varennes, with expertise in strategic sectors: Eau Terre Environnement, Énergie Matériaux Télécommunications, Urbanisation Culture Société, and Armand-Frappier Santé Biotechnologie. The INRS community includes more than 1,500 students, postdoctoral fellows, faculty and staff.
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