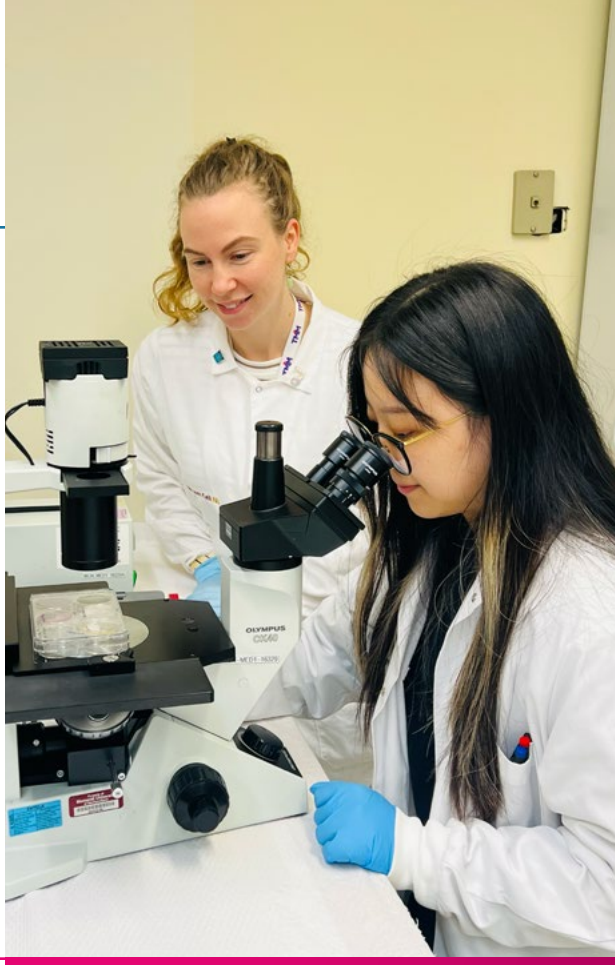
Stem Cell Network | Réseau de Cellules Souches

Powering Regenerative Medicine
Propulsons la médecine régénératrice

ATLANTIC CANADA BY THE NUMBERS



SCN REGIONAL PROFILE

For nearly 25 years, the Stem Cell Network (SCN) has led the way in building national capacity in the field of stem cell and regenerative medicine by supporting world-class research and empowering leading researchers and trainees from coast to coast.

Stem cell and regenerative medicine researchers in **Atlantic Canada** are making important advancements in the area of cardiac disease.

FUNDS INVESTED IN AC RESEARCH

$500,000

2 TOTAL PROJECTS FUNDED

1 INSTITUTION SUPPORTED

2 INVESTIGATORS SUPPORTED

13 AC HQP TRAINED

MATCHING FUNDS FROM PARTNERS

$238,000

Data from 2016 onward

SCN RESEARCHERS ARE WORKING ON:

CARDIAC DISEASE

Including arrhythmogenic right ventricular cardiomyopathy

DID YOU KNOW?

Arrhythmogenic right ventricular cardiomyopathy (ARVC) is a heart disease that can cause sudden death as its first symptom. Among an affected group of families in Newfoundland and Labrador, this disease is caused by an inherited genetic mutation and has come to be known as the **"Newfoundland curse."**

WATCH US IN ACTION

STEMCELLNETWORK.CA

UNLOCKING THE GENETIC PUZZLE OF

INHERITED HEART DISEASE

Cardiomyopathies are inherited heart diseases that affect both how the heart pumps and how it maintains its rhythm—often leading to heart failure or sudden cardiac death. For many of the 750,000 Canadians living with heart failure, a heart transplant is the only option, but donor organs are scarce.

Dr. Jessica Esseltine's research focuses on a remarkable discovery from families in Newfoundland and Labrador, where two different mutations—each of which causes severe heart disease when inherited alone—appear to cancel each other out when inherited together, preventing disease entirely.

Her research will explore how these individual mutations impair heart cell function, and why their combination seems to restore it. By uncovering the biological mechanisms behind this unexpected finding, Dr. Esseltine's team hopes to identify new strategies for preventing or treating inherited heart disease. Newfoundland and Labrador's unique population genetics and the generosity of participating families make it a powerful hub for this kind of research, with the potential to change how we understand and treat genetic heart conditions.

"This research started with a surprising question—how can two harmful mutations combine to prevent disease?

By exploring that mystery, we hope to uncover entirely new ways to protect heart health for patients across Canada and around the world."

Dr. Jessica Esseltine
Associate Professor, Memorial University of Newfoundland

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The Stem Cell Network (SCN) is a national not-for-profit that funds stem cell and regenerative medicine (RM) research; trains the next generation of talent; enables knowledge mobilization of research; and enhances the commercialization readiness of stem cell and RM innovations. From the lab to the clinic, the SCN community is connected by a common vision: to transform lives through regenerative medicine.

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