Stem Cell Network

2022-2025 Research Funding Programs Information Webinar

Photo credit: Qin Liang
SCN 2022-2025
Programs
Information
Webinar

SCN Background

SCN BY THE NUMBERS: 2001–2021

$118 MILLION
direct investment in research, training & outreach

$125 MILLION
in research partnerships

200+
translational research projects supported

196
research groups funded

1,027
patent applications

153
patents issued

111
licences granted

4,134
trainees & highly qualified personnel trained

24
clinical trials funded

21
regenerative medicine biotech companies catalyzed
The Potential for Canada

Economic Contributions

If Canada were to capture only 5% of the projected $77 billion USD market, this could represent over $5 billion CAD in potential growth, which in turn translates to over an additional 6,000 jobs.
Where it all began...

Budget 2021 proposes, “$45 million over three years, starting in 2022-2023, to the Stem Cell Network to support stem cell and regenerative medicine research.”
Defining Regenerative Medicine

Regenerative Medicine is the branch of medicine that develops methods to regrow, repair or replace damaged or diseased cells, organs or tissues. Regenerative medicine includes the generation and use of therapeutic stem cells, tissue engineering and the production of artificial organs.

Source: Nature.com (https://www.nature.com/subjects/regenerative-medicine)

Research applications that are focused on cancer must be regenerative in nature and/or use stem cells for addressing the proposed problem.
Mandate:
A national research leader dedicated to accelerating regenerative medicine and its translation for the benefit of Canada.

Vision:
To power life-saving therapies & technologies through regenerative medicine research for the benefit of Canadians.
<table>
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<tr>
<th>Updated Objectives</th>
<th>Ultimate Results</th>
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<tbody>
<tr>
<td><strong>Fuel world-class stem cell &amp; regenerative medicine research</strong>, across the research continuum, and enable its translation for the benefit of Canada.</td>
<td>Made-in-Canada RM therapies &amp; technologies are powering global advancements in science and health care innovations.</td>
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<td><strong>Build world-leading expertise in the translation</strong> of RM and stem cell therapies &amp; technologies.</td>
<td>Canada is globally known for its translational expertise and ability to deliver innovative technologies &amp; therapies into the clinic.</td>
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Stem Cell Network: 2022-2025 RESEARCH PROGRAMMING

Funding Streams

Cross-cutter Commercialization

ECR Jump Start
Impact Awards

Discovery

Clinical Accelerator
Clinical Trials

Translation

Translation & Society Team
Knowledge Translation Awards

Pre-clinical

Clinical

Commercialization

Clinical Trials

Fueling Biotechnology

Pre-clinical

Clinical

Commercialization

Impact Awards

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Fueling Biotechnology

Cross-cutter Commercialization
Stem Cell Network: 2022-2025 Competition and Funding Timeline

**ROUND 1**

- **'21**
  - LOI Launch: 
    - Sept 1 '21
  - LOI Deadline: 
    - Sept 22 '21
  - Full applications open: 
    - Sept 24 '21
  - Full application deadline: 
    - Dec 1 '21

- **2022**
  - Jan-March 2022: International Peer Review
  - RMC evaluation
  - Board approval

- **2023**

- **2024**

- **'25**

- **INTERNATIONAL PEER REVIEW**
  - Assessment of scientific and commercialization merit.

- **RESEARCH MANAGEMENT COMMITTEE**
  - Evaluation of strategic fit with SCN mandate.

- **SCN BOARD**
  - Utilizes RMC recommendation in final funding decision.
Stem Cell Network: 2022-2025 Competition and Funding Timeline

ROUND 1

- '21
- 2022
- 2023
- 2024
- '25

ECR Jump Start Awards - $300K
Impact Awards - $250K
Clinical Trial Awards - $1M
Translation & Society Team Award - $750K
Knowledge Translation Awards - $200K
Fueling Biotech Partnerships Awards - $400K
Horizon Awards - $3M

R1 Project start: April 1, 2022
Stem Cell Network: 2022-2025 Competition and Funding Timeline

ROUND 1

'R21' - 2022 - 2024 - '25

- ECR Jump Start Awards - $300K
- Impact Awards - $250K
- Clinical Trial Awards - $1M
- Translation & Society Team Award - $750K
- Knowledge Translation Awards - $200K
- Fueling Biotech Partnerships Awards - $400K
- Horizon Awards - $3M

R1 Project start: April 1, 2022

24 month project end: Mar 31, 2024

34 month project end: Jan 31, 2025
Projects must have a RM focus and the potential to move along a translational pathway.
Projects must include aims, milestones and deliverables.
Projects should integrate sex and gender considerations into the research, when appropriate.
Projects should include an explanation of how an inclusive and diverse culture will be fostered and maintained within the team.
KT & training plans must be clearly outlined within project proposals.
Include non-federal partnerships that provide in-kind and cash contributions. Partnerships and leveraged funding (in-kind and/or cash) will increase the application’s ranking. Partner letters of support are required.
An applicant is limited to act as Lead Investigator on only one LOI submission and project application per program
Investigators requesting funds from SCN must be based at a Tri-Council eligible institution and must themselves be eligible to receive Tri-Council funding.
Early Career Researcher Jump Start Awards

Up to $300K/award for 34 months (R1)

- Funding through this program will support early career researchers (ECRs) from the health, bio-engineering and social sciences who are within the first 5yrs. of an initial academic appointment*.

- **Projects can focus on developmental or high-risk, innovative regenerative medicine research that has the potential to be translated in the coming years.**

- ECRs must show how the project will contribute to building out a longer-term research program in RM.

- **Potential areas of activity:**
  - development of new regenerative medicine models;
  - expression and epigenetic studies to understand behavior of stem and progenitor cells for health or disease;
  - generation of unique datasets;
  - proof-of-principle experiments;
  - identification and characterization of compounds/drugs that target stem cell fate and function with the aim to develop novel therapeutic approaches.
  - In addition, projects that have a bio- or tissue-engineering focus and are relevant to regenerative medicine are in-scope for this program.
  - policy, regulatory or ethical issues relevant to regenerative medicine research
Impact Awards

Up to $250K/award for 24 months (R1 & R2)

- Projects that may be funded within this program can involve proof-of-principle experiments for gene and/or cell therapy development, development of new models, and expression and epigenetic studies to understand behavior of stem and progenitor cells in disease relevant settings.

- Projects must articulate a translational “bench to bedside” path of the research and where the proposed research stands along the path.

- Seed research avenues or build intellectual property (IP) that will yield Canadian translational or commercialization activity.

- Awards can be to support work in an individual lab.

- Should include collaborators from outside of the Lead Investigator’s institution to further the Network and research impact.
Clinical Trials Awards

Up to $1M/award for 34 months (R1)

- Support early phase clinical trials that focus on therapies or technologies relevant to regenerative medicine and that will be made available to Canadian patients.

- Trials should use a collaborative team-based approach, and Phase II trials should include more than one site.

- SCN will contribute a maximum of 40% for the costs of a clinical trial.

- Funded projects must include a robust study design & clinical protocol.

- Trial proposals must also provide a patient engagement plan, health-economic analysis that demonstrates need and viability for reimbursement.

- REB and CTA approvals must be in place prior to funding.
Clinical Trials Awards (cont.)

Up to $1M/award for 34 months (R1)

- Funding can be used to offset the costs of manufacturing a cell product that will be delivered to patients. **A letter of support from cell manufacturer is required.**

- Applications should describe risk mitigation strategies to overcome challenges that could prevent clinical trial success (e.g. patient enrollment, manufacturing, partner and receptor engagement)

- For multi-site trials a training plan must be in place for all those who will be participating in the trial and delivering the product to patients and tracking outcomes.
Translation & Society Team Award

Up to $750K for 34 months (R1)

- Support a multi-disciplinary policy & society team who will focus on a specific theme and dimensions (i.e., ethical, legal, social, regulatory or economic) relevant to RM.

- Be driven by expert ELSI teams that may include investigators not previously funded by SCN.

- Project design should consider the needs of receptors and/or end users (e.g., policy & regulatory users, patient groups, academic stakeholders, the general public etc.).

- Project plans should include details on how the research will be adopted by receptors and provide letters from receptors that demonstrate their interest in moving the results of the research forward.

- Projects must demonstrate international relevance and the potential for both national and global impact.

- Feature the development of ELSI Highly Qualified Personnel (HQP) as a key pillar of the proposal to build the next generation of ELSI research leaders. Funded investigators will be expected to recruit trainees into the field, along with Research Associates (to be supported through the project budget) and be mentored to become ECRs.
Knowledge Translation Awards

Up to $200K/award for 24 months (R1 & R2)
- Support the knowledge translation of regenerative medicine.
- Projects can focus on a social, economic, technological, regulatory, patient or ethical question or challenge that should be addressed to support the knowledge and advancement of RM in Canada and globally.
- Projects may focus on outputs that go beyond traditional academic research products including digital, educational & cultural materials.
- Project plans should include details on how the research will be tailored for and used by receptors (e.g. policy & regulatory users, patient groups, academic stakeholders, media, the general public etc). Should include letters from receptors that demonstrate their interest in the outputs.
- Awards can be to support work in an individual lab.
- Note: the creation and maintenance of databases should not represent a major component of the activities funded by this award.
Fueling Biotechnology Partnerships

Up to $400K/award for 24 months (R1 & R2)

- Supports partnerships between RM academics and early-stage Cdn start ups who have a focus in regenerative medicine.

- Supports projects in the regenerative medicine space, that are novel and competitively differentiated, and that resolve a key translational question or bottle neck that will enable a technology or therapy to move into the clinic or market within five years.

- Projects must be led by an academic at a Canadian institute and the partnering receptor company must be a Canadian SME in the field.

- Projects must be focused on advancing a Canadian regenerative medicine innovation that will have global relevance.

- Projects must provide a development plan and commercialization assessment that clearly articulates a commercial pathway, competitive differentiation, and value-creating deliverables.

- Note: Projects can use a portion of the project funds to offset costs for IP filings or for licensing agreements (up to $60K for a max of 2 filings or licensing activities).
Horizon Awards

Up to $3M/award for 34 months (R1)

- Support for innovative, transformative technology solutions for tackling significant regenerative medicine challenges and realize health and economic benefits within one decade.

- Awards will support multi-disciplinary teams with investigators located in 3 or more institutions across Canada.

- Project will be expected to be comprised of innovative, translational and ethical/policy components.

- Projects will have an innovative & transformative impact for a specific disease or illness using an RM approach.

- Enhance national collaborative networks and integrate experts new to the Network, or disciplines that are not traditional to the Network (e.g., AI, material sciences, health economics etc.).

- Seed research and build IP that will yield translational or commercialization activity within 10 years.
Questions and Answers