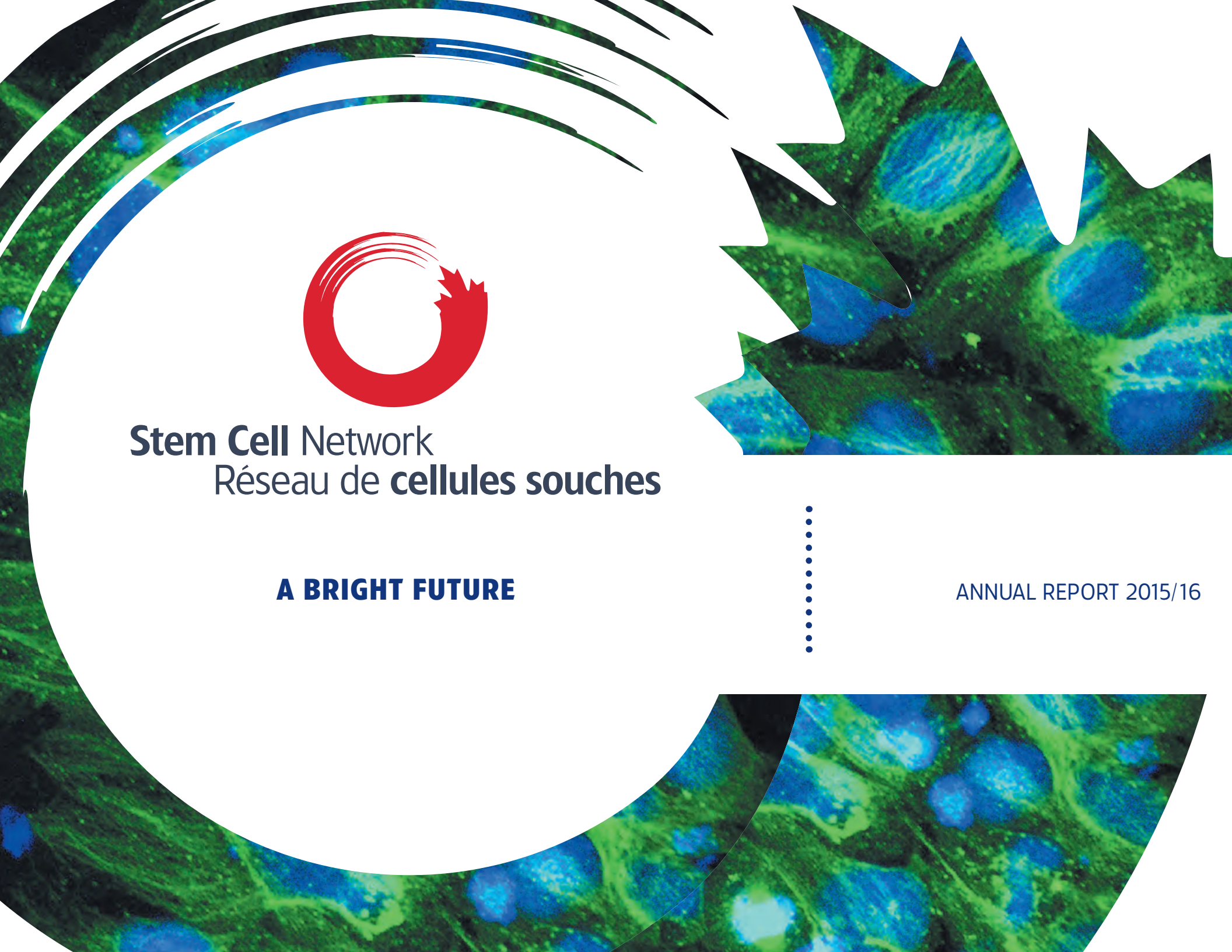


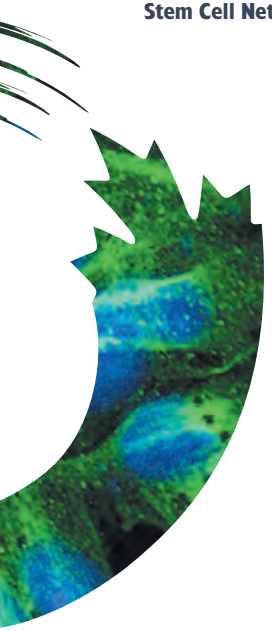
Stem Cell Network
Réseau de cellules souches

A BRIGHT FUTURE

ANNUAL REPORT 2015/16


LEAD
CONNECT
TRAIN
INVEST
NATIONALLY & INTERNATIONALLY
PEOPLE & IDEAS
THE NEXT GENERATION
GOAL DIRECTED RESEARCH
DELIVERING ON THE PROMISE OF STEM CELL RESEARCH

TABLE OF CONTENTS



A MESSAGE FROM SCN'S CHAIR OF THE BOARD OF DIRECTORS, SCIENTIFIC DIRECTOR AND EXECUTIVE DIRECTOR

We are pleased to provide both the government and our community with the Stem Cell Network (SCN)'s annual report for 2015/16. We started the year in a wrap-up mode, focusing on our legacy and on ensuring that the work of the SCN would continue through our partners. We ended the year on a much different note, as the Government of Canada, in Budget 2016, delivered positive news with a multi-million dollar investment in SCN. Today, as a result, we are looking to the future with optimism and see a bright future for stem cell research.

The funding we received will support innovative translational stem cell research that is being conducted by Canada's best and brightest scientific minds. Ultimately, the outcomes of that research will lead to important discoveries and treatments for those suffering from chronic diseases and debilitating illnesses. Canada has some of the most respected stem cell and regenerative medicine researchers in the world. Their work has led to:

- a way to turn stem cells into insulin-producing cells for the treatment of type 1 diabetes (Dr. Tim Keiffer, University of British Columbia);
- a clinical trial of an existing drug, metformin, to treat children with brain injury due to treatment for brain tumours, (Dr. Freda Miller, University of Toronto); and
- a procedure to increase blood stem cells that will enable a greater number of cancer patients to receive blood stem cell transplantations, (Dr. Guy Sauvageau, Université de Montréal).

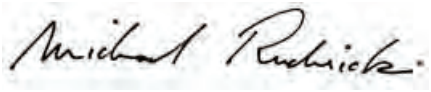
Clearly, SCN has an important story to tell. Stem cell research and regenerative medicine hold significant potential for our healthcare system, our economy and our population. Over the past 15 years, since its inception, SCN has proven itself to be a responsible, goal-oriented organization capable of supporting the highest quality research in Canada and developing the next generation of researchers. Now we will further build on the momentum and scientific muscle that exists within Canada.

This annual report presents the results of projects that came to an end within the fiscal year and profiles some of the researchers who led the work. This report also recognizes all those who have been involved with us and supported us throughout the year. We continue to value our relationships and look forward to re-connecting in the years ahead.

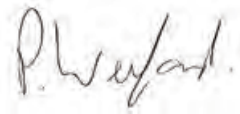
Finally, we would like to thank the members of SCN's Board of Directors for their continuing support and extend our thanks to the committed staff team who, as always, have helped to ensure the smooth running of our organization in all its varied activities. Today, the team is focused on planning for the future and developing programs and opportunities that will broaden and deepen Canada's stem cell research strength.

Sincerely,

Andrew McKee
Chair, Board of Directors



Michael Rudnicki
Scientific Director



Philip Welford
Executive Director

Stem Cell Network Mandate

To enable the translation of stem cell research into clinical applications, commercial products and policy.

INTRODUCTION

More than 50 years ago, Canadian researchers Drs. James Till and Ernest McCulloch first proved the existence of stem cells; their seminal studies launched the international field of stem cell research. Stem cells have the unique ability to develop into any type of cell and repair damaged and diseased tissues or organs. As a result, they hold great promise for the development of new therapies and treatments.

Based on that promise, the Stem Cell Network (SCN) was established in 2001. Since then, it has become Canada's premier research organization dedicated to enabling the translation of stem cell research into clinical applications, commercial products and public policy. Supported by the Government of Canada, SCN forged the Canadian stem cell community and has provided approximately $85 million for innovative, translational research. In that period, SCN has leveraged more than $80 million in partner contributions from national and international non-governmental organizations, provincial governments, industry and the charitable sector.

In addition to the leveraged funding, SCN's research investments over the past 15 years have supported:

- 12 clinical trials
- 11 Canadian biotech start-ups
- training more than 2,500 highly qualified personnel
- incubating several international and Canadian research networks and organizations

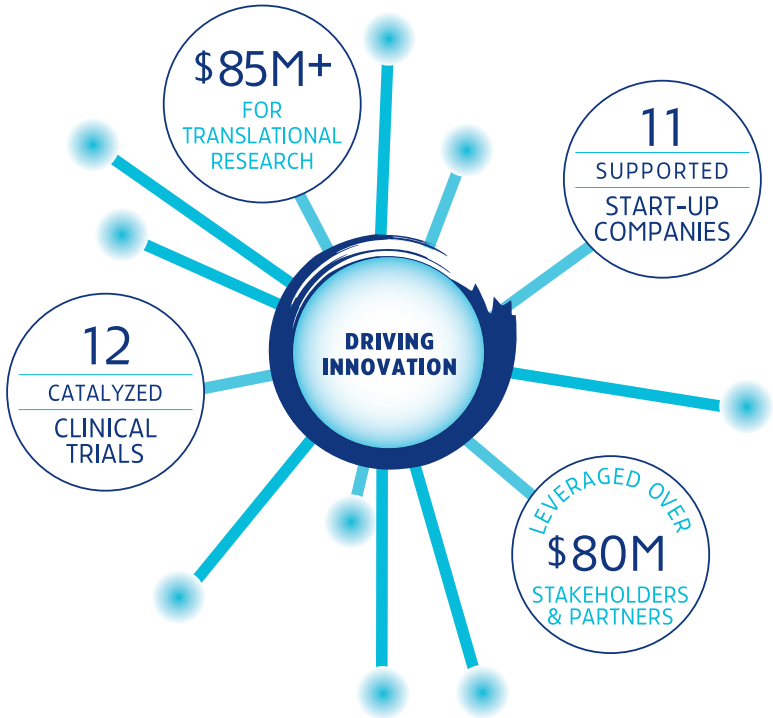
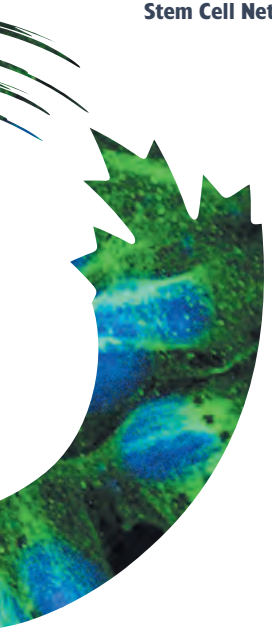


FIGURE 1: SCN Results: 2001–2015



"...to further support Canadian strengths in this highly promising field, Budget 2016 proposes to provide up to $12 million over two years, starting in 2016–17, to support the Network's research, training and outreach activities."

Growing the Middle Class, Budget 2016

In 2001, SCN provided support to some 50 research groups across Canada. Today, that number has nearly tripled.

Stem cell science, pioneered in Canada, clearly has the potential to be an iconic Canadian contribution to medical science. Recognizing this potential, the Government of Canada, in 2016, provided an additional $12 million over two years to SCN to continue to build Canada's research capacity in stem cell and regenerative science.

Today, innovative nations such as Japan, the United Kingdom (U.K.) and the United States (U.S.) are all vigorously pursuing stem cell research and development in the hopes of leading the field. Like Canada, these countries recognize the power stem cells hold for not only improving health but also lowering costs associated with the treatment of chronic diseases such as diabetes. In Canada, these diseases are responsible for 67% of all direct healthcare costs and their burden on the healthcare system continues to outpace economic growth; their treatment costs, some $68 billion, account for 3.6% of GDP. However, this is a story that can and will change as stem cell–based treatments and therapeutics come online over the next decade. SCN is proud to be delivering on the promise of stem cell research.

This report provides information on SCN's activities in 2015/16 in three key areas: research, training and networking.

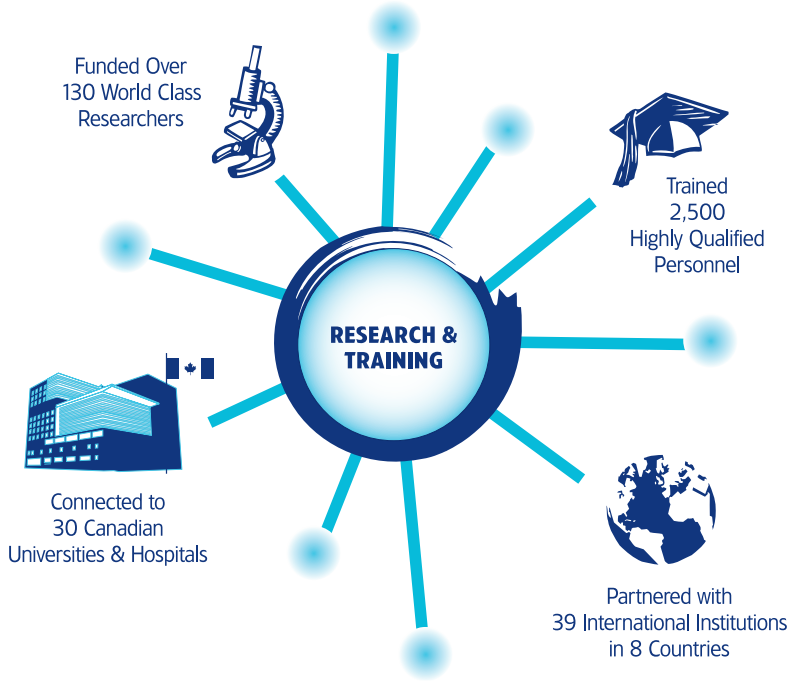
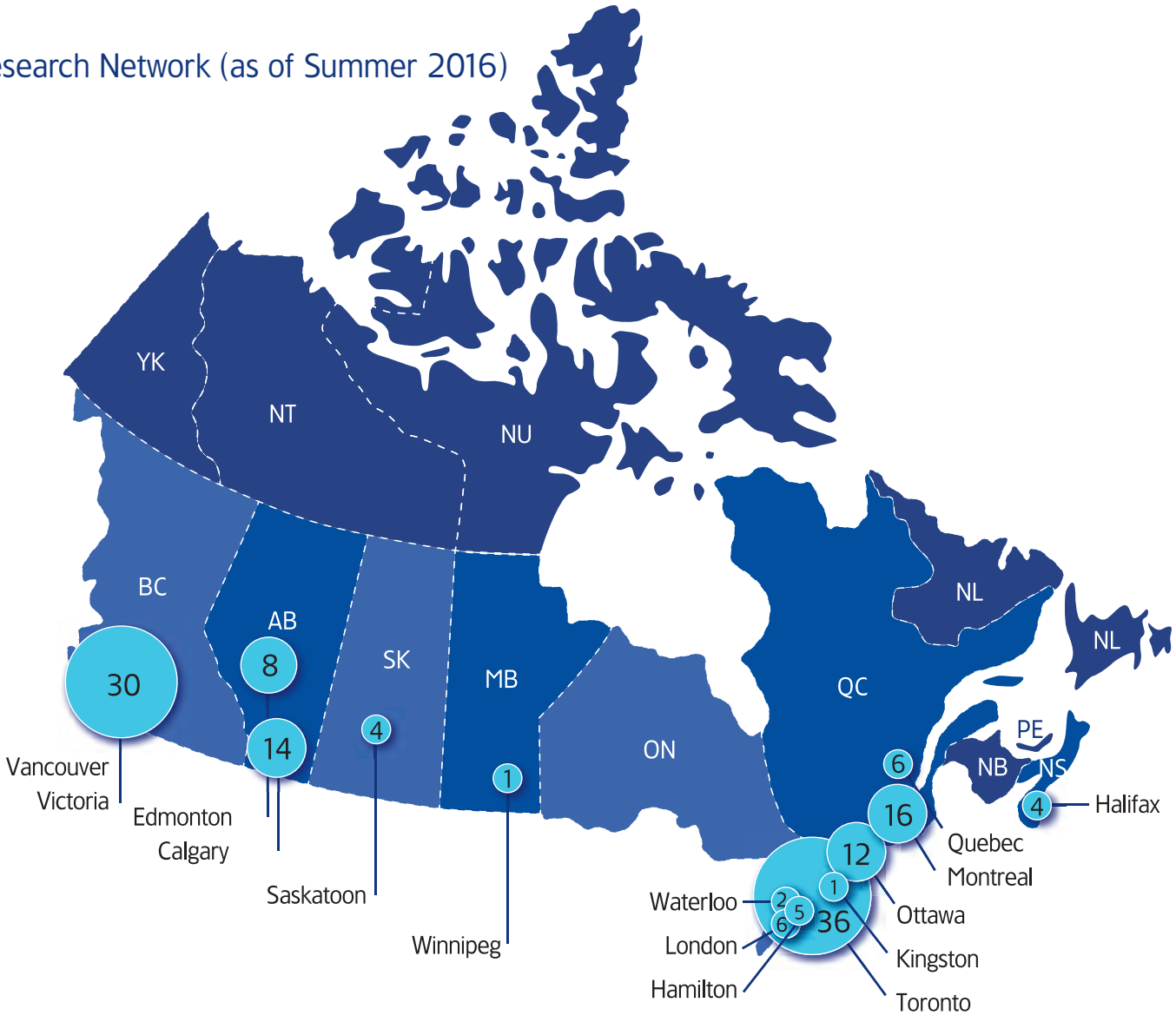


FIGURE 2: SCN Results: Building the Stem Cell Community

DYK?

Canada is in the top ranks for international collaboration and impact of scientific output, and is well positioned to be a global leader in the area of stem cell and regenerative medicine.

SCN's Research Network (as of Summer 2016)



DYK?

Canada has seven large cell therapy manufacturing centres, each led by an SCN researcher – two in Montreal and one in each of Quebec City, Toronto, Ottawa, Edmonton and Vancouver. These facilities will advance the translation of stem cell research into therapies and treatments.

RESEARCH

As 2015–16 was to be SCN's final year of operations, it did not run any new funding competitions during the fiscal year. However, some research projects that were awarded in 2011 came to an end during the fiscal year: two Global Research Program projects and two ELSI studies.

GLOBAL RESEARCH PROGRAM

SCN's Global Research Program was designed to fund research projects that demonstrate potential for major global impact and that identified tangible deliverables readily translatable to human health. Three large scale projects were funded through this program, two of which completed their work in 2015/16:

Regenerative networks: Recruiting adult stem cells for tissue repair

Lead Investigator: Dr. Freda Miller

SCN funding: $3.4 million (October 2011–March 31, 2016)

Adult stem cells are found in most tissues of our body and research increasingly suggests that these adult stem cells mediate the processes of tissue repair and regeneration. Dr. Freda Miller of the University of Toronto led a team examining the signals that can "turn on" these stem cells in the hope that learning how they work could promote tissue repair and regeneration in diseases where it does not normally occur.

This project built on previous work done by Dr. Miller's team that identified drugs that could activate adult stem cells in the skin and the brain. Among the drugs investigated was metformin, currently used to treat type 2 diabetes. The project also sought to screen other drugs to identify those that can activate adult stem cells in other tissues.

This SCN-supported project resulted in:

- The initiation of a pilot phase III clinical trial for metformin in childhood acquired brain injury following treatment for brain tumours; other trials using metformin for children with multiple sclerosis or cerebral palsy are currently in the planning stage.
- The identification of two compounds, already approved for use, that could promote wound healing and also, possibly, hair growth. This discovery has led to two patents, one awarded and one filed, and the creation of a new company, called Reveille, that has funding and collaborators for a clinical trial of these compounds for steroid-induced thinning of the dermis layer of the skin.

- The development of a new high-throughput screening platform for adult human skin-derived precursors (SKPs) to screen large libraries of proprietary compounds that would promote the development of skin-derived adult stem cells.
- The development of large quantities of adult human SKPs for use in skin transplants after burn injuries. The team is currently working on taking this finding to the clinic.
- The incorporation of a new company called Mesentech, which is focused on using mesenchymal stem cells for bone repair.
- The development of novel stem cell screens and establishment of potential new partnerships, including screens for retinal stem cells that will be further extended through a partnership with a new company called Endogena.
- The establishment of computational approaches to understand how environmental signals regulate blood or neural stem cells.

In total, the project resulted in nearly 150 scientific articles published, four patents filed and/or awarded, and interactions/involvement in four existing companies and start-ups.

DYK?

Upwards of two dozen investigators were involved with this SCN Global project. Including SCN funded Investigators like: Aaron Schimmer, Sam Weiss and John Hassell.

SPOTLIGHT

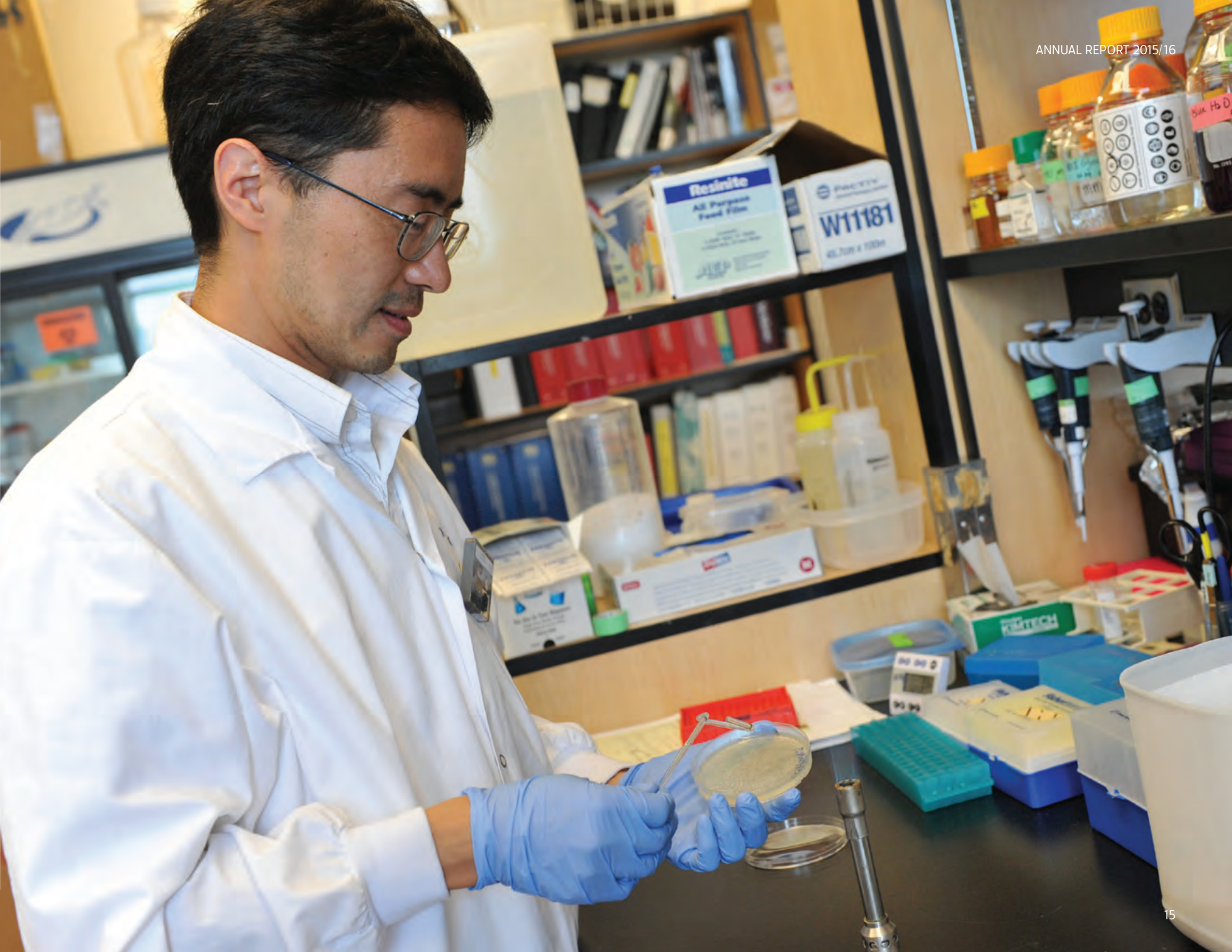
MOVING RESEARCH FROM BENCH TO BEDSIDE

Septic shock can be fatal when infection causes hyper-activation of the immune system and leads to organ failure. Estimates suggest that more than 100,000 Canadians suffer from septic shock every year. It accounts for 20 percent of all ICU admissions and costs the Canadian health-care system approximately $4 billion each year.

During 2015/16 Dr. Duncan Stewart and Dr. Lauralyn McIntyre from the Ottawa Hospital Research Institute began a clinical trial entitled, Cellular Immunotherapy for Septic Shock. This is the first trial in the world using mesenchymal stem cells to treat septic shock.

The trial is based on research originally funded in part by SCN. The SCN supported research, which was completed in 2013/14, developed the therapy upon which the clinical trial is based, and supported pre-clinical testing for safety and effectiveness. In addition, in 2013 Dr. Stewart was awarded an SCN Cell Therapy Accelerator Grant to optimize the manufacturing of clinical-grade stem cells for use in clinical trials for septic shock and other illnesses where cell-based therapies have potential benefit.

The innovative work being led by Drs. Duncan and McIntyre is impressive and already leading to meaningful results for Canadian patients.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Drug discovery using cancer stem cells

Lead Investigator: Dr. David Kaplan

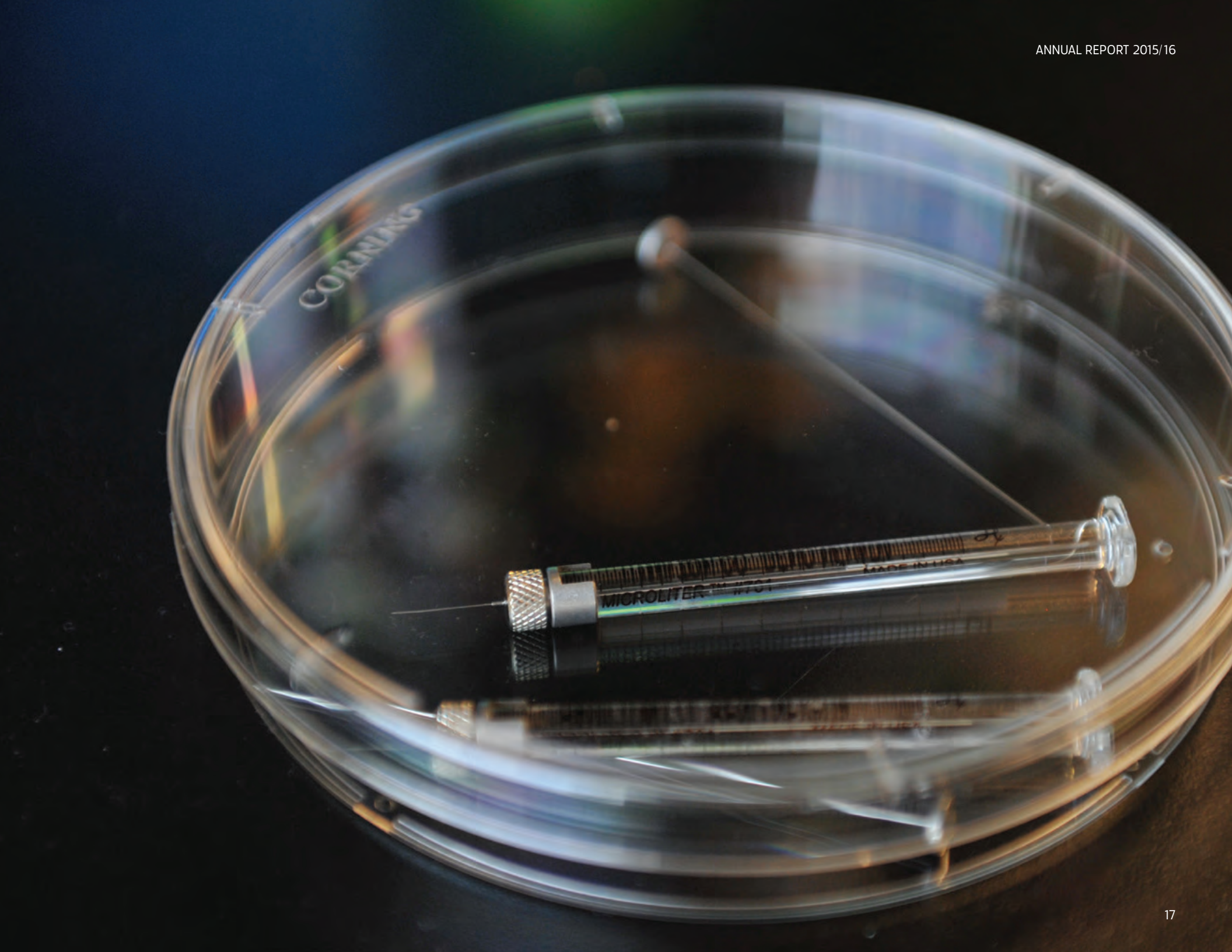
SCN funding: $2.975 million (October 2011–March 31, 2016)

Cancer Stem Cells (CSCs) are thought to be responsible for perpetual tumor growth and metastases, and for the resistance of many cancers to current anticancer therapies such as radiation and chemotherapeutic agents. By targeting CSCs, new cancer treatments should lead to long-lasting remission and cures. In this project, Dr. David Kaplan of the University of Toronto led a team in using drug screening technology to identify new and more effective drugs to treat several different cancers, including leukemia/lymphoma; glioblastoma malignant brain tumours; neuroblastoma, a major and often fatal childhood cancer; and breast cancer.

Kaplan's team met or exceeded deliverables, including:

- initiating or completing five clinical trials on potential drugs identified by screening, one in leukemia, two in glioblastoma, and two in neuroblastoma;
- partnering with, or being involved in discussions with, 12 biotechnology, pharmaceutical, or commercialization entities to bring drugs to the clinic;
- publishing 59 papers.

In addition, all four principal investigators have received follow-up funding to sustain the project, from CIHR, SU2C Cancer Stem Cell Dream Team, and Stem Cell Therapeutics and the National Cancer Institute of the National Institutes of Health.


CORNING
MICROLITER

ELSI PROGRAM

SCN has proudly supported large multidisciplinary research projects that address public policy and ethical, legal and social issues (ELSI). SCN made available more than $1 million for research under the ELSI Program and funded three projects, two of which came to an end in 2015/16 and are described in the pages that follow.

DYK?

SCN's contributions to developing a policy statement and providing expert testimony to Parliament on the need for a public cord blood bank in Canada were central to the formation of a national cord blood banking program that launched in 2013.

Enhancing translational stem cell research: Innovative models for multi-sectoral collaborations

Lead Investigator: Dr. Tania Bubela

SCN funding: $350,000 (October 2011–March 2015)

As stem cell research progresses from the laboratory to the clinic, there are still significant barriers preventing or slowing their move – scientific barriers, but also ethical, legal and social barriers. These include a lack of well-understood business models; problems with managing intellectual property; and challenges to developing the proper regulatory systems to ensure therapies are safe. In recognition of the reality that academia and industry need to work together to overcome these barriers to realize the potential of stem cell research, Dr. Tania Bubela of the University of Alberta led an interdisciplinary team of lawyers, economists, stem cell researchers, clinicians, regulators and policy experts to address models to enhance collaborative translational stem cell research.

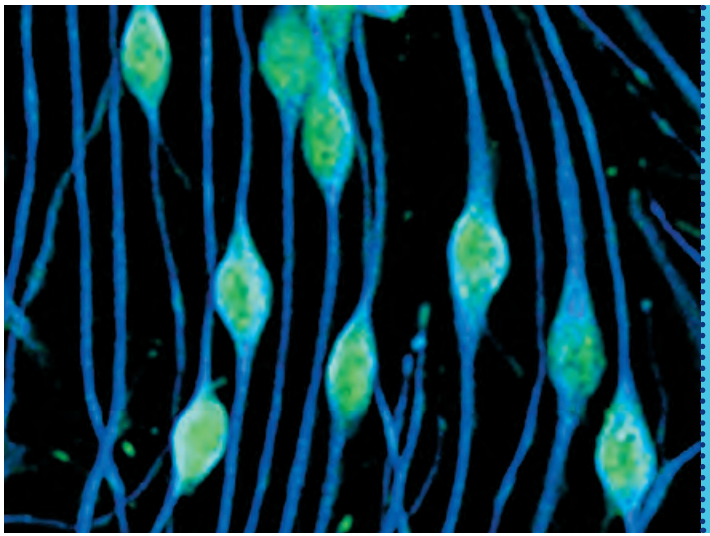
The team looked at incentives to facilitate collaboration between academia and industry, options for governance and intellectual property management and the economic aspects of such collaboration. The SCN-supported project also featured workshops to discuss various aspects of facilitating the needed collaboration and the development of a theoretical framework to guide such collaboration.

As part of the project, the team also completed case studies of similar collaborations in related fields, such as pharmaceutical, biotechnology and medical devices R&D and health services delivery, to understand existing collaborations, how barriers were overcome and governance and intellectual property management issues dealt with. As part of that work, the team built a database of publications, clinical trials and patents for diabetes and bone marrow transplantation to assist stem cell-focused collaborations.

By involving all the various players involved in collaborative stem cell research, the project's conclusions were able to set out optimal arrangements, but also reflect the reality of the constraints each player experiences, ensuring that the framework developed will actually help to move stem cell research out of the laboratory and into the clinic, including the clinical trial and the commercialization processes.

In total, the team published 22 articles, five book chapters and two policy reports, as well as making 33 presentations at workshops and conferences. The project has been commended for its inclusion of clinicians and researchers in ELSI research and for the international novelty of its approach.

SPOTLIGHT



THE POTENTIAL OF STEM CELLS IN THE FIGHT AGAINST DISEASE

There is enormous potential for the use of stem cell therapies to treat people suffering from chronic diseases & debilitating illnesses such as:

- Parkinson's
- Respiratory diseases
- Spinal cord & brain injuries
- Multiple sclerosis
- Auto-immune disorders
- Heart disease
- Cancers
- Diabetes
- Muscular dystrophy


SORTIE
Meet the Experts Breakfast
Table 10: Michael Rudnicki

From banking to international governance: fostering innovation in stem cell research

Lead Investigator: Dr. Bartha Maria Knoppers

SCN funding: $365,000 (October 2011–March 31, 2016)

Stem cell banks (SCBs) are increasingly seen as an essential resource for biological materials used in both basic and translational research. In the world of the bioeconomy, where biotechnology contributes to a significant share of economic output, SCBs are destined to become a pillar in many countries.

Dr. Bartha M. Knoppers of McGill University led a team investigating whether biobanking of other biological materials can provide answers to some of the socio-ethical and legal concerns around SCBs. The team reviewed existing governance, commercialization and regulatory frameworks for biobanking and proposed policy recommendations to govern stem-cell banking throughout the research cycle, from banking and distribution, to derivation and use. Their work provides researchers, stem cell bankers, policy makers and the general public with analyses, strategies and solutions for moving stem cell research forward, both nationally and globally.

The team examined various aspects of SCB, including:

- Governance: The team explored how SCB and stem cell research could thrive by focusing on issues related to international policy interoperability, consent, governance, privacy and traceability, and results and data sharing. The team developed policy recommendations and best practices with regard to SCB governance that can ensure the scientific and ethical integrity of SCBs.

- Regulation: The team examined regulatory frameworks for stem cell banking and research, focusing specifically on differences that could act as barriers to international collaboration and transfer of materials, particularly with regard to commercialization and clinical development. Analysis of these differences underscored the need for clear and harmonized definitions of key concepts and terminology. The team also focused on the impact of regulatory frameworks on clinical development, an area that is not well understood.

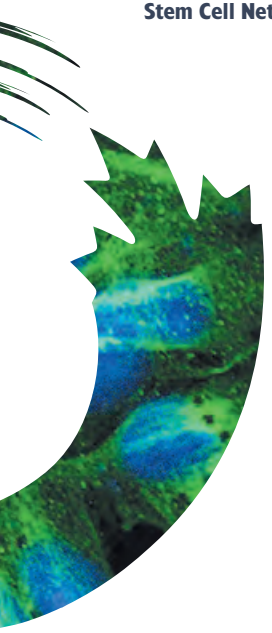
- Commercialization: In order to create an environment that will attract private investment, SCB policies need to foresee the sharing and eventual licensing of stem cell lines and accompanying data for research. Policies also need to consider future intellectual property rights, as uncertainty in this area can discourage private investment. The team examined various policies from existing SCBs around the world and also compared them against models adopted by other biorepositories, such as tissue banks or genomic databases.

Findings in these three linked thematic areas highlighted how practices, networking and standardization efforts by stakeholders are intertwined within the regulatory and commercialization environments in Canada. Currently, stem cell researchers, product developers and regulators are engaged in a unique reverse governance process, with regulators relying on the scientific expertise of researchers and developers to establish a regulatory framework to govern the future of innovation. This has two positive aspects: ensuring that regulations for emerging biotechnologies better reflect the operational and innovation-oriented priorities of researchers, and encouraging collaboration among the various stakeholders at each point in the biotechnology innovation continuum.

Overall, the project resulted in 37 publications and 98 project presentations to workshops and symposia.

DYK?

Based on the findings of the SCN-funded Stem Cell Genomics Projects, SCN partnered with the Ottawa Hospital Research Institute (OHRI) to develop StemBase, one of the largest stem cell gene expression databases in the world. StemBase was funded in 2003 but continues to be relevant and active today.



"I work a lot in policy development, ethical aspects, prospective needs and practical issues. By working directly with SCN, you have policy questions integrated into the scientific community, submitted throughout the community and then shared at SCN meetings and workshops."

Dr. Bartha Maria Knoppers

IN PROFILE: Bartha Maria Knoppers, Director of the Centre for Genomics and Policy, McGill University

Dr. Bartha M. Knoppers, Director of the Centre for Genomics and Policy at McGill University believes that being an SCN member has helped catalyze her research which explores significant social, ethical and legal questions relevant to stem cell research and genomics.

She says, "I work a lot in policy development, ethical aspects, prospective needs and practical issues. By working directly with SCN, you have policy questions integrated into the scientific community, submitted throughout the community and then shared at SCN meetings and workshops."

In her years with SCN, Dr. Knoppers has been leading research with SCN's ELSI group. This work has resulted in a variety of outcomes, including a free, global database (StemGen) designed to keep track of the laws, policies and regulatory environments governing stem cell research in 50 countries. Dr. Knoppers has also been involved in the International Stem Cell Charter and the SCN policy development committee, co-chaired with Janet Rossant. Most recently, she led a team that studied the socio-ethical and legal concerns of biobanking. The research resulted in the development of evidence-based policy recommendations to govern stem cell banking. Dr. Knoppers gives credit to the Stem Cell Network for supporting her work and its important outcomes.

Finally, when it comes to policy and ethical issues emerging as a result of advancements in stem cell research, Dr. Knoppers says that "Canada might not always have technology-specific positions, but it does have in place principled policy that can be used as a guide to support future legislative and regulatory decisions."

SCN has been proud to support outstanding ELSI research and the talented Canadians who are working in the field.

TRAINING

During 2015/16, SCN provided important training opportunities. The workshops and other learning events help give young investigators a competitive edge. Four of the workshops (along with participant feedback) are described below. Two others, a career development workshop and an ethics session, were held as part of the 2015 Till & McCulloch Meetings; information about those two events provided.

Workshops included:

- The UBC Flow Course, Vancouver, summer 2015 – SCN has provided more than 100 travel grants to this workshop since it started 15 years ago; many of the grant recipients are now senior researchers and principal investigators. The course is extremely popular as it provides hands-on training in the theory and use of flow cytometry machines.

  "I've gained fundamental understanding of how flow data is generated, and therefore can now more accurately interpret published and peer reviewed data." Victor Chihkov, McGill University

- Cellular Therapies Manufacturing and Clinical Trials Workshop, Toronto, fall 2015

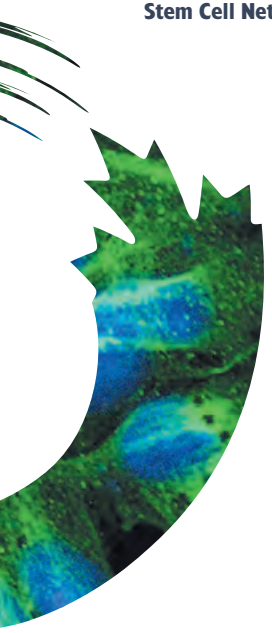
  "This workshop helped me to gain knowledge of the various requirements and pitfalls at each stage of clinical trials and the corresponding necessity for large scale cell manufacturing was highly beneficial to me and anyone wanting to commence a clinical trial." Dr. Mirabelle Ho, Ottawa Hospital Research Institute

- Introduction to Cost Effectiveness Modeling, University of Alberta, spring 2015

  "I would recommend the workshop to colleagues who are interested in cost effectiveness modeling. The workshop was comprehensive and the instructors were committed to engaging workshop participants and making sure that everyone understands the material." Shelly Benjaminy, University of British Columbia

- RNA-Seq Analysis Workshop, Toronto, winter 2015 – this event was a follow-up to the immensely popular–OMICS workshop held a year before. SCN was proud to be a sponsor, along with the Ontario Institute of Regenerative Medicine.

  "This was a very rewarding learning experience for me, and it was great to be able to ask questions to bioinformaticians who work with these tools every day. Thanks again!" Joel Ostblom, University of Toronto



"...a trainee's time shouldn't just be spent in the lab, it should be a chance to develop into a well-rounded scientist where all avenues of future work are open."

Janet Rothberg, PhD Candidate

IN PROFILE: Janet Rothberg, PhD Candidate, Ottawa Hospital Research Institute (OHRI)

Over 15 years, SCN has provided a wide range of training opportunities for more than 2,500 trainees, ensuring that the future of this exciting field is in good hands.

Janet Rothberg is one of the young investigators who participated in SCN's training workshops. Today, she is a PhD candidate at OHRI and a Development Scientist at the Centre for Commercialization of Regenerative Medicine (CCRM).

She told SCN, "The opportunities provided by the SCN really helped motivate and focus my research. I think the workshops and conferences put on by SCN were a highlight of my time as a trainee."

With SCN support, Janet has attended the UBC Flow Course, as well as SCN's Communications and Commercialization workshops. She noted how her participation in such workshops not only deepened her knowledge base but were important networking activities.

"It was directly through many of the Stem Cell Network's workshops that I met and networked with other researchers and people from industry. The contacts I made through SCN definitely helped lead me to my current job."

As well as being a scientist, Janet is also a skilled communicator. This is in part due to her experiences as a member of SCN's Trainee Communications Committee. Janet refined soft skills such as writing, public speaking and workshop planning. In addition, she programmed and facilitated the SCN's 2013 Journal Writing workshop in Banff, Alberta.

Janet sees the focus of training opportunities and workshops shifting to areas outside of pure academic research. Noting, "Training opportunities in areas like business development and entrepreneurship are very helpful for trainees who want to work outside of academia. Developing soft skills like written and verbal communication help trainees with current work and future endeavours."

As Janet aptly demonstrates, "a trainee's time shouldn't just be spent in the lab, it should be a chance to develop into a well-rounded scientist where all avenues of future work are open."

NETWORKING & OUTREACH

2015 TILL & MCCULLOCH MEETINGS

One of the annual focal points for the Stem Cell Network is the Till and McCulloch Meetings (TMM), Canada's premier stem cell research event. The event draws in more than 400 people, including Canada's leading stem cell scientists, clinicians, bioengineers and ethicists, as well as representatives from industry, government, health and NGO sectors from around the world. This event serves as an important hub for knowledge mobilization and exchange. SCN was pleased to provide almost 100 travel awards for the event, including support for investigators from Brazil, Germany, Australia and Chile.

SPOTLIGHT

réunions TM Till & McCulloch meetings

TMM CAREER DEVELOPMENT WORKSHOP

A highlight of TMM was SCN's Career Development Workshop, attended by approximately 80 people. Participants heard from 11 panelists representing a wide variety of (mostly) non-academic career paths. Each panelist gave a short five minute introduction that included career tips for trainees. Participants also had the opportunity to participate in the popular 'Speed Networking' session, where panelist spent time at each participants' table chatting to trainees about their career goals. The workshop closed with an opportunity for participants and panelists to mingle at SCN's networking mixer.

Dr. Tim Kieffer, 2015 TMM Award Winner with Dr. James Till

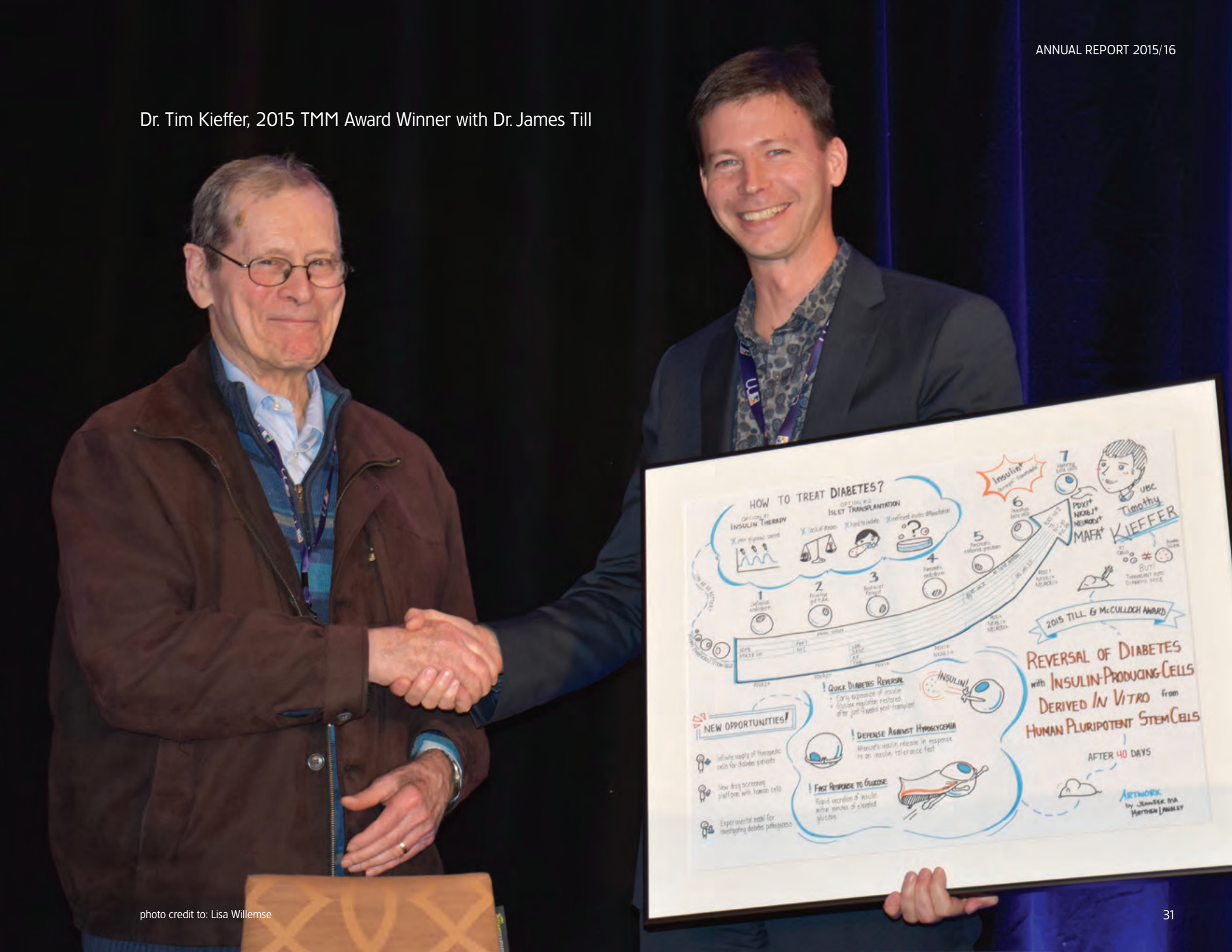


photo credit to: Lisa Willemse

PARTNERSHIP WITH INDIA

As part of it commitment to international collaborations, SCN, in May 2015, entered into a collaboration with India's Institute for Stem Cell Biology and Regenerative Medicine (inStem). The partnership's initial focus was the exchange of students between Canada and India. As part of that exchange, SCN ran a travel award competition to enable 10 junior researchers from India to attend the 2015 TMM. While they were in Canada, the Indian researchers were able to participate in lab visits. These visits enabled relevant connections with Canadian researchers, to facilitate the initiation of collaborative stem cell projects and the exchange of knowledge. Three of the Indian researchers took advantage of the opportunity, with visits ranging in length from one week to one month.

SUPER CELLS

Super Cells
THE POWER OF STEM CELLS

In 2014 the Stem Cell Network partnered with the Sherbrooke Museum of Nature and Science to produce *Super Cells: The Power of Stem Cells*, a traveling exhibition.

The exhibition includes a variety of interactive modules to illustrate the crucial role of stem cells at all stages of life. The objectives are to inform about the existence and functioning of stem cells; and to demonstrate the progress of the research that is dedicated to finding treatments against diseases.

In May 2015 the exhibit was awarded the CASCADE Award for *Best Exhibit or Show – Small Institution*, from the Canadian Association of Science Centres. This honour is a testament to the innovative and interactive approach used to educate the public about the power of stem cells.

During the 2015/16 fiscal year the exhibit travelled to the U.K., Toronto and San Diego. In 2016 the exhibition will be on tour throughout California, including the California Science Center in Los Angeles and the Lawrence Hall of Science at Berkeley University in San Francisco. In January 2017, the exhibit will return to Canada for a showing at the Musée du Fjord in Saguenay, Quebec.

By the end of the multi-year tour, more than a million people will have viewed *Super Cells*. Many more will have been to supercells.ca, to learn how the exhibit was made and get plain-language information, in text and video, about stem cells and how they have the potential to unlock treatments and cures for numerous diseases.

PARTNERS

SUPERCELLS: THE POWER OF STEM CELLS

- California Institute for Regenerative Medicine
- Centre for Commercialization of Regenerative Medicine
- Cell Therapy Catapult
- EuroStemCell

STEMCELLTALKS

StemCellTalks (SCT) is a national stem cell biology outreach initiative undertaken in partnership with Let's Talk Science and the Stem Cell Network. It was established to facilitate knowledge transfer relevant to the science and practical ethics of stem cells between scientists and high-school students.

During the fiscal year StemCellTalks symposia were held in seven cities across Canada: Toronto, Ottawa, Hamilton, Vancouver, Calgary, Edmonton and Montreal, engaging some 800 high-school students. Each symposium featured a "Stem Cells 101" lecture where students learned the basics of stem cell biology. The events featured principal investigators and postdoctoral fellows from the local area as speakers. During knowledge sharing sessions students were invited to ask questions, both scientific and ethical/policy-related, about the symposium's theme or content. The day-long session was always interactive and graduate students provided support by running breakout sessions with student participants.

This year, the Toronto symposium focused on retinal stem cells and curing blindness. An ethics panel discussed prospects for eventual treatments becoming available, illustrating the concept of stem cell hype vs. hope. The Toronto event also included a debate about whether pluripotent or multipotent stem cells should be used to develop curative therapies for blindness. Dr. Peter Tonge, from the Lunenfeld-Tanenbaum Research Institute, debated in support of pluripotent stem cells. However, Dr. Vince Tropepe, from the University of Toronto, won the day with his defence of multipotent stem cells to cure blindness. By all accounts all involved found it to be fun and engaging!

SCN is proud to support this important knowledge mobilization effort and looks forward to next year!

CONCLUSION

Today, as we move into a new fiscal year, we are looking forward to a bright future. Thanks to the work of our supporters and to the generosity of the Government of Canada, SCN is as strong as ever, continuing to be a sector leader and provide strategic funding opportunities. Promising research in disease areas such as diabetes, kidney, heart disease and cancer are now moving forward and, as a result, we will see better treatments and therapies making a difference in the health and lives of Canadians. SCN thanks the Government of Canada for providing additional funding – thereby helping us *deliver on the promise of stem cell research*.


StemCellTalks
Opening dialogue on stem cell science and practical ethics
Pluripotent versus Multipotent (Adult) Stem Cells to Cure Blindness
EXIT
EXIT

Network Community

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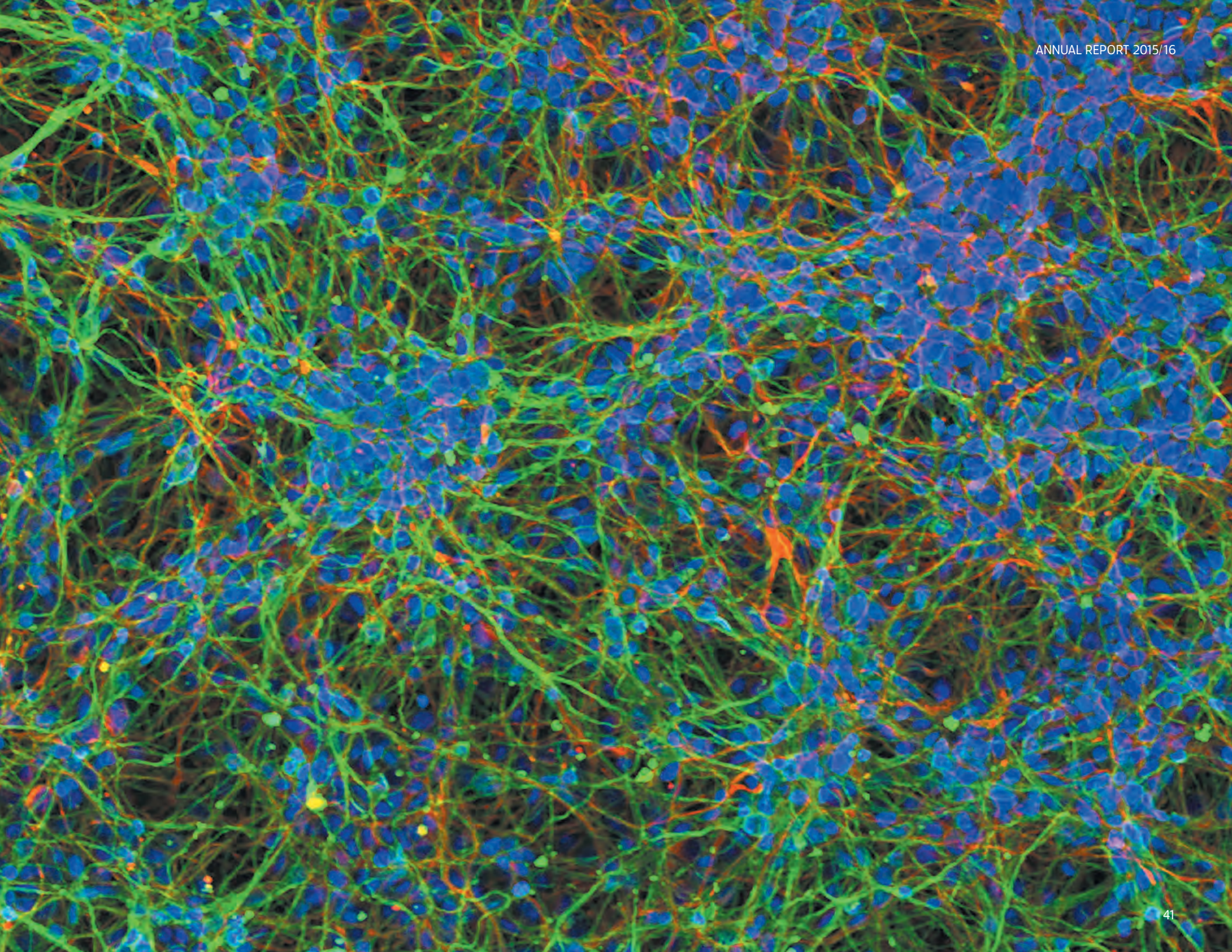


Stem Cell Network
Contents
For the year ended March 31, 2016

Independent Auditors' Report

To the Members of Stem Cell Network:

We have audited the accompanying financial statements of Stem Cell Network, which comprise the statement of financial position as at March 31, 2016, and the statements of operations, changes in net assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the financial statements present fairly, in all material respects, the financial position of Stem Cell Network as at March 31, 2016 and the results of its operations, changes in net assets and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

MNP LLP

Ottawa, Ontario

June 27, 2016

Chartered Professional Accountants

Licensed Public Accountants

Stem Cell Network
Statement of Financial Position
As at March 31, 2016

	2016	2015
Assets		
Current		
Cash	**880,285**	1,115,476
Restricted cash equivalents *(Note 3)*	**50,000**	50,000
Accounts receivable *(Note 4)*	**96,635**	64,091
Prepaid expenses	**18,232**	9,599
	1,045,152	1,239,166
Liabilities		
Current		
Accounts payable and accruals	**152,510**	118,833
Due to government agencies	**-**	4,381
Contributions received in advance *(Note 5)*	**696,163**	759,060
	848,673	882,274
Net Assets		
Unrestricted	**146,479**	306,892
Externally restricted	**50,000**	50,000
	196,479	356,892
	1,045,152	1,239,166

Approved on behalf of the Members

The accompanying notes are an integral part of these financial statements

Stem Cell Network
Statement of Operations and Changes in Net Assets
For the year ended March 31, 2016

	2016	2015
Revenue		
Networks of Centres of Excellence Grant *(Note 5)*	**562,897**	6,582,268
Services in-kind *(Note 6)*	**66,000**	66,000
Services	**64,745**	-
Interest	**1,666**	3,482
AGM sponsorship / registration	**-**	196,550
Other contributions *(Note 6)*	**-**	55,000
Other	**-**	5,250
	695,308	6,908,550
Expenses		
General and administration *(Note 6), (Note 7)*	**580,354**	577,496
Annual conference *(Note 7)*	**136,782**	531,683
Highly qualified personnel *(Note 7)*	**75,162**	303,545
Communications and outreach *(Note 6), (Note 7)*	**72,711**	513,590
SCN board and committees	**3,709**	14,634
Business development	**1,767**	19,957
International initiative	**-**	45,726
CellCAN initiative	**-**	10,551
Commercialization	**-**	4,976
Research (recovery) *(Note 6), (Note 7)*	**(14,764)**	4,750,909
Total expenses	**855,721**	6,773,067
Excess (deficiency) of revenue over expenses	**(160,413)**	135,483
Net assets, beginning of year	**306,892**	171,409
Net assets, end of year	**146,479**	306,892

The accompanying notes are an integral part of these financial statements

Stem Cell Network
Statement of Cash Flows
For the year ended March 31, 2016

	2016	2015
Cash provided by (used for) the following activities		
Operating		
Excess (deficiency) of revenue over expenses	**(160,413)**	135,483
Amortization	-	2,841
	(160,413)	138,324
Changes in working capital accounts		
Accounts receivable	**(32,544)**	187,955
Prepaid expenses	**(8,633)**	39,893
Accounts payable and accruals	**33,677**	(93,184)
Due to government agencies	**(4,381)**	(6,740)
Research commitments payable	-	(830,075)
Contributions received in advance	**(62,897)**	(182,268)
Decrease in cash	**(235,191)**	(746,095)
Cash, beginning of year	**1,115,476**	1,861,571
Cash, end of year	**880,285**	1,115,476

The accompanying notes are an integral part of these financial statements

Stem Cell Network
Notes to the Financial Statements
For the year ended March 31, 2016

1. Incorporation and nature of the organization

The Stem Cell Network (the "Network") was established on November 19, 2001 as an independent not-for-profit corporation and accordingly, is exempt from income taxes. The mission of the Stem Cell Network is to be a catalyst for enabling translation of stem cell research into clinical applications, commercial products or public policy.

The Network is one of Canada's Network Centres of Excellence ("NCE") networks. The NCE program is administered and funded by the Natural Sciences and Engineering Research Council ("NSERC"), the Canadian Institute of Health Research ("CIHR"), and the Social Sciences and Humanities Research Council ("SSHRC"), in partnership with Industry Canada. The goal of the federal NCE program is to mobilize Canada's research talent in universities, industry and government to create new economy jobs, stimulate growth and improve the quality of life for Canadians.

As of March 2015, the Network's grant from the Network of Centres of Excellence had come to an end. The Network had been approved for NCE management transition funds of $500,000 in order to provide for the winding down of operations in the current year. As part of the federal budget announcement on March 22, 2016, an additional funding amount of up to $12,000,000 has been approved for the Network over the next two years.

Therefore, these financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the payment of liabilities in the ordinary course of business. The Network has determined that they have sufficient resources to allow the Network to meet its obligations over the next two years. Should the Network be unable to continue as a going concern, it may be unable to realize the carrying value of its assets and to meet its liabilities as they become due.

2. Significant accounting policies

The financial statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations set out in Part III of the CPA Canada Handbook - Accounting, as issued by the Accounting Standards Board in Canada, which are part of Canadian generally accepted accounting principles using the following significant accounting policies:

Cash and cash equivalents

All highly liquid investments with original maturities of twelve months or less, including all cashable guaranteed investment certificates, are classified as cash equivalents. The fair value of cash equivalents approximates the amounts shown in the financial statements.

Revenue recognition

The Network follows the deferral method of accounting for contributions, which include government grants. Funds are received from the Canadian federal government as well as private and public sector partners.

Grants and other contributions which have external restrictive covenants governing the types of activities that they can be used to fund are deferred until such time as the actual spending is incurred. Consequently, unspent grants having restrictions are deferred and will be recognized as revenue in future periods when the spending occurs.

Amounts received for services are recognized as revenue as the related work is performed based on agreed upon hourly rates and collection is reasonably assured.

AGM sponsorship and registration fees are deferred and are recognized as revenue in the year in which the event occurs and the related expenses are incurred.

Unrestricted contributions, interest income and other income are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Contributions and services in-kind

Many organizations and individuals contribute a significant amount of volunteer effort in each year. The fair value of these services and contributions is often difficult to determine. Contributed services and contributions are not recognized in the financial statements unless a fair value can be reasonably estimated, such services and contributions are used in the normal course of operations and the provider of the services and contributions has explicitly defined the value of the services and contributions to the Network. The Network is dependent on such contributors to appropriately report the value of all services and contributions in-kind to its administrative centre.

2. Significant accounting policies *(Continued from previous page)*

Research programs expenses

Costs relating to research programs are recorded as expenses when they become payable. Research grants that will become payable in future periods are summarized and disclosed as commitments in the notes to the financial statements.

Allocation of expenses

The Network allocates salaries and benefits based on an estimate of the percentage of time each person typically spends on each area. The Network has applied this on a consistent basis.

Income taxes

As a not-for-profit organization, the Network is not subject to income taxes.

Measurement uncertainty

The preparation of financial statements in conformity with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet date and the reported amounts of revenues and expenses during the year. Items requiring the use of significant estimates include accrued liabilities, in-kind contributions and allocation of salaries and benefits expenses. These estimates are reviewed periodically and adjustments are made to income as appropriate in the year they become known. Actual results could differ from those estimates.

The amount of funding received from NCE is dependent on compliance with eligible expenses as defined in their grant agreement. Should a compliance audit be conducted by the NCE, it is possible that the amounts included in these financial statements would change. The Network feels that it is in compliance with the terms of the agreement.

Financial instruments

The Network recognizes its financial instruments when the Network becomes party to the contractual provisions of the financial instrument. All financial instruments are initially recorded at their fair value, except for financial assets and liabilities originated and issued in a related party transaction which are initially measured at their exchange amount in accordance with Section 3840 *Related Party Transactions* (refer to Note 6).

At initial recognition, the Network may irrevocably elect to subsequently measure any financial instrument at fair value. The Network has not made such an election during the year.

The Network subsequently measures financial assets and financial liabilities at amortized cost.

Financial assets measured at amortized cost include cash, restricted cash equivalents, and accounts receivable.

Financial liabilities measured at amortized cost include accounts payable and accruals.

Transaction costs and financing fees directly attributable to the origination, acquisition, issuance or assumption of financial instruments subsequently measured at fair value are immediately recognized in the excess of revenues over expenses for the current period. Conversely, transaction costs and financing fees are added to the carrying amount for those financial instruments subsequently measured at cost or amortized cost.

2. Significant accounting policies *(Continued from previous page)*

Financial asset impairment:

Financial assets measured at amortized cost are tested for impairment when there are indicators of possible impairment. The amount of the write-down is recognized in net income. The previously recognized impairment loss may be reversed to the extent of the improvement, directly or by adjusting the allowance account, provided it is no greater than the amount that would have been reported at the date of the reversal had the impairment not been recognized previously. The amount of the reversal is recognized in net income.

3. Restricted cash equivalents

Restricted cash equivalents are amounts invested in a non-redeemable guaranteed investment certificate (GIC) which is held by the Network's bank as collateral for their Visa account. The non-redeemable GIC bears interest at 0.7% and matures on March 19, 2017.

4. Accounts receivable

	2016	*2015*
Accounts receivable	**64,745**	-
Rebate receivables	**30,444**	64,091
Other	**1,446**	-
	96,635	64,091

5. Contributions received in advance

NCE funds are managed in accordance with the funding agreement between the granting councils, the University of Ottawa and the Stem Cell Network. A copy of the funding guidelines can be found on the NCE website: www.nce.gc.ca.

	2016	*2015*
Networks of Centres of Excellence (NCE) Funds:		
Balance, beginning of year	**759,060**	941,328
Contributions from the Networks of Centres of Excellence	**500,000**	6,400,000
Less: amount recognized as Networks of Centres of Excellence grant revenue	**(562,897)**	(6,582,268)
Balance, end of year	**696,163**	759,060

6. Related party transactions

The Network is related to the University of Ottawa ("the University") by virtue of the fact that the University is its host institution under the Networks of Centres of Excellence program.

Under an agreement, the University provides accounting and administrative support services as well as office space and furniture without charge to the Network. The value of the in-kind contributions received for services in fiscal 2016 is estimated to be $66,000 (2015 - $66,000) and it is recorded in general and administration. Effective July 2008, the Network, the University and the Ottawa Hospital Research Institute (OHRI) have an agreement that the OHRI will provide the Network with office space and information technology support services.

Included in other contributions revenue is $Nil (2015 - $55,000) from the University.

The Network has expensed $Nil during fiscal year (2015 - $98,000) in research expense to its host institution, the University.

During the year ending March 31, 2009, as part of its mandate to catalyze new models for partnering and engage the public and philanthropic community in stem cell research, the Network supported the establishment of the Canadian Stem Cell Foundation ("CSCF"), a not-for-profit organization and registered charity. The CSCF has the following specific objectives:

6. Related party transactions *(Continued from previous page)*

(a) To conduct or commission research on stem cells, regenerative medicine and associated technologies, and the clinical applications thereof for the prevention, diagnosis and treatment of diseases, and to communicate the results thereof to interested individuals, groups, organizations, academics, industries, governments and the public at large.

(b) To provide educational programs to educate the public about the benefits and advances in stem cell research.

The Network is related to the CSCF by virtue of the fact that two members of the Network's board of directors' are two of the seven directors of the CSCF.

During the year ending March 31, 2016, the Network expensed $Nil (2015 - $10,703) of restricted funds which are included in the Communications and outreach expenses on the statement of operations. These expenses fall within the mandate of the Network.

With the exception of the in-kind contributions from the University which are reported at fair value, the transactions between related parties are recorded at the exchange amount, which is the amount established and agreed to between the parties.

7. Allocation of expenses

Salaries and benefits of $506,457 (2015 - $771,988) have been allocated as follows:

	2016	*2015*
General and administration	**458,165**	431,893
Highly qualified personnel	**24,146**	67,677
Annual conference	**24,146**	24,058
Communications and outreach	**-**	180,683
Research	**-**	67,677
	506,457	771,988

8. Financial instruments

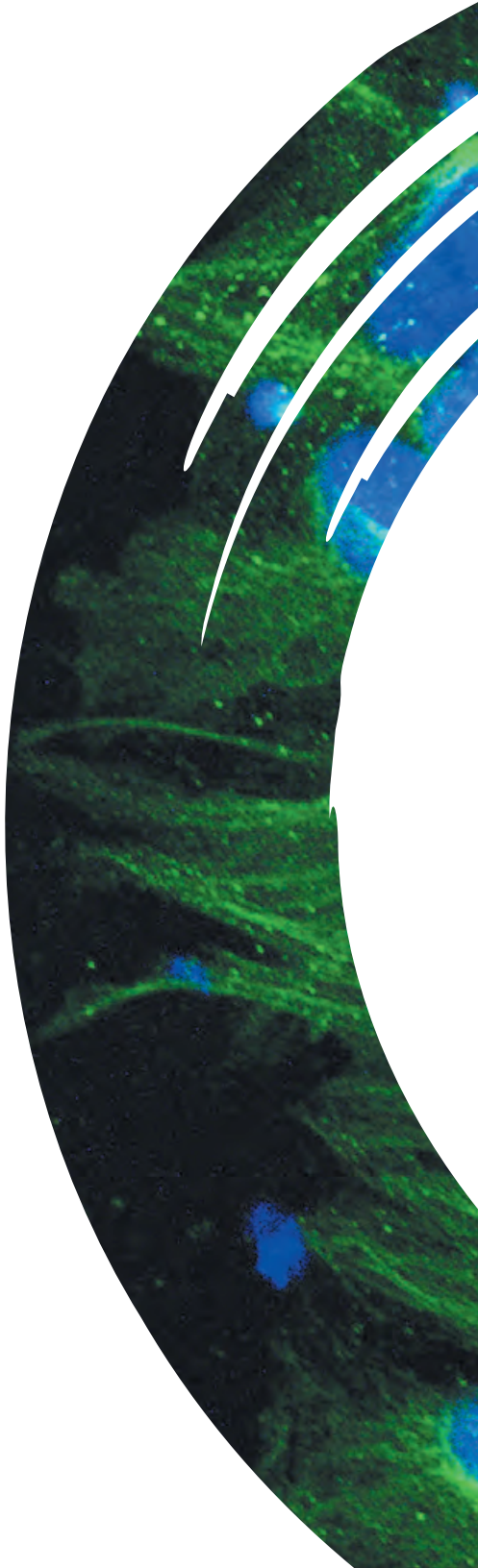
The Network, as part of its operations, carries a number of financial instruments. It is management's opinion that the Network is not exposed to significant interest, currency, credit, liquidity or other price risks arising from these financial instruments.

Carrying amount of financial assets by categories

The Network's assets, totaling $1,026,920 (2015 - $1,229,567) have been classified as financial assets at amortized cost, less any reduction for impairment.

9. Comparative figures

Certain comparative figures have been reclassified to conform with current year presentation. This reclassification had no impact on the excess (deficiency) of revenue over expenses for the period.



Stem Cell Network
Réseau de **cellules souches**

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