Funding Opportunities for Researchers at BCIT

Applied Research Liaison Office
Stefan Joseph
[June 2014]

Agenda

External research funds & processes/ constraints

Stand alone research | Collaborative research

CCV



NSERC



SSHRC



Social Sciences and Humanities Research Council of Canada

Conseil de recherches en sciences humaines du Canada



CIHR



CRC



CFI



other









Canadian Common CV (CCV)

- After collaboration between more than 22 member agencies, release of new CCV system was announced in June 2012
- Members include:
 - CIHR
 - NSERC
 - SSHRC
 - CFI
 - MSFHR
 - Genome Canada
 - Networks of Centres of Excellence of Canada



No collaborator required

- <u>BCIT Institute Research Funds</u> (not covered in this presentation)
- NSERC Discovery Grant (DG)
- NSERC Research Tools and Instrumentation (RTI)
- NSERC Idea to Innovation (I2I) Grant (Phase I)
- NSERC PromoScience
- NSERC Regional Opportunities Funds
- NSERC Undergraduate Students Research Awards
- SSHRC Insight Development Grant
- Canada Research Chair
- CFI John R. Evans Leaders Fund (formerly Leaders Opportunity Fund)



NSERC Discovery Grants Program

- <u>Discovery Grants</u> support ongoing programs of research with long-term goals, rather than a single short-term project or collection of projects. Objectives are:
 - promoting and maintaining a diversified base of high-quality research capability in the natural sciences and engineering;
 - fostering research excellence;
 - providing a stimulating environment for research training.
- Duration: Up to five years
- Recipients of Discovery Grants are not restricted to the specific activities described in the application, but may pursue new research interests, provided they are within NSERC's mandate.



NSERC Discovery Grants Program



- Important dates (BCIT / NSERC):
- ☐ ASAP Create/ update CCV



- ☐ July 15 / August 1 (Notification of Intent to Apply)
- October 20 / November 1 (Application)



Application⁺ Process @ BCIT (with focus on NSERC DG)

Pre-application:

- Dedicated research time
- ☐ Equipment/infrastructure
- □ BCIT internal approval
- ☐ Canadian Common CV
- ☐ Notice of Intent (NoI)
- ☐ Mock review: *please help find a mock reviewer.*



Application⁺ Process @ BCIT (with focus on NSERC DG)

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CCV review
Submit complete DRAFT application (~early October)
Mock review
Refine Application
"Submit"
Print hardcopy
Internal Signature Sheet: Complete, sign & get signatures from your direct supervisor and your Dean
Send signed hardcopies to RGO at ARLO
get approval from VP Research
□ Submit to NSERC

Integrity

Tri-Agencies share data regarding Responsible Conduct of Research

"... ... In case of a serious breach of agency policy, the agency may publicly disclose your name, the nature of the breach, the institution where you were employed at the time of the breach and the institution where you are currently employed. You accept this as a condition of applying for, or receiving, agency funding, and you consent to such disclosure. "

Integrity

9

Integrity is one thing you cannot afford to lose.

You can give it away or sell it,
but you can't buy it.

Without integrity you become nothing

and will have nothing.

(Michael Josephson)



Application⁺ Process @ BCIT (with focus on NSERC DG)

Application:

CCV review
Submit complete DRAFT application (~early October)
Mock review
Refine Application
"Submit"
Print hardcopy
Internal Signature Sheet: Complete, sign & get signatures
from your direct supervisor and your Dean
Send signed hardcopies to RGO at ARLO
get approval from VP Research
☐ Submit to NSERC

SIGNATURES (Refer to instruction	ons "What do signatures mean?")		
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		VP Resea	rch
		President of instance (or representation	
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Canadä

The information collected on this form and appendices will be stored in the Personal Information Bank for the appropriate program.

Version française disponible

PROTECTED WHEN COMPLETED

ORGANIZATION'S CONTRIBUTIONS							
Contributions to the direct costs of research	Year 1	Year 2		Year 3	Year 4	Year 5	
a) Cash contribution							
b) In-kind contribution							
Has your organization received publicly-funded support for R&D directly related to the proposed project? Yes				Are the applicant and co-applicant(s) at arm's length from your organization?			
Name, title and telephone number of authorized representative of the organization			Signature			Date	
			Au	thorized Repr	esentative		

Form 183A (2009)

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Version française disponible



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You'll need to complete this, sign it, and get it signed by others ...



Application⁺ Process @ BCIT (with focus on NSERC DG)

Post-Application:

- ☐ Apply for any certification that may be required (REB, etc.)
- ☐ Deal with any other issues / prepare to start research...



Application⁺ Process @ BCIT (with focus on NSERC DG)

Post-Approval:

- Set up account with Operations Manager (ARLO & other)
- ☐ Receive all approvals
- Proceed with research
- Hire help (students, technicians, etc.)
- Purchase equipment, materials, etc.
 - Disclose IP early contact ARLO *
- Disseminate results
 - publish with your students as co-authors **
 - remember to acknowledge funding! **
- □ Submit yearly <u>Form 300</u> work with your operations manager
- ☐ Use this opportunity (your DG) to engage in research with industry
- At the end of 5 years: get ready to apply for renewal of your DG



NSERC Research Tools and Instrumentation (RTI)

- RTI Grants are one-year awards of up to \$150,000 to support the purchase or development of research equipment with \$7,000 < total net cost ≤ \$250,000
- Remember though: equipment of any value can be purchased using a Discovery Grant.
- BCIT's allocation of 2014 RTI applications is two (2).
- Important dates (BCIT / NSERC):



- **ASAP**: Create/ update your Personal Data Form 100
- July 15: Notify BCIT/ ARLO that you wish to apply for RTI funds this year depending on number of notifications, an internal adjudication may be required.
- October 10 / October 25: Application (Form 101)



NSERC Idea to Innovation (I2I) Grant

- The objective of the <u>Idea to Innovation (I2I) Grants</u> is to accelerate the pre-competitive development of promising technology <u>originating from the university and college sector</u> and promote its transfer to a new or established Canadian company.
- The discoveries must be disclosed by the investigators according to institution policy and ARLO must endorse and work on each new proposal.
- Eligible technology transfer activities expenses must be justified by BCIT and we must commit to bear at least half of their cost.
- CIHR-equivalent: Proof of Principle (POP)







NSERC Idea to Innovation (I2I) Grant

Market Assessment

 Funding is available for up to 12 months, with a maximum contribution from NSERC of \$15,000 if contracted to a consulting firm.

Phase I – Reduction-to-Practice Stage

- Funding is available for up to 12 months, at a maximum of \$125,000, and is non-renewable. NSERC will assume 100% of the direct costs of research.
- Phase II Technology Enhancement here you do need a collaborator:
- Phase IIa Early-stage Investment Partner
 - Duration: 6-18 months; NSERC: ~\$125,000/year. NSERC: ≤2/3 of project costs; early-stage investment entity: the balance in cash.
- Phase IIb Partnership with a Canadian Company
 - Duration: 2years; NSERC: \$350,000. NSERC: ≤1/2 of project costs; company: the other half through cash (at least 40 percent of the amount requested from NSERC) and in-kind contributions.



NSERC PromoScience

- NSERC's PromoScience Program offers financial support for organizations working with young Canadians to promote an understanding of science and engineering (including mathematics and technology).
- PromoScience supports hands-on learning experiences for young students and their science teachers. Grants may be used to cover improvements to program content or delivery, as well as for new programs and activities. Grants can also be used to cover operational costs such as salaries, travel, postage, materials and supplies, provided that they relate to the promotion of science and engineering.
- Organizations may request funds for up to three years at a time.



NSERC Regional Opportunities Fund

- □ ROF support of special events and activities related to natural sciences and engineering.
- ☐ Priority to applications in support of activities that:
 - provide opportunities for relationship building and research collaboration between industrial and postsecondary communities;
 - promote participation in NSERC's Research Partnership Programs or Industrial Scholarships and Fellowships.
- ☐ Typical funding range from \$1,000 to \$5,000.
- Decisions usually within six to eight weeks

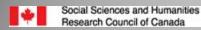




NSERC Undergraduate Student Research Awards

- Undergraduate Student Research Awards (**USRA**) are meant to stimulate students' interest in research in the natural sciences and engineering.
- Duration: 16 consecutive weeks on a full-time basis.
- Value: \$4,500 for a full 16-week period.
- The award must be supplemented by **at least 25%** of its value using other sources.
- BCIT's quota: 4 USRAs per year.
- The supervisor must hold an **active NSERC research grant** (e.g., Discovery, CREATE, Strategic, Research Partnerships).
- Note: BCIT students can also apply for an Industrial USRA. Here, the student is considered an employee of an eligible company that provides the matching funds. The undergraduate student's supervisor is a researcher at the company.





Social Sciences and Humanities Research Council of Canada (SSHRC)

- <u>Insight Development Grants</u> support research in its **initial stages**. The grants enable the development of **new research questions**, as well as experimentation with **new methods**, theoretical approaches and/or ideas.
- Within the Insight Development Grants funding opportunity, funding is available for: emerging scholars and established
 scholars
- Duration: 1 to 2 years
- Funding: \$7,000 to \$75,000
- More advanced: <u>Insight Grants</u>
- Many <u>other SSHRC grants</u> are available as well, e.g., <u>Aid to Scholarly Journals</u>





Canada Research Chairs

- The Canada Research Chairs program stands at the centre of a national strategy to make Canada one of the world's top countries in research and development.
- The Canada Research Chairs Program invests approximately \$265 million per year to attract and retain some of the world's most accomplished and promising minds. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities, and social sciences.
- BCIT's current allocation of Chairs: 3 Tier-2 Chairs





John R. Evans Leaders Fund

(formerly Leaders Opportunity Fund)

The <u>John R. Evans Leaders Fund</u> (JEL-F) is one the programs offered by the <u>Canada Foundation for Innovation (CFI)</u>. All CFI funding is for the infrastructure of research projects lead by highly respected researchers.

- The <u>John R. Evans Leaders Fund</u> (JEL-F) is designed to help universities attract and retain the very best of today's and tomorrow's researchers at a time of intense international competition. To this end, the JEL-F offers universities the opportunity to:
 - Acquire infrastructure for their leading research faculty to undertake cuttingedge research;
 - Create competitive packages of research support in the form of infrastructure and a portion of the operating and maintenance costs from the CFI, coupled with direct research costs from partner organizations.





John R. Evans Leaders Fund (formerly Leaders Opportunity Fund)



- BCIT's amount of funding available
 from CFI: \$400,000 (as of June 2014)
- Infrastructure funding formula:

40 % — CFI

40 % — BC Knowledge Development Fund (BCKDF)

20% — partners in the public, private and nonprofit sectors. Often: vendor discounts (above and beyond the regular educational discounts), and Institute contributions.



 Deadlines: February 15, June 15 and October 15



Collaborator(s) required

- Private Sector/ Industry collaborator:
 - NSERC Idea to Innovation (I2I) Grant (Phase II)
 - NSERC Partnership Workshops Grants
 - NSERC Engage Grant
 - NSERC Collaborative Research and Development (CRD) Grant
 - NSERC Collaborative Research and Training Experience (CREATE)
 - NSERC Strategic Network Grant (SNG)
 - Networks of Centres of Excellence
 - National Research Council (NRC) Industrial Research
 Assistance Program (IRAP)
 - MITACS-Accelerate (also requires graduate student)
- Private Sector/ Industry and College:
 - NSERC College-University Idea to Innovation Grants (CU-I2I)



NSERC Idea to Innovation (I2I) Grant

Market Assessment

no collaborator required here:

- Funding is available for up to 12 months, with a maximum contribution from NSERC of \$15,000 if contracted to a consulting firm.
- Phase I Reduction-to-Practice Stage
 - Funding is available for up to 12 months, at a maximum of \$125,000, and is non-renewable. NSERC will assume 100% of the direct costs of research.
- Phase II Technology Enhancement
- Phase IIa Early-stage Investment Partner
 - Duration: 6-18 months; NSERC: ~\$125,000/year. NSERC: ≤2/3 of project costs; early-stage investment entity: the balance in cash.
- Phase IIb Partnership with a Canadian Company
 - Duration: 2years; NSERC: \$350,000. NSERC: ≤1/2 of project costs;
 company: the other half through cash (at least 40 percent of the amount requested from NSERC) and in-kind contributions.



NSERC Partnership Workshops **Grants (PWG)**

- The objective of a PWG is to bring together academic researchers with non-academic end users and create new partnerships through workshops that develop collaborations addressing research and technology needs identified by the user community. The workshops are intended to generate new academic-industrygovernment partnerships that will lead to new collaborative research activities.
- The workshops must be organized and championed by at least one academic & one non-academic leader; both must be Canadian.



Maximum value: \$25,000. Contributions from the non-academic partners are strongly encouraged and give greater credence to the proposal.

SSHRC-equivalent: Connection Grants Social Screening





NSERC Engage Grants

- Engage Grants give companies that operate from a Canadian base access to unique knowledge and expertise available at Canadian universities. Company must be able to fully exploit the results. Intellectual Property rights stay with the company.
- NSERC-eligible academic researcher must have been granted peerreviewed research support in the natural sciences and/or engineering fields from a recognized federal or provincial granting agency within the past six years.
- Value: Up to \$25,000 for up to six months
- Please ask the company to cover overhead costs.
- ∃ subsequent <u>Engage Plus Grant</u> to support a project for an additional six months.
- ∃ funding for travel and meeting activities to establish contact with new potential industrial partners: Interaction Grant.





NSERC Collaborative Research and Development (CRD) Grants

- ☐ <u>CRD Grants</u> support well-defined projects undertaken by university researchers and their **private-sector partners**
- ☐ High success rate (≈ 90%)
- \$10,000 to \$500,000 per year from NSERC
- ☐ Industry partner must be willing to contribute cash & "in kind"
 - Contributions may be eligible for SR&ED tax credit **
- Ask Industry partner to contribute to overhead costs
- ☐ <u>Intellectual Property Agreement</u> is required
- Apply any time
- Decisions usually within three to five months





NSERC Collaborative Research and Training Experience (CREATE)

- ☐ The Collaborative Research and Training Experience (CREATE)
 Program supports the training of teams of highly qualified
 students from Canada and abroad through the development
 of innovative training programs that:
 - encourage collaborative and integrative approaches, and address significant scientific challenges associated with Canada's research priorities; and
 - facilitate the transition of new researchers from trainees to productive employees in the Canadian workforce.
- Programs must include the acquisition and development of important professional skills among students that complement their qualifications and technical skills.
- International Collaborations possible:
 - Deutsche Forschungsgemeinschaft
 - Fundação de Amparo à Pesquisa do Estado de São Paulo
- ☐ At least 80 percent of the CREATE grant must be used for trainees' stipends.





NSERC Strategic Network Grants (SNG)

- The objective of the **Strategic Network Grants (SNG)** is to increase research and training in targeted areas that could strongly enhance Canada's economy, society and/or environment within the next ten years.
- SNG are ideal for large-scale, complex research programs that involve collaborations among university, industry and government. Companies that have common research needs and are willing to share the research results may benefit by participating in a Strategic Network.
- ☐ Duration of award: 5 years
- ☐ Typical grant range: \$500,000 to \$1,000,000 per year
- Application deadline: June 1
- Evaluation steps: Preliminary application, full application (by invitation)
- Evaluation time: 12 to 15 months from the preliminary application deadline





Networks of Centres of Excellence

The program supports large-scale academically led research networks that harness the creativity and inventiveness of Canadian health, natural, and social scientists and engineers. Partners from industry, government and not-for-profit organizations contribute additional expertise and contribute nearly \$90 million per year of cash and in kir support.					
NC	Es focus on issues that are critical to Canadians, and to the world by:				
	Mobilizing multi-disciplinary research capacity from across Canada				
	Engaging partners from multiple academic institutions and various public and private- sector organizations				
	Training the next generation of highly qualified people – more than 36,000 to date				
	Working with end users to accelerate the creation and application of new knowledge				
	Increasing collaboration between researchers in Canada and abroad				
inc	addition to the traditional NCE networks (<u>e.g., AFMNet</u>), the program ludes the <u>NCE Knowledge Mobilization (NCE-KM)</u> and the <u>Canada-</u>				





National Research Council (NRC) — Industrial Research Assistance Program (IRAP)

- NRC Industrial Research Assistance Program (IRAP) provides financial support to qualified small and medium-sized enterprises (500 or fewer full-time equivalent employees) in Canada to help them undertake technology innovation.
- The enterprise receiving financial support through NRC's IRAP, can use some of the funds to **subcontract BCIT**.
 - Get industry partner/ enterprise willing to apply for IRAP funds and engage you as subcontractor
 - An IRAP <u>Industrial Technology Advisor</u> is available at Mathissi Place, Wing E (same wing as ARLO)
 - Industry partner contributions may be eligible for SR&ED tax credit



MITACS-Accelerate

- Through Mitacs-Accelerate, **graduate students** and postdoctoral fellows from over 50 universities apply their specialized expertise to business-related research challenges.
- Interns spend approximately half of the time on-site with the industry
 partner; the remainder is spent at the university advancing the research
 under the guidance of a faculty supervisor.
- Open to all disciplines and all industry sectors
- Each 4-month internship project receives \$15,000 in direct funding, with the partner organization and Mitacs each providing \$7,500
- The \$15,000 will be provided to the intern's academic supervisor as a research grant
- It is required that the intern receive a **stipend of a minimum of \$10,000** of the total grant per 4-month internship
- Larger and longer projects are also possible.



NSERC College-University Idea to Innovation (CU-I2I) Grants

- CU-I2I Grants are intended to support <u>college</u> and <u>university</u>
 participation in the improvement or extension of existing company
 technology or commercial products, processes and/or services.
 Intellectual Property rights stay with the company.
- CU-I2I Grants can be up to \$250,000 per year for the college and university participants combined. The maximum grant for either participant is \$125,000 per year. Company partner contributions can be matched at a maximum level of 1:1 for both the college and university participants.
- Overhead costs are allowed up to 20% of the total grant awarded for both colleges and universities ⇒ ask for at least as much from the company partner!
- Company partner must operate from a **Canadian** base and must be able to fully exploit the results.

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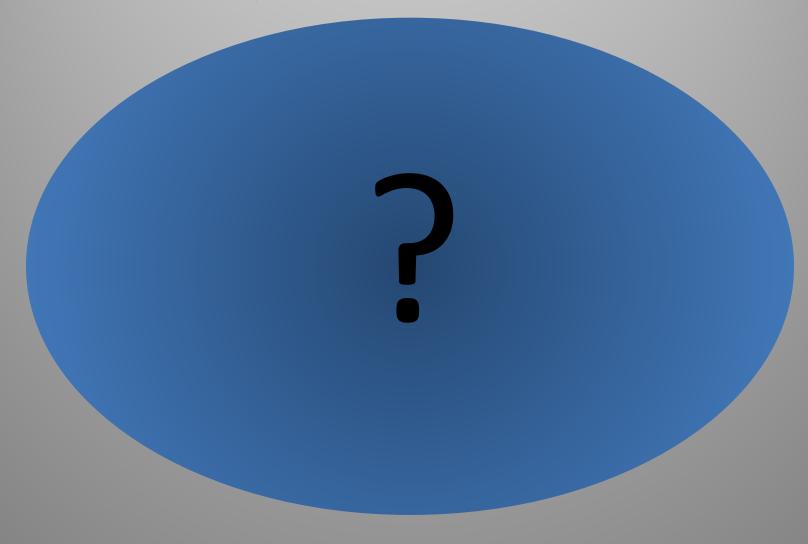


Western Economic Diversification Canada

- The WDP Call for Proposals (CFP) process closed May 30, 2014. The next Call for Proposal will be announced at a later date.
- Activities funded will be in the areas of:
 - Innovation
 - Industrial and Technological Benefits (ITB)
 - Trade and investment
 - Economic growth acceleration opportunities for Aboriginal peoples (First Nations, Inuit and Métis)
 - Skills development and training



Questions?





IP Policy

BCIT Intellectual Property Policy

- 4.1 Creator(s) shall own IP that is:
 - 4.1.5 IP resulting from research funded by grants awarded to the Creator as an individual researcher².
 - ² See "<u>BCIT Intellectual Property Procedures</u>" (§2.4) for an explanation of what is meant by "a grant to an individual researcher".
- 2. Ownership of Intellectual Property
 - 2.6 §4.1.5 of the Policy refers to grants which are awarded to an individual researcher. The defining characteristic of such grants is that they allow the researcher to take their grant with them if they move to another institution. This is the case with certain grants provided by federal granting councils (e.g. NSERC). Other types of grants are awarded to the institution, and if the individual who won the grant should move to another institution, they would not have the right to take the grant with them.

SR&ED

- The Scientific Research and Experimental Development tax incentive is the largest single source of federal government support for industrial R&D.
- The SR&ED Program gives claimants cash refunds and / or tax credits for their expenditures on eligible R&D work done in Canada.
- The following provides links to related Web sites of potential interest to users of the Scientific Research and Experimental Development program's Web site.

http://www.cra-arc.gc.ca/txcrdt/sred-rsde/lnks-eng.html



Indirect Costs Program

- The Indirect Costs Program helps Canadian postsecondary institutions with the hidden costs of research.
- BCIT's latest report is posted on BCIT's Website.
- Grant calculations are not easy to predict in advance since the %-rate goes down as the Institute gets more funding. Only at the end of the fiscal year when the calculations are made can we really tell what we are getting that year.
- In line with the <u>intent of the Indirect Costs Program</u>, the indirect costs that eventually come to the Institute do not come back to the PI or project but are received by the VP's Office to help pay for a portion of the hidden or "indirect" costs of research research (including ARLO).



Infrastructure Operating Fund (IOF)

The <u>Infrastructure Operating Fund (IOF)</u> helps cover a portion of the operating and maintenance costs to ensure optimal use of <u>CFI-funded infrastructure</u>. It is nonetheless the institution's responsibility to provide sufficient funds for the operation and maintenance of CFI-funded infrastructure.

All eligible projects generate an IOF allocation of 30% of the maximum CFI amount approved at award finalization.

Each **institution** is **responsible** for deciding how their funds will be divided among projects eligible to receive IOF.

An annual report must be completed online and submitted electronically to the CFI by June 15, along with a request for release of infrastructure operating funds.

Strategic versus opportunistic

The vision of where you want to be is the greatest asset you have.

Without having a goal, it's difficult to score.

(Paul Arden)

Make sure you communicate your goals — best if they become part of <u>BCIT's Strategic Research Plan</u> (SRP)