

People. Discovery. Innovation.
Les gens. La découverte. L'innovation.



Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

Canada

Life Cycle of a Discovery Grant Application

August

Submission of notification of intent to apply (due Aug. 1)

September

Internal assignment to EG

October

Selection of external reviewers and preliminary joint review discussions

November

Submission of application (due Nov. 1)

December

Members receive applications and begin reviewing

January

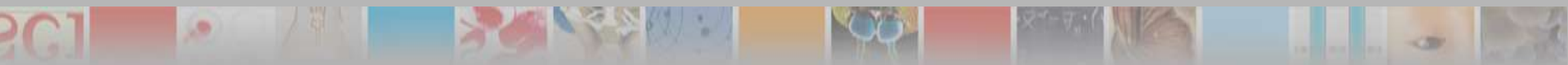
Members review applications and external reviewer reports are received

February

Grants competition

April

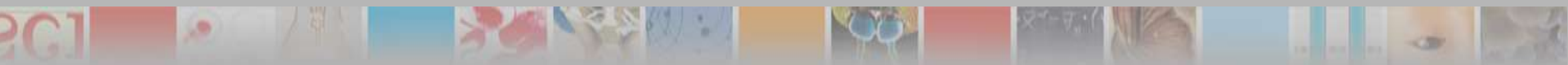
Announcement of results



Notification of Intent to Apply (NOI)

Overview

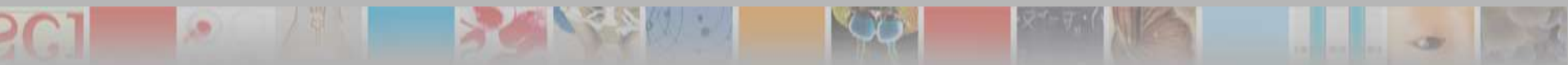
- **Deadline:** August 1st - **Mandatory**
- **Main components:**
 - Research topics, keywords, title
 - Summary of proposal
 - Suggested external reviewers
 - Canadian Common CV (CCV)
- **Submission:**
 - Research Portal



Notification of Intent to Apply

Purpose

- **Facilitates preliminary assignments:**
 - to an Evaluation Group
 - of internal reviewers
 - of external reviewers
- **First indication of joint review**
 - Informed by research topics, keywords, and proposal summary
- **First review of subject matter eligibility**



Notification of Intent to Apply

Joint Reviews - Evaluation Groups

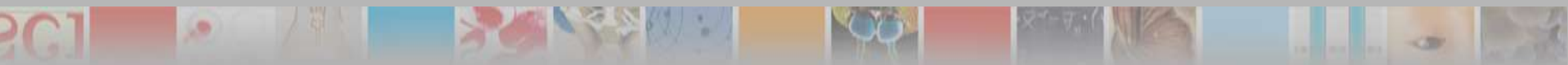
- Genes, Cells and Molecules (1501)
- Biological Systems and Functions (1502)
- Evolution and Ecology (1503)
- Chemistry (1504)
- Physics (1505)
- Geosciences (1506)
- Computer Science (1507)
- Mathematics and Statistics (1508)
- Civil, Industrial and Systems Engineering (1509)
- Electrical and Computer Engineering (1510)
- Materials and Chemical Engineering (1511)
- Mechanical Engineering (1512)



Notification of Intent to Apply

Tips

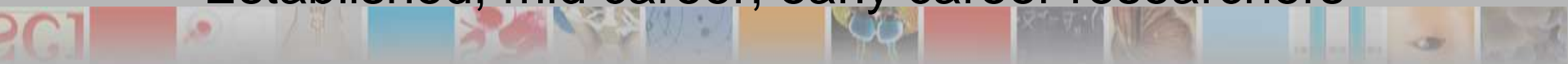
- **Select appropriate research topics**
 - First selected must be from suggested EG
 - Helps identify potential joint reviews
- **Submit a detailed summary**
 - Helps internal reviewers select appropriate external reviewers
 - Helps identify potential joint reviews



Notification of Intent to Apply

Tips for selecting external reviewers

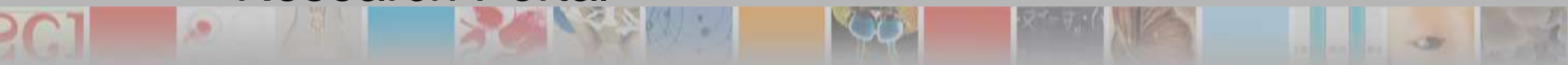
- **Be mindful of conflicts of interest**
 - Reviewers outside your institution (primary & adjunct)
 - Adhere to [NSERC guidelines](#) (e.g., six-year window)
- **Identify the best expertise**
 - Ability to comment/review with confidence
- **Consider diversity in your selection**
 - National, International
 - Private, government, public sectors
 - Gender
 - Under-represented groups
 - Established, mid career, early career researchers



Discovery Grant Application

Overview

- **Deadline:** November 1st - **internal deadlines are earlier**
- **Main components:**
 - Application for a grant
 - Research proposal
 - Samples of research contributions
 - Budget and justification
 - Canadian Common CV (CCV)
- **Submission:**
 - Research Portal

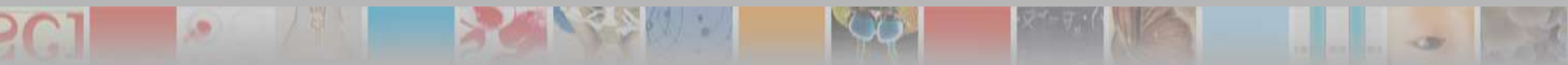


Grants Competition

Review Process

Step 1: Merit Assessment

- **Three equally weighted criteria:**
 - Excellence of the Researcher
 - Merit of the Proposal
 - Contribution to Training of Highly Qualified Personnel (HQP)
- **Uses six-point scale**
 - From exceptional to insufficient



Grants Competition Review Process

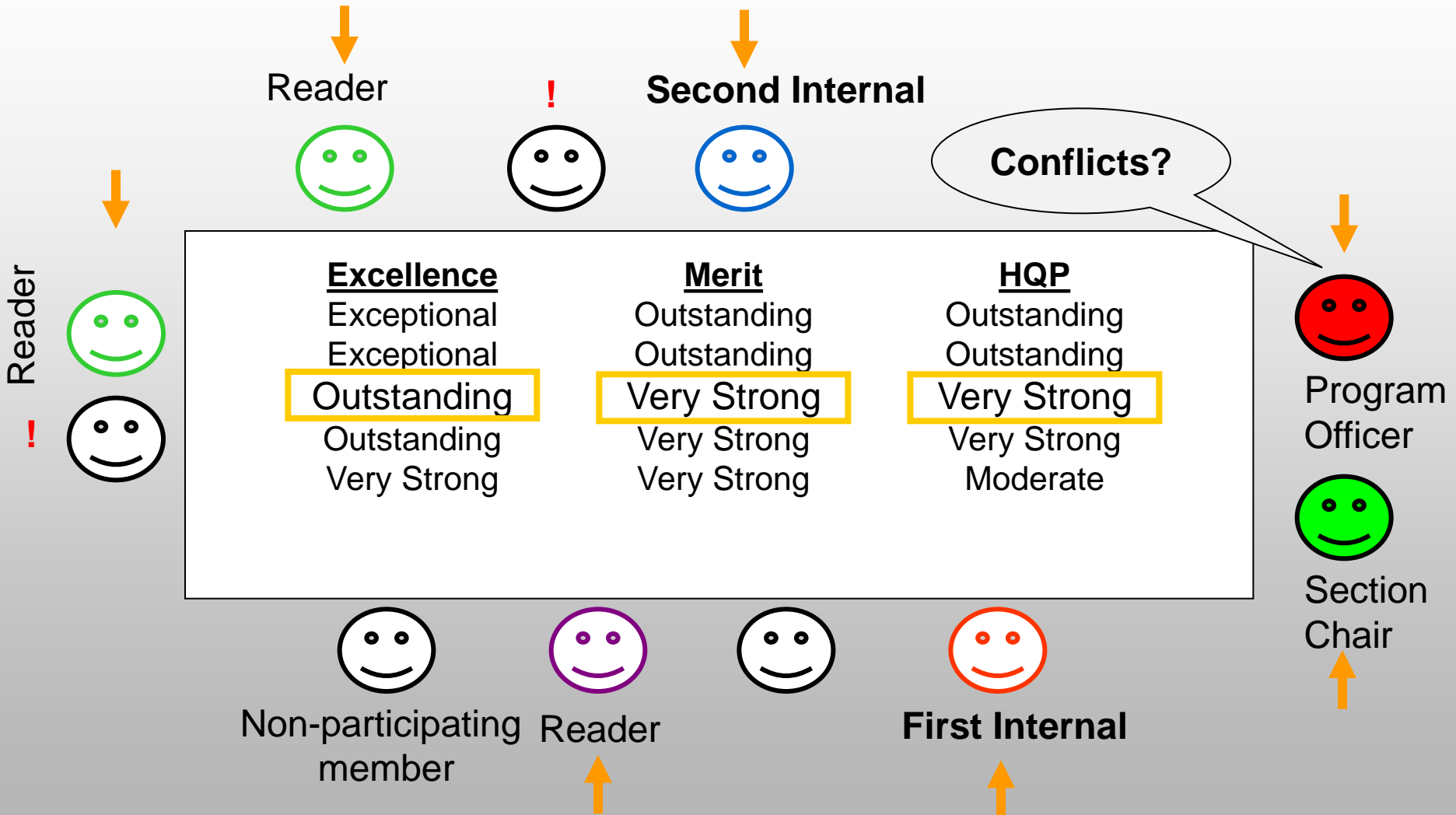
■ Merit Indicators “Grid”

DISCOVERY GRANTS MERIT INDICATORS¹

	Exceptional	Outstanding	Very Strong	Strong	Moderate	Insufficient
Excellence of the Researcher	Acknowledged as a leader who has continued to make, over the last six years, influential accomplishments at the highest level of quality, impact and/or importance to a broad community.	The accomplishments presented in the application were deemed to be far superior in quality, impact and/or importance to a broad community.	The accomplishments presented in the application were deemed to be of superior quality, impact and/or importance.	The accomplishments presented in the application were deemed to be solid in their quality, impact and/or importance.	The accomplishments presented in the application were deemed to be of reasonable quality, impact and/or importance.	The accomplishments presented in the application were deemed to be below an acceptable level of quality, impact and/or importance.
Merit of the Proposal	Proposed research program is clearly presented, is extremely original and innovative and is likely to have impact by leading to groundbreaking advances in the area and/or leading to a technology or policy that addresses socio-economic or environmental needs. Long-term vision and short-term objectives are clearly defined. The methodology is clearly defined and appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.	Proposed research program is clearly presented, is highly original and innovative and is likely to have impact by contributing to groundbreaking advances in the area, and/or leading to a technology or policy that addresses socio-economic or environmental needs. Long-term goals are clearly defined and short-term objectives are well planned. The methodology is clearly described and appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.	Proposed research program is clearly presented, is original and innovative and is likely to have impact by leading to advancements and/or addressing socio-economic or environmental needs. Long-term goals are defined and short-term objectives are planned. The methodology is clearly described and appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.	Proposed research program is clearly presented, is original and innovative and is likely to have impact and/or address socio-economic or environmental needs. Long-term goals and short-term objectives are clearly described. The methodology is described and appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.	Proposed research program is clearly presented, has original and innovative aspects and may have impact and/or address socio-economic or environmental needs. Long-term and short-term objectives are described. The methodology is partially described and/or appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.	Proposed research program, as presented lacks clarity, and/or is of limited originality and innovation. Objectives are not clearly described and/or likely not attainable. Methodology is not clearly described and/or appropriate. The application does not clearly demonstrate how the research activities to be supported are distinct from those funded (or applied for) by other sources.
Training of HQP	Past training is at the highest level in terms of the research training environment provided and HQP contributions to research. Most HQP move on to highly impactful positions that require skills gained through the training received. Training philosophy and research training plans are at the highest quality ; highly appropriate, clearly defined and expected to produce top quality results in terms of the overall approach and specific projects for HQP.	Past training is far superior to other applicants in terms of research training environment provided and HQP contributions to research. Most HQP move on to impactful positions that require skills gained through the training received. Training philosophy and research training plans are far superior; highly appropriate, clearly defined and expected to produce high quality results in terms of the overall approach and specific projects for HQP.	Past training is superior to other applicants in terms of the research training environment provided and HQP contributions to research. HQP generally move on to impactful positions that require skills gained through the training received. Training philosophy and research training plans are superior; highly appropriate, clearly defined and expected to produce quality results in terms of the overall approach and specific projects for HQP.	Past training compares favourably with other applicants in terms of the research training environment provided and HQP contributions to research. HQP generally move on to positions that require skills gained through the training received. Training philosophy and research training plans are appropriate and clearly defined in terms of the overall approach and specific projects for HQP.	Past training is modest relative to other applicants in terms of the research training environment provided and HQP contributions to research. Some HQP move on to positions that require skills gained through the training received. Training philosophy and research training plans are partially appropriate and partially defined in terms of the overall approach and specific projects for HQP.	Past training is below an acceptable level in terms of the research training environment provided and HQP contributions to research. HQP rarely move on to positions that require skills gained through the training received. Training philosophy and research training plans are not appropriate and not clearly defined in terms of the overall approach and specific projects for HQP.

¹The Discovery Grants Merit Indicators should be used in conjunction with the Peer Review Manual which outlines how reviewers arrive at a rating.

Grants Competition Conference Model



Grants Competition Review Process

Step 1: Merit assessment

	Exceptional	Outstanding	Very Strong	Strong	Moderate	Insufficient
Excellence of the researcher	X X	X X	X			
Merit of the proposal		X X	X X X			
Contribution to the training of HQP		X X	X X		X	

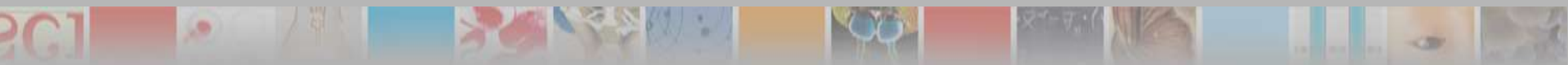


Outstanding – Very Strong – Very Strong



Step 2: Funding Recommendation

Funding Bin	A	B	C	D	E	F	G	H	I	J	K	...	P
Value	...\$...\$...\$...\$...\$...\$...\$...\$...\$...\$...\$...\$...\$

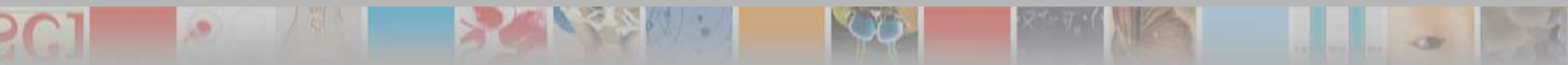


Discovery Grant Application

Excellence of the Researcher

Assessment based on achievements demonstrated over the past **six** years.

- Knowledge, expertise, and experience
- Quality and impact of contributions to Natural Sciences and Engineering (NSE) research
- Importance of contributions to researchers and end-users

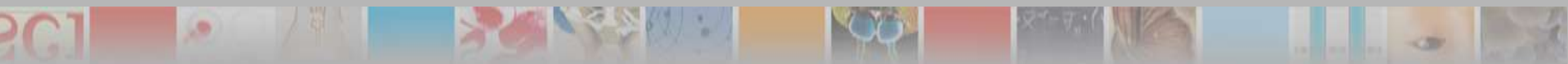


Discovery Grant Application

Excellence of the Researcher

Members will assess this using information from:

- **Most significant contributions**
 - Highlighted quality and impact
- **Samples of research contributions**
 - Up to 4 attached with application *within the last 6 years*
- **CCV contributions, recognitions, activities**
 - Additional information on contributions in application



Discovery Grant Application

Merit of the Proposal

Assessment based on the following elements:

- Originality and innovation
- Significance and expected contributions to research
- Clarity, scope of objectives, and appropriateness of methodology
- Feasibility
- Appropriateness and justification for the budget
- Relationship to other research support

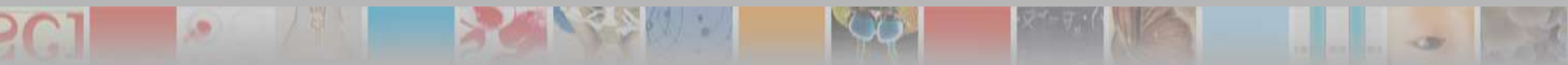


Discovery Grant Application

Merit of the Proposal

Relationship to other research support

- Budget requested in DG is for different expenses than the ones supported (or to be supported) by other sources.
- The DG proposal is distinct conceptually from research supported (or to be supported) by CIHR and/or SSHRC.
- ***New in CY2017*** For CIHR Foundation Grant holders or applicants only: convincing evidence that support from DG is essential to carry out the work proposed.

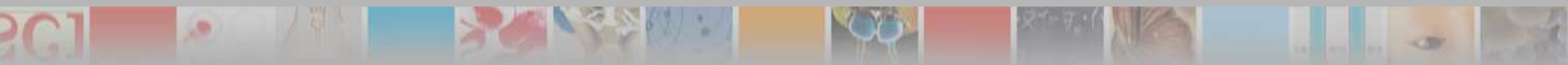


Discovery Grant Application

Merit of the Proposal

Members will assess this using information from:

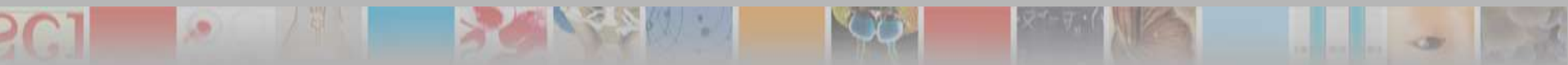
- **Research proposal (5 pages)**
 - List of references (2 pages)
- **Proposed expenditures and budget justification**
- **Relationship to other research support**
 - CIHR and/or SSHRC summary and budget pages
 - CCV research funding history



Discovery Grant Application

Subject Matter Eligibility

- NSERC supports research whose major challenges lie in the natural sciences and engineering (NSE), other than the health sciences.
- The intended objective(s) of the research must primarily be to advance knowledge in one or more of the NSE disciplines.
- Applicants should refer to:
 - [Selecting the Appropriate Federal Granting Agency](#)
 - ***Updated*** [Addendum to the Guidelines for the Eligibility of Applications Related to Health](#).
 - The Addendum provides examples that illustrate the eligibility of applications related to human health.



Discovery Grant Application

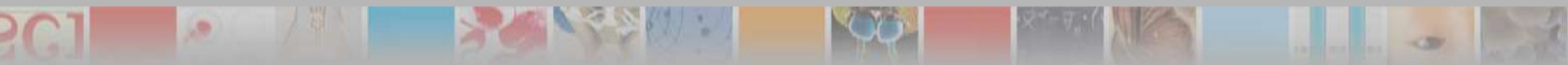
Contributions to the training of HQP

Assessment is based on both:

- the **past contributions to training**; and
- the **future plans for training**

Quality **research training at all levels** are valued, including:

- Undergraduate students involved in research
- Graduate students and postdoctoral fellows
- Technicians and research associates
- Other research personnel from non-academic sectors i.e. government, or industry



Discovery Grant Application

Contributions to the training of HQP

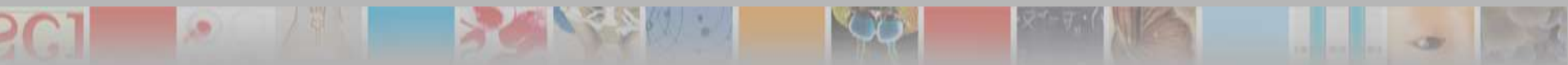
Past contributions to the training of HQP

Assessment based on training over the past **six** years

****New Instructions in CY2017 ****

Include three components:

1. Training environment
2. HQP awards and research contributions
3. Outcomes and skills gained by HQP



Discovery Grant Application

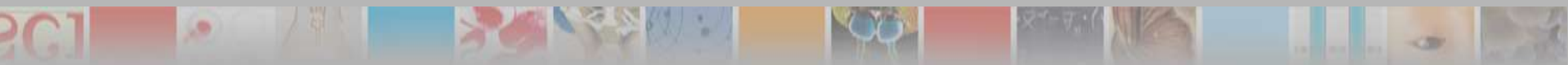
Contributions to the training of HQP

Past contributions to the training of HQP

Other items to consider:

- Explain the level, context, and role in supervision and co-supervision
- Note impact of delays in training (those taken by the applicant or HQP)
- Focus on quality and impact of training

Members are instructed not to rate Early Career Researchers (ECRs) as *Insufficient* solely due to a limited past record of contributions to the training of HQP.



Discovery Grant Application

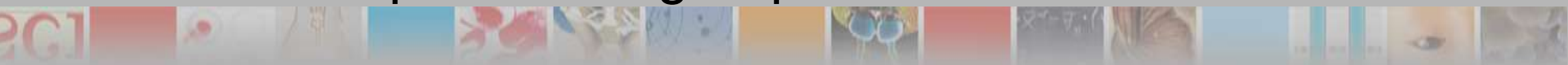
Contributions to the training of HQP

Future plans for training

****New Instructions in CY2017****

Include two components:

1. Training Philosophy
2. Research Training Plan
 - Focus on quality, suitability and clarity of plan
 - Must be planned training in the NSE
 - Define your role in any planned co-supervision
 - Encourage approaches that promote increased inclusion and advancement of women and other under-represented groups in NSE



Discovery Grant Application

Contributions to the training of HQP

Evaluation Group will assess HQP using information from:

- **Application:**

- Past contributions to HQP training
- HQP training plan

- **CCV**

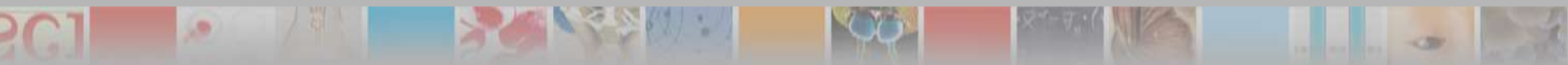
- Supervisory activities and contributions
- Trained HQP who co-authored should be identified with an asterisk “*”
- Do not use “academic advisor”



Discovery Grant Application

Tips

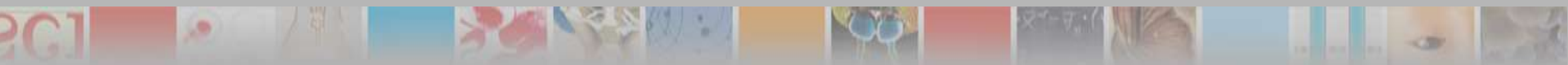
- **Read other successful applications**
- **Ask colleagues and/or your RGO for comments on your application**
 - Ask both experts in your field and non-experts to review
- **Plan ahead and check institutional deadlines**
- **Use the resources available**



Discovery Grant Application

Delays

- Applicant delays are recorded in the CCV, under the Employment section
- HQP delays are recorded in the HQP section of the application
- In both cases, clearly explain
 - the **duration** (i.e., start/end dates)
 - the **impact** on your research (e.g., dissemination of results, ability to recruit HQP)



Discovery Grant Application

Available Resources

- **Discovery Grants Information Centre**
- **Resource Videos**
- **Peer Review Manual**
 - Includes information on each of the three criteria and the merit indicators
- **HQP FAQ Document**
- **Webinars on how to apply**
 - NOI and full application stages (French and English)



2018 Competition Results



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Research Council of Canada

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Canada

2018 Competition Results

Peer Review – Thank You!

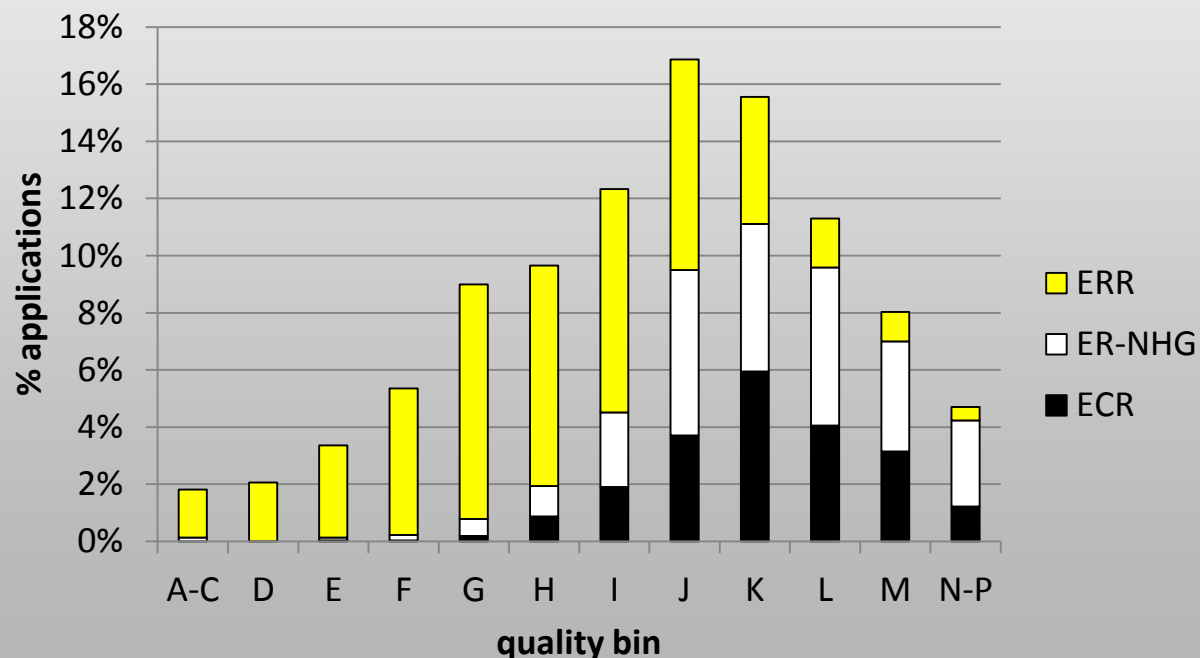
- 3200+ Discovery Grants Applications =
 - 400+ Evaluation Group Members
 - 16 000+ Reviews by EG members
 - 8700+ External Reviewers Reports



2018 Competition Results

Overall – Discovery Grants

	Early Career Researchers	Established Researchers		Total
		Returning	Not Holding a Grant	
# of applications	677	1635	901	3213
# of awards	433	1366	326	2125
Success Rate	64%	84%	36%	66%



* Results presented are not official

2018 Competition Results

Equity, Diversity and Inclusion (EDI)

		Female*	Male*	Not indicated
Early Career Researchers (ECR)	Number of awards	106	208	119
	Success rate	60%	63%	69%
Established Researchers (ER)	Number of awards	315	1054	323
	Success rate	70%	67%	62%

**Data from CCV. NSERC is committed to using more gender inclusive language in the future.*

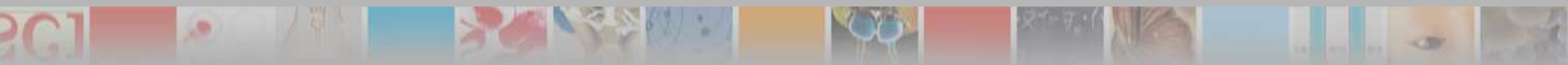
*** Results presented are not official**

2018 Competition Results

Research Tools and Instruments (RTI)

RTI grants foster and enhance the discovery, innovation and training capability of university researchers in the NSE by supporting the purchase of research equipment.

	2014	2015	2016	2017	2018
Budget	\$19.5M	\$25M	\$26M	\$30.5M	\$25.1M
# Appl.	468	666	657	748	1000+



2018 Competition Results

Research Tools and Instruments (RTI)

	2014	2015	2016	2017	2018
Budget	\$19.5M	\$25M	\$26M	\$30.5M	\$25.1M
# Appl.	468	666	657	748	1043
# Funded	176	218	215	241	208
Success Rate	38%	33%	33%	32%	20%
Funding Rate	38%	34%	33%	33%	21%

* Results presented are not official

Discovery Grant Updates

NSERC Leave Policies

Primary Caregivers (Pilot)

- Researchers who become primary caregivers following the birth or adoption of a child and who are eligible for maternity or parental leave but decline the leave, may be eligible to receive a one-year grant extension with funds

Family and Medical Leave

- Grant holders who plan to take family-related leave or medical leave may be eligible for a grant extension with funds for up to two years.

Paid Maternity / Parental Leave for Students and Postdoctoral Fellows paid from Grants

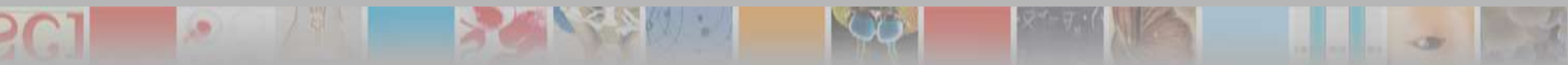
- Students and Postdoctoral fellows who are supported by NSERC grants and are eligible may receive up to 6 months of paid maternity / parental leave.
- The leave supplement will be paid by NSERC.



Discovery Grant Updates

Early Career Researcher - New DG definition

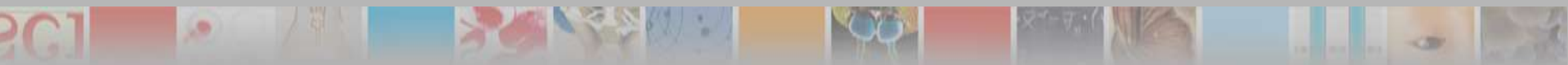
- Early Career Researchers (ECR) are applicants who have held an independent academic position for **three years or less** and who meet the NSERC - Eligibility Criteria for Faculty at the time of submitting the Notification of Intent to Apply for a Discovery Grant (NOI).
- For example, for the 2019 competition, to be classified as an ECR, a researcher submitting an NOI in August 2018 would have been hired on or after **July 2015**.
- Applicants are given the opportunity to indicate their “Suggested Applicant Category” along with an explanation at the time of submitting a full application.



Discovery Grant Updates

ECR extension option with funds

- ECRs re-applying for the first time will now have the option of **extending their DG by one year with funds**
- **Goal:** Allow early stage researchers additional time to better establish themselves and their research program before re-applying to the Discovery Grant program as established researchers



Discovery Grant Updates

Equity, Diversity and Inclusion (EDI)

- Selection of Sex in personal information within CCV is now mandatory
- Sex identification is NOT shared with reviewers; it is used only for statistical purposes.

Canadian Common CV

Français	Home	Contact Us	Help				
Welcome	CV	Versions	History	Consent	Utilities	PIN/System Account	Account

Personal Information

Identification [?](#)

* Title

* Family Name

* First Name

Middle Name

Previous Family Name

Previous First Name

Date of Birth [?](#)

Sex [?](#)

Designated Group

* Correspondence language

Application received by reviewers

	
Research Portal	
Application - Discovery Grants Program - Individual	
Identification	
Applicant	
Family Name: Bale	First Name: Philip
Middle Names:	
Current Position: Professor	
Primary Affiliation: University of Ottawa	
Department/Division: Department of Communications	
Administering Organization	
Organization: University of Ottawa	
Department/Division: Communication	

Discovery Grant Updates

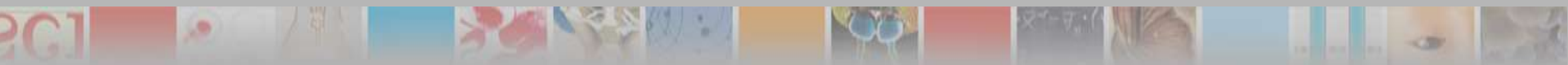
Highly Qualified Personnel – Literature Change

****New Instructions in CY2017****

- Rewording of current HQP criterion
 - Instructions to Applicants
 - Peer Review Manual

Objective:

- Applicants – better description of what is expected
- Members – clearer information for review



Discovery Grant Updates

Relationship to Other Research Support

****New from CY2017****

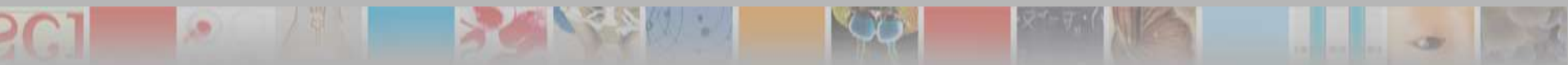
- Clarified instructions for the applicant and for committee members (Instructions to Applicants, Peer Review Manual).
 - **Expenses proposed in the DG application must not be supported (or submitted for support) by other sources**
 - **The Discovery Grants Program does not support research ideas/objectives that are already funded (or submitted for funding) by CIHR and/or SSHRC.**
- CIHR Foundation Grant Holders or Applicants must explain why support from DG is essential to carry out the work proposed.



Discovery Updates

RTI Program Update

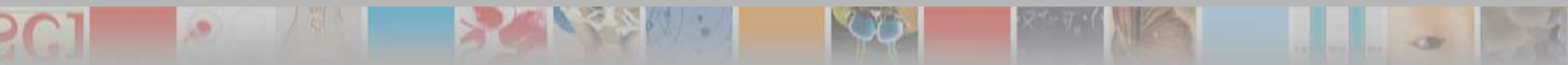
- Changes to RTI selection criteria
 - Reduction in the number of selection criteria from five (5) to three (3)
 - Applied weighting for each criterion
 - The weighted scoring method will better guide Selection Committee members during review
 - Will provide applicants with more detailed scoring on their proposals to help improve subsequent applications
- Research Portal open in August



2018 Competition Results

Discovery Accelerator Supplements

- DAS provides resources to researchers who:
 - *Have highly original and innovative research programs*
 - *Show strong potential to become international leaders within their field*
- \$120,000 - over three years
- Up to 125 Supplements per year
- Each EG will receive a quota of DAS nominations to recommend
- EG members nominate candidates and members vote during competition. Executive Committee makes the final recommendation to NSERC



2018 Competition Results

Northern Research Supplements (NRS)

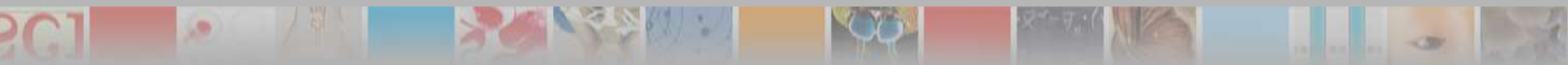
Objective:

- To augment and promote Canadian university-based northern research, training, and outreach by recognizing the added costs unique to conducting research in the Canadian North

Description:

- **New Application Process CY 2019:** apply as part of DG application within Research Portal - no longer a separate application through On-Line System
- \$10,000 to \$25,000/year for duration of the DG: amount based on combination of logistical costs and recognizing outstanding contributions to outreach and interactions with Northerners

Contact: EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca



2018 Competition Results

Ship Time Program

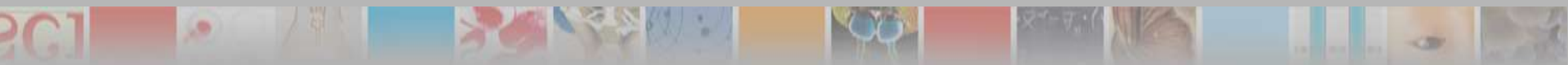
Objective:

- Assists with high costs associated with chartering research vessels in Canada and abroad
- Funds access to research vessels in support of on-going Discovery research programs

Description:

- Applicants must hold a Discovery Grant (*or be successful in current competition*)
- Duration usually one year
- Results announced late November each year
- Deadline: September 1st

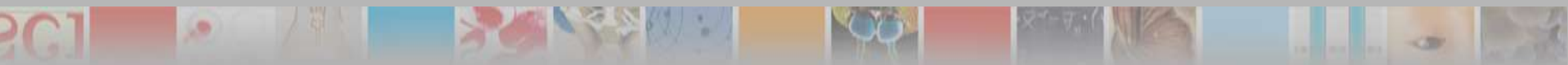
Contact: EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca



Discovery Grant Updates

DND/NSERC Discovery Grant supplement

- Supporting discovery-based research
- 20 supplements at \$40,000 per year for 3 years
- Eligibility
 - Researchers applying to current DG competition
 - Proposed research must fit within DND defence and security target areas
- Internal DND committee will select recipients
- Results will be announced in the spring
- Contact: dndsuppmdn@nserc-crsng.gc.ca



NSERC Updates



Natural Sciences and Engineering
Research Council of Canada

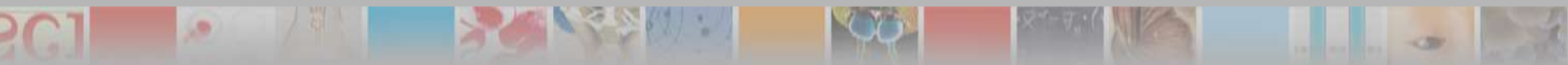
Conseil de recherches en sciences
naturelles et en génie du Canada

Canada

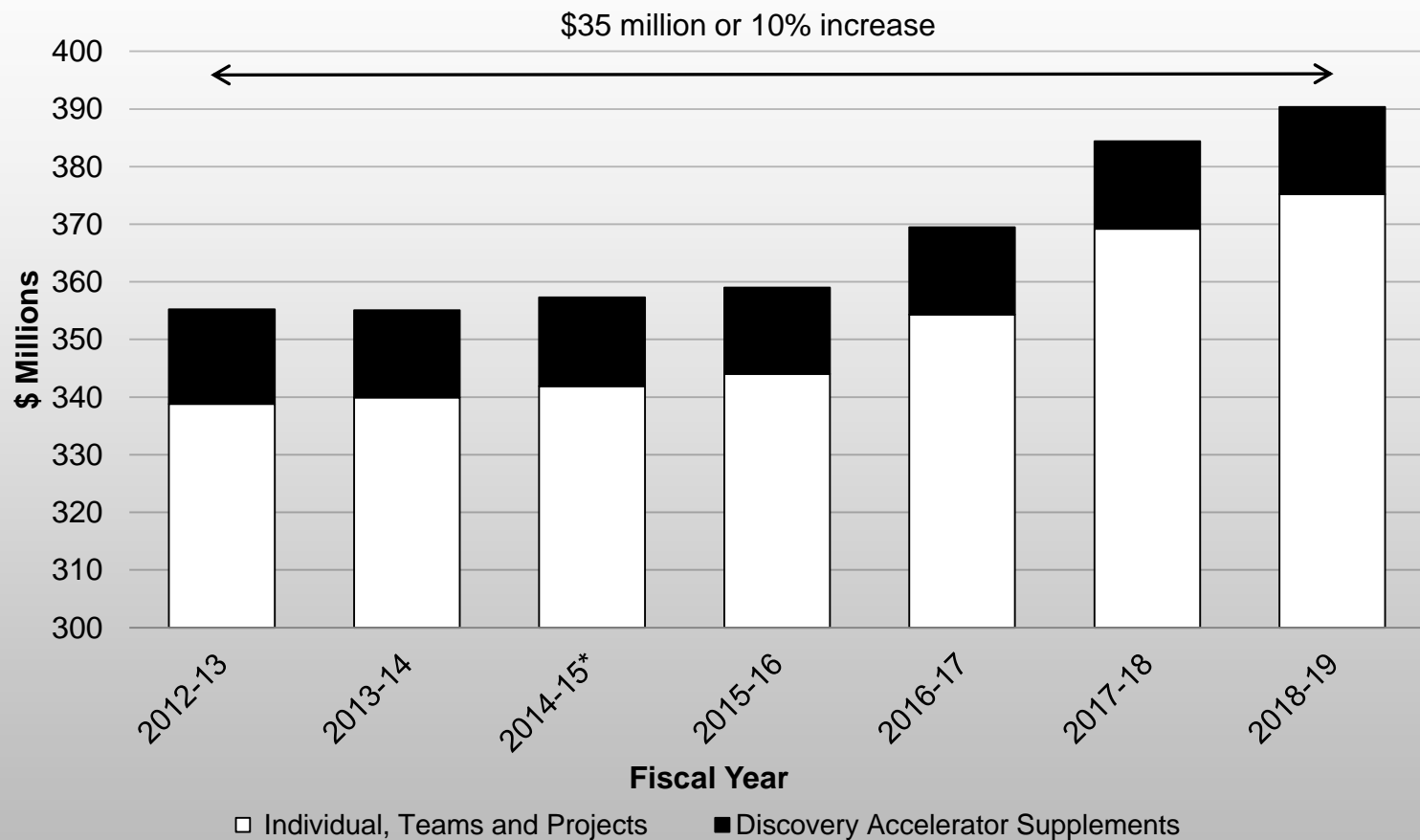
Federal Budget 2018

Investing in Canadian Scientists and Researchers

Agency	Programs	Over five years	Ongoing/year
NSERC		\$354.7 million	\$90.1 million
CIHR		\$354.7 million	\$90.1 million
SSHRC		\$215.5 million	\$54.8 million
Tri-councils	New EDI initiatives	\$21 million	--
Tri-councils	New research fund	\$275 million	\$65 million
Tri-councils	Colleges (CCI)	\$140 million	--
Tri-councils	CRC (early career)	\$210 million	\$50 million
Tri-councils	Research support fund	\$231.3 million	\$58.8 million



N SERC Discovery Grants Funding (millions of dollars)



* Includes additional funding received resulting from Federal Budget 2014 and 2016

** Projected expenditures for 2018-2019



Other Updates: **Open Access**

Tri-Agency Open Access Policy on Publications

http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html

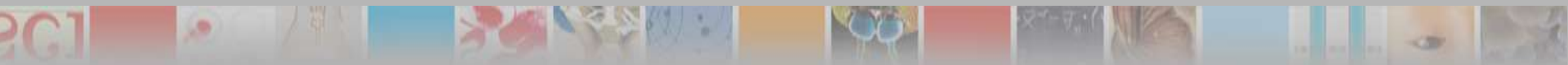
- Researchers must make articles freely available online within 12 months of publication
- Applies to all grants awarded May 1, 2015 and onward
- How to comply:
 - Deposit peer-reviewed manuscript in a repository; and/or
 - Submit final, peer-reviewed manuscript to journal that offers open access within 12 months

Frequently Asked Questions:

http://www.science.gc.ca/eic/site/063.nsf/eng/h_42701EA6.html

Toolbox: http://www.science.gc.ca/eic/site/063.nsf/eng/h_ECEFDFAA.html

Contact: openaccess@nserc-crsng.gc.ca



Other Updates: **Data Management**

- Based on research community feedback, the *Tri-Agency Statement of Principles on Digital Data Management* was released in June 2016.

http://www.science.gc.ca/eic/site/063.nsf/eng/h_83F7624E.html?OpenDocument

- NSERC, SSHRC and CIHR are currently seeking input from the research community on draft policy text and how best to realize the principles presented in the Statement.

http://www.science.gc.ca/eic/site/063.nsf/eng/h_547652FB.html



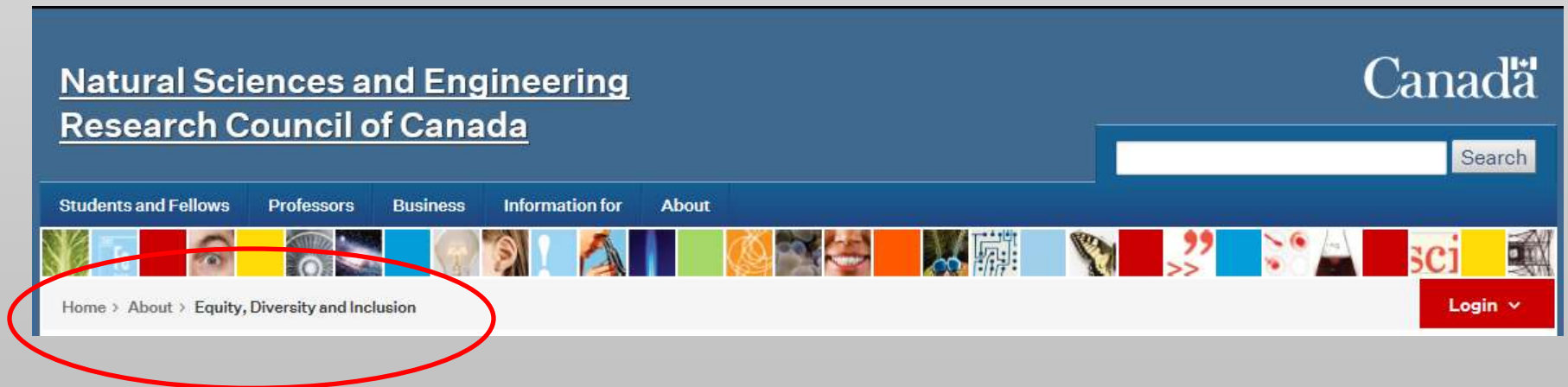
NSERC News

Equity, Diversity, and Inclusion

Equity, diversity and inclusion (EDI) strengthen the scientific and engineering communities and the quality, social relevance and impact of research.

Visit NSERC's EDI website for resources:

- NSERC's EDI framework
- Training modules and tools
- Related programs and awards
- Events, such as Gender Summit



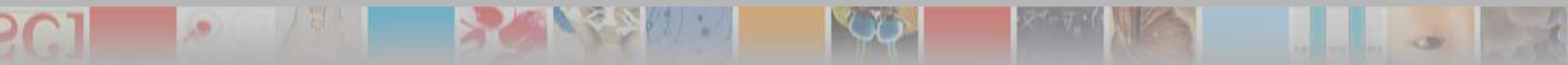
The image shows a screenshot of the NSERC website header and navigation bar. The header is dark blue with the text "Natural Sciences and Engineering Research Council of Canada" on the left and the "Canada" logo on the right. Below the header is a navigation bar with several menu items: "Students and Fellows", "Professors", "Business", "Information for", and "About". A search bar is located on the right side of the navigation bar. Below the navigation bar is a row of colorful icons representing various scientific and engineering fields. At the bottom of the page, there is a breadcrumb trail: "Home > About > Equity, Diversity and Inclusion", which is circled in red. A "Login" button is visible in the bottom right corner.

Other Updates:

Upcoming Deadlines for 2018

Notification/Letter of Intent Deadlines

- Discovery Grants - (**August 1st**)
- Subatomic Physics Major Resources Support Program (**August 1st**)
- Subatomic Physics – RTI (Category 2 & 3) (**August 1st**)



Other Updates:

Upcoming Deadlines for 2018

Application Deadlines

- NSERC Awards for Science Promotion (**TBD**)
- Ship Time Program (**September 4th**)
- PromoScience (**September 15th**)
- Research Tools & Instruments (and Subatomic Physics Category 1) (**October 25th**)
- Discovery Grants - (**November 1st**)
- Northern Research Supplements Program (**November 1st**)



