

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



Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
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Canada

Discovery Grants Program Information Session

Summer 2017



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Discovery Grant Updates



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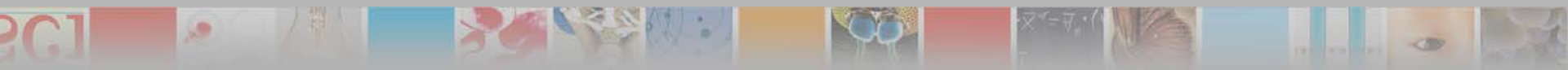
Conseil de recherches en sciences
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Discovery Grant Updates

Early Career Researcher - New DG definition

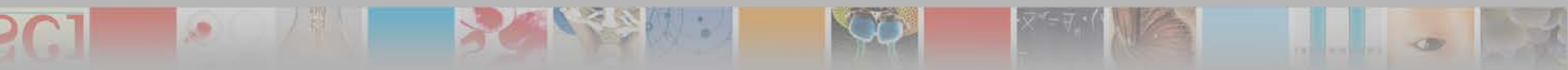
- Early Career Researchers (ECR) are researchers who are **within three years of the start date** of an NSERC eligible position, and who have no academic or non-academic independent research experience prior to the three-year window at the time of submitting the Notification of Intent to Apply for a Discovery Grant (NOI).
- For example, for the 2018 competition, to be classified as an ECR, a researcher submitting an NOI in August 2017 would have been hired on or after **July 2014**.



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

Highly Qualified Personnel – Literature Change

****NEW Instructions****

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

Objective:

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

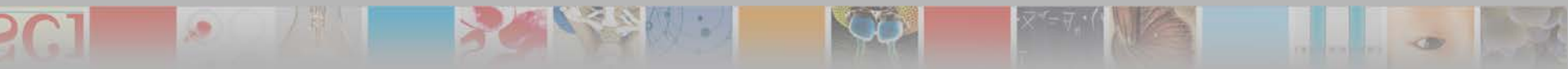


Discovery Grant Updates

Relationship to Other Research Support

****NEW ****

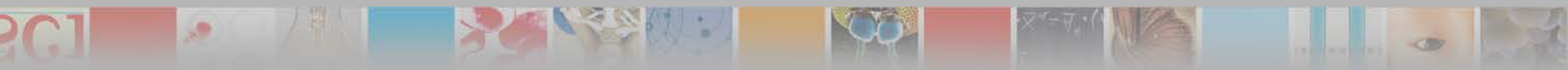
- Clarified instructions for the applicant and for committee members (Instructions to Applicants, Peer Review Manual).
 - **Expenses proposed in the DG application must not be supported (or submitted for support) by other sources**
 - **The Discovery Grants Program does not support research ideas/objectives 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 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

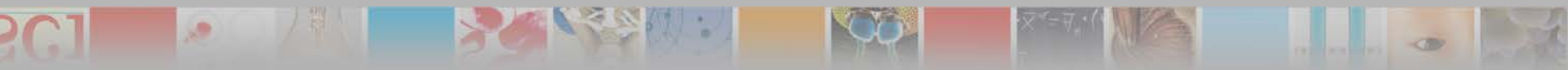


Discovery Grant Updates

Primary Caregiver Policy

NSERC Policy for New Primary Caregivers (Pilot)

- In place as of March 1, 2016
- 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

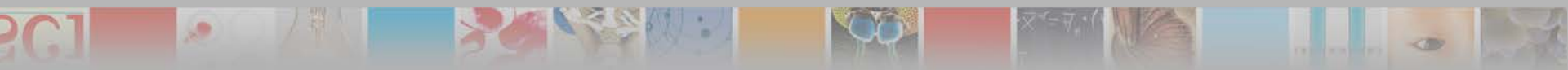


Discovery Grant Updates

Maternity and Parental Leave

***Reminder* - NSERC Policy on 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 Updates

Discovery Frontiers

These project grants address national research priorities and global challenges by supporting major new transformative and integrative activities led by world-class Canadian researchers and comprised of multi-institutional teams and international collaborators.

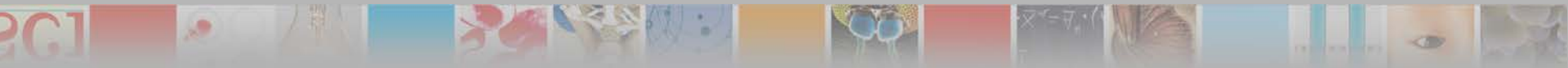
Calls for proposal:

- 2011 – Northern Research Systems
- 2013 – Exploring Big Data
- 2015 – New Materials for Clean Energy and Energy Efficiency
- 2017 – Biodiversity and Adaptation of Biosystems
 - LOI deadline – April 17, 2017

Discovery Updates

RTI Program Update

- University quotas to be removed for the 2018 competition
 - Competition open to all eligible Canadian university researchers
 - Researchers will be able to participate on one application per competition, either as an applicant or a co-applicant, but not both
- Research Portal open in August



How to prepare a Discovery Grant Application



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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

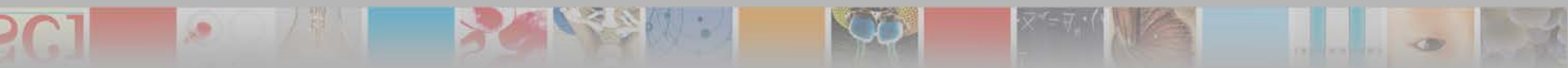
Members review applications and external reviewer reports are received

February

Grants competition

March/April

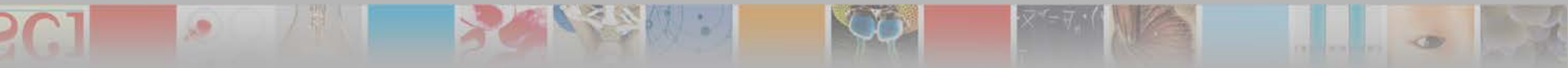
Announcement of results



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

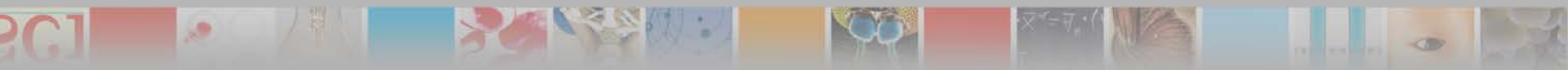
- **Facilitates preliminary assignments:**
 - to an Evaluation Group;
 - of internal reviewers; and
 - of external reviewers
- **First indication of joint review**
 - Informed by research topics, keywords, and proposal summary
- **First review of subject matter eligibility**



Notification of Intent to Apply

Joint Reviews - Evaluation Groups

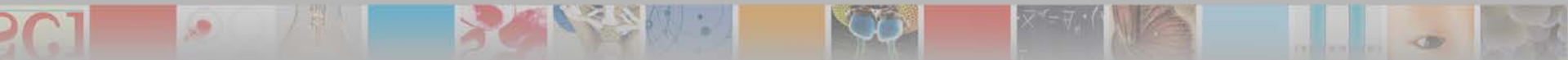
- Genes, Cells and Molecules (1501)
- Biological Systems and Functions (1502)
- Evolution and Ecology (1503)
- Chemistry (1504)
- Physics (1505)
- Geosciences (1506)
- Computer Science (1507)
- Mathematics and Statistics (1508)
- Civil, Industrial and Systems Engineering (1509)
- Electrical and Computer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



Notification of Intent to Apply

Tips

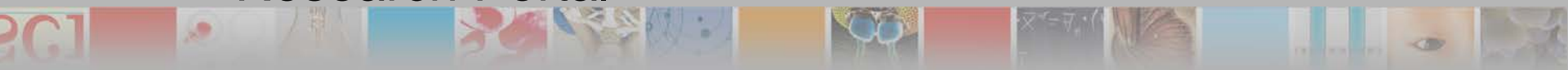
- **Select appropriate research topics**
 - First selected must be from suggested EG
 - Helps identify potential joint reviews
- **Submit a detailed summary**
 - Helps internal reviewers select appropriate external reviewers
 - Helps identify potential joint reviews
- **Select appropriate suggested external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



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

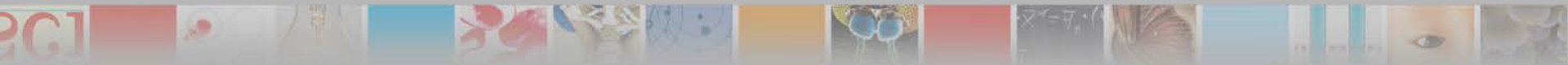


Grants Competition

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 INDICATORS ¹						
	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 proposal and budget clearly demonstrate how the research activities to be supported are distinct from and complement those funded 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 proposal and budget clearly demonstrate how the research activities to be supported are distinct from and complement those funded 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 proposal and budget demonstrate how the research activities to be supported are distinct from and complement those funded 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 proposal and budget demonstrate how the research activities to be supported are distinct from and complement those funded 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 proposal and budget demonstrate how the research activities to be supported are distinct from and complement those funded 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 proposal and budget do not clearly demonstrate how the research activities to be supported are distinct from and complement those funded by other sources.
Training of HQP	Training record is at the highest level , with HQP contributing to top quality research . Most HQP move on to positions that require highly desired skills , obtained through training received. Research plans for trainees are appropriate and clearly defined . HQP success highly likely .	Training record is far superior to other applicants, with HQP contributing to high-quality research . Most HQP move on to positions that require highly desired skills , obtained through training received. Research plans for trainees are appropriate and clearly defined . HQP success highly likely .	Training record is superior to other applicants, with HQP contributing to quality, original research . Many HQP move on to appropriate positions that require desired skills , obtained through training received. Research plans for trainees are appropriate and clearly described . HQP success is likely .	Training record compares favourably with other applicants. HQP generally move on to positions that require desired skills , obtained through training received. Research plans for trainees are appropriate and described . HQP success is likely .	Training record is acceptable but may be modest relative to other applicants. Some HQP move on to programs or positions that require desired skills , obtained through training received. Plans for trainees are described and should contribute to HQP success.	Training record is below an acceptable level relative to other applicants. HQP do not, in general, move on to positions that require skills obtained through training received. Plans for trainees are not appropriate or are not described with enough information to predict likelihood of HQP success.

¹The Discovery Grants Merit Indicators should be used in conjunction with the Peer Review Manual (Chapter 6) which outlines how reviewers arrive at a rating.

Cost of research	High	Normal	Low
	Majority of justified expenses represent costs higher than the norm for the research area.	Majority of justified expenses are within the norm for the research area.	Majority of justified expenses are lower than the norm for the research area.

² Possible examples include: Cost of training of HQP; Equipment intensive research and/or high users fees; particularly expensive or frequent consumables; Travel (for collaborations, field work, access to facilities, conferences, ...)

Grants Competition Conference Model

Reader ! Second Internal



Conflicts?

Reader
!



<u>Excellence</u>	<u>Merit</u>	<u>HQP</u>
Exceptional	Outstanding	Outstanding
Exceptional	Outstanding	Outstanding
Outstanding	Very Strong	Very Strong
Outstanding	Very Strong	Very Strong
Very Strong	Very Strong	Moderate
<u>COR Factor:</u>	N	N



Program Officer



Section Chair



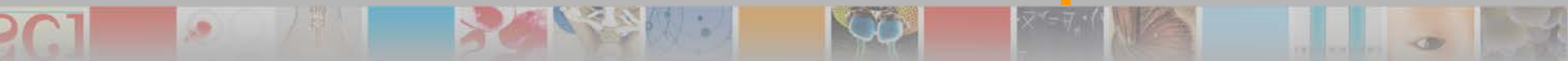
Non-participating
member



Reader



First Internal



Grants Competition

Review Process

Step 2: Funding Recommendations

- Applications grouped into 'bins' of comparable merit
- Similar overall ratings within an EG receive comparable funding
- Possible adjustment related to the cost of research



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	

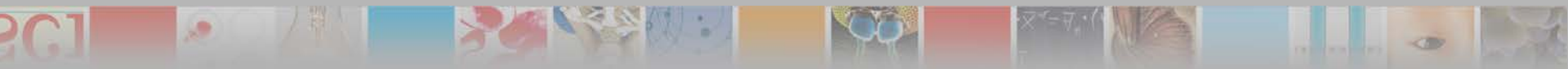


Outstanding – Very Strong – Very Strong



Step 2: Funding Recommendation

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

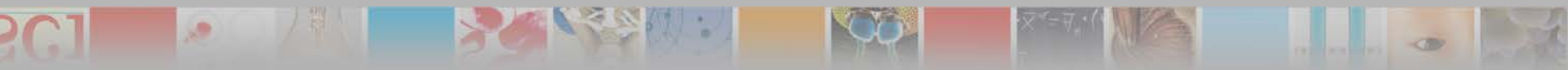


Discovery Grant Application

Excellence of the Researcher

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

- Knowledge, expertise, and experience
- Quality and impact of contributions to NSE research
- Importance of contributions to researchers and end-users

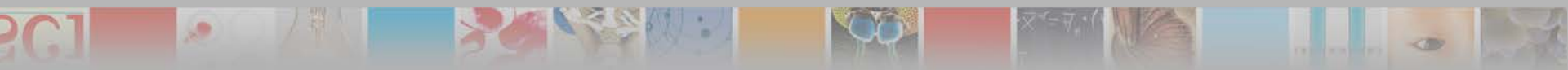


Discovery Grant Application

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
- **CCV contributions, recognitions, activities**
 - Additional information on contributions in application

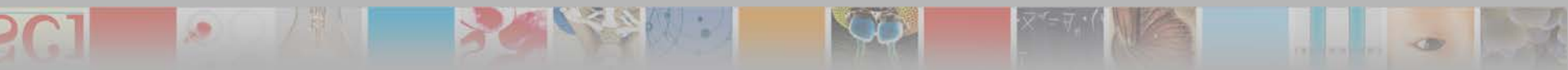


Discovery Grant Application

Merit of the Proposal

Assessment based on the following elements:

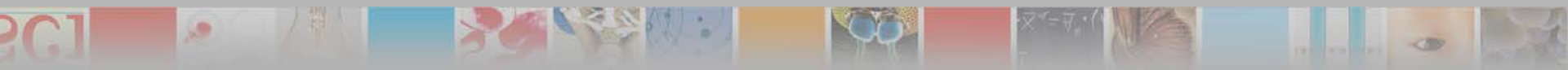
- Originality and innovation
- Significance and expected contributions to research
- Clarity, scope of objectives, and appropriateness of methodology
- Feasibility
- Appropriateness and justification for the budget
- Relationship to other research support



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*** For CIHR Foundation Grant holders or applicants only: convincing evidence that support from DG is essential to carry out the work proposed.

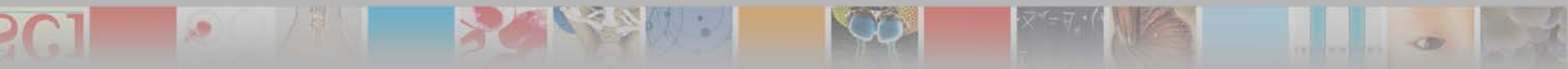


Discovery Grant Application

Merit of the Proposal

Members will assess this using information from:

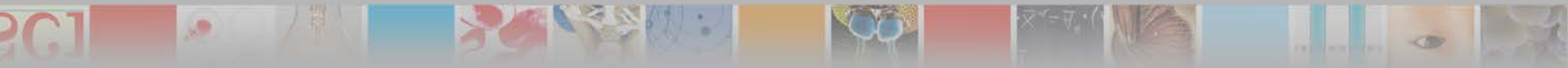
- **Research proposal (5 pages)**
 - List of references (2 pages)
- **Proposed expenditures and budget justification**
- **Relationship to other research support**
 - CIHR and/or SSHRC summary and budget pages
 - CCV research funding history



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:
 - ***Updated*** [Selecting the Appropriate Federal Granting Agency](#)
 - ***New*** [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

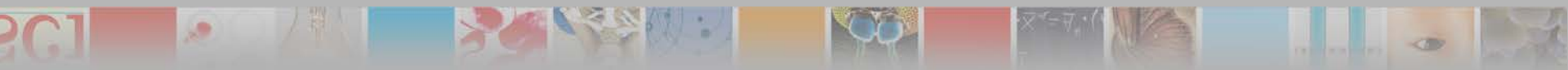
Contributions to the training of HQP

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; and
- Other trainees from non-academic sectors i.e. government, or industry.



Discovery Grant Application

Contributions to the training of HQP

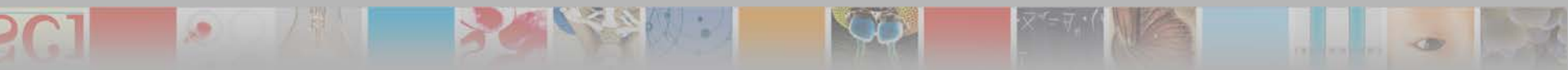
Past contributions to the training of HQP

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

****NEW Instructions****

Include three components:

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



Discovery Grant Application

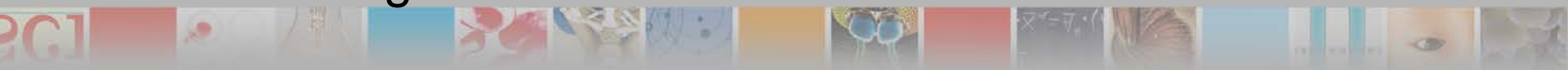
Contributions to the training of HQP

Past contributions to the training of HQP

Other items to consider:

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

Early Career Researchers (ECRs) should not be rated *insufficient* **solely** due to a poor past record of contributions to the training of HQP.



Discovery Grant Application

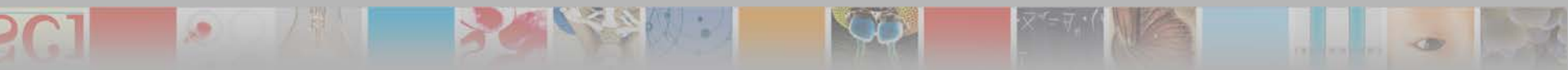
Contributions to the training of HQP

Future plans for training

****NEW Instructions****

Include two components:

1. Training Philosophy
2. Research Training Plan



Discovery Grant Application

Contributions to the training of HQP

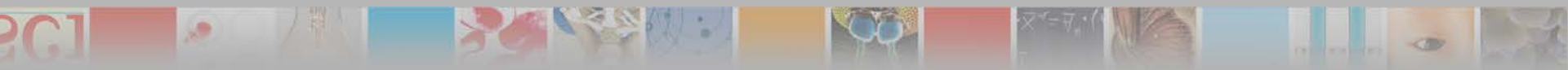
Evaluation Group will assess HQP using information from:

- **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”.

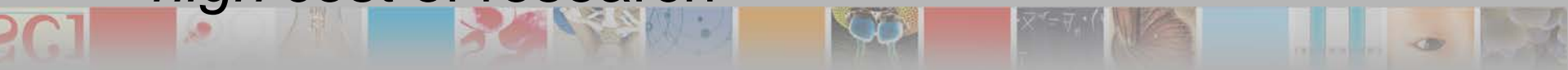


Discovery Grant Application

Cost of Research

Relative cost of research of the proposed research program **as compared to the norms** for a given discipline / field of research.

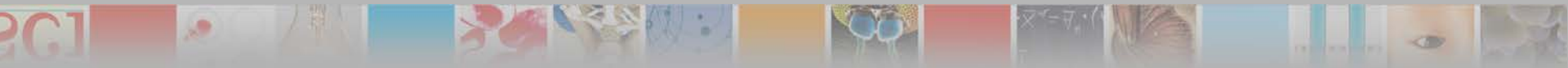
- High or Normal
- Not used by all Evaluation Groups
 - Expected that most applications will have a normal cost of research
- Budgets that are large simply because of the program size do not translate automatically into a *high* cost of research



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

Available Resources

- **Discovery Grants Information Centre**

http://www.nserc-crsng.gc.ca/Professors-Professeurs/DGIC-CISD_eng.asp

- **Resource Videos**

http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/Index_eng.asp

- **Peer Review Manual**

- Includes information on each of the three criteria and the merit indicators

http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reviewers-Examineurs/IntroPRManual-IntroManuelEP_eng.asp

- **HQP FAQ Document**

http://www.nserc-crsng.gc.ca/_doc/Professors-Professeurs/FAQ_Evaluation_HQP_eng.pdf

- **Webinars on how to apply**

- NOI and full application stages (French and English)

NSERC Contacts

NSERC Staff	First_Name.Last_Name@nserc-crsng.gc.ca
Deadline, acknowledgement of applications and results	Your university RGO
Your account, Grants in Aid of Research Statement of Account (Form 300)	Your university Business Officer (BO)
NSERC Web site	www.nserc-crsng.gc.ca
Discovery Grants Program (including eligibility)	Email: resgrant@nserc-crsng.gc.ca Tel.: 613-995-5829
Use of Grant Funds	Email: awdad@nserc-crsng.gc.ca
On-line Services Helpdesk	Email: webapp@nserc-crsng.gc.ca

