

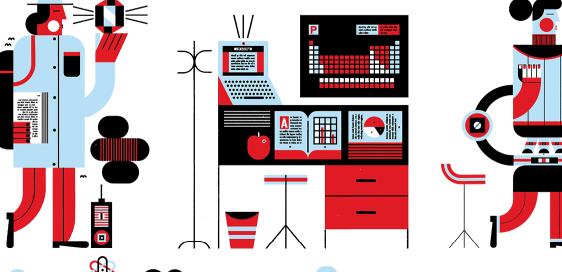
Chemical Institute of Canada (CIC) Talks NSERC presentation on Discovery Grant

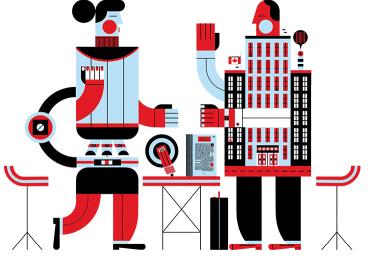
Sophie Debrus, Program Officer, NSERC

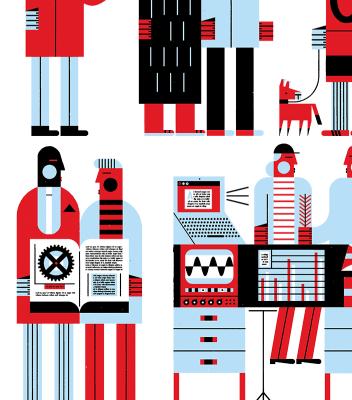
Stacey Wetmore, Professor & Group Chair for EG 1504, University of Lethbridge Lisa Rosenberg, Professor & past Section Chair for EG 1504, University of Victoria

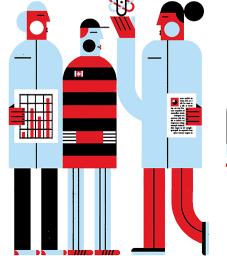
September 19, 2022













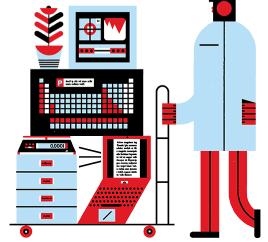
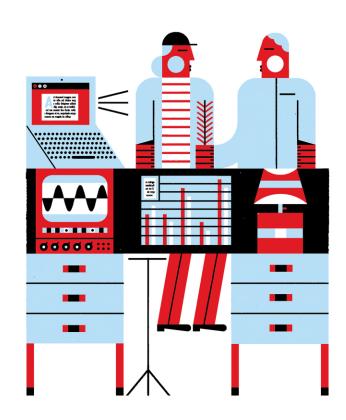


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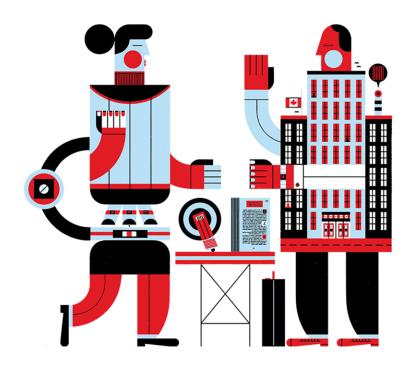


resgrant@nserc-crsng.gc.ca

1. How to prepare a Discovery Grant application



Full application overview and tips (Part 1 of 3)



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

Discovery Grants competition

April

Announcement of results

Overview

- **Deadline:** November 1st * internal deadlines are earlier
- Main components:
 - Grant application
 - Research proposal
 - Research contribution samples
 - Budget and justification
 - Canadian Common CV (CCV)
- Submission:
 - Research Portal

Discovery Grant updates - Early career researchers

- Applicants who have an <u>independent</u> academic position for <u>5 years or</u> <u>less</u> at the time of submitting the notification of intent
 - Five-year window adjusted for any eligible delay in research
 - All eligible leaves taken (e.g., parental, bereavement, illness of applicant or family)
 will now be credited as <u>twice</u> the amount of time taken
 - ECRs need to self-identify on the Research Portal at the full application stage by completing the Applicant Category module

Discovery Grant - DND supplement and NRS

DND/NSERC DG supplement

Proposed research must fit within DND defence and security target areas

Contact: dndsuppmdn@nserc-crsng.gc.ca
Webpage: DND*/NSERC DG supplement

Northern Research Supplements (NRS)

- Updates from CY2020:
 - Boundary change: moved to the southern limit of "isolated patches of permafrost" from British Columbia to Labrador, including all of the three territories—wider area of inclusion
 - Selection criteria updated: weighted scoring applied to each criterion; more detailed feedback provided to applicants
 - Application incorporated into the Research Portal

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

Webpage: Northern Research Supplements

RGS Program Updates

Discovery Grant Application: Attachment for eligible leaves or delays

Applicants who report an eligible leave of absence or delay are entitled to list additional contributions beyond the last six years, for a period equivalent to the duration of the leave

Contributions prior to the last six years can be recorded in:

- 2-page attachment
- Past contributions to the training of HQP section
- Most significant contributions to research section
- Samples of research contributions section

Eligible leaves of absence include delays due to COVID-19

Delays in research and dissemination of research results

- Eligible leaves of absence (e.g., maternity and parental leave, personal illness, chronic illness, mental illness, or disability associated with reduced research activity, leave taken by applicant for family-related illness, bereavement, and extraordinary administrative duties) are those taken within the last six years.
- COVID-19-related impacts on research and training are considered eligible delays.
- The impact of delays is taken into consideration in the assessment of contributions to research and/or training.

Delays: Where and how to describe in your application

- 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 (start/end dates, FTE if period of reduced research and training)
 - the impact on research and training (e.g., dissemination of results, ability to recruit or train HQP)
- Focus on the impact of the delay, not on the personal circumstances.
- Additional guidance on how to describe COVID-19-related impacts:

Impacts of the COVID-19 pandemic on research: New guidelines for NSERC's community

Delays in research: Leaves of absence attachment

Applicants who have reported an eligible leave of absence or delay in their CCV are entitled to an attachment that must be used to list **only** *supplemental contributions to research and to training* beyond the last six years, for a period equivalent to the duration of the leave or delay.

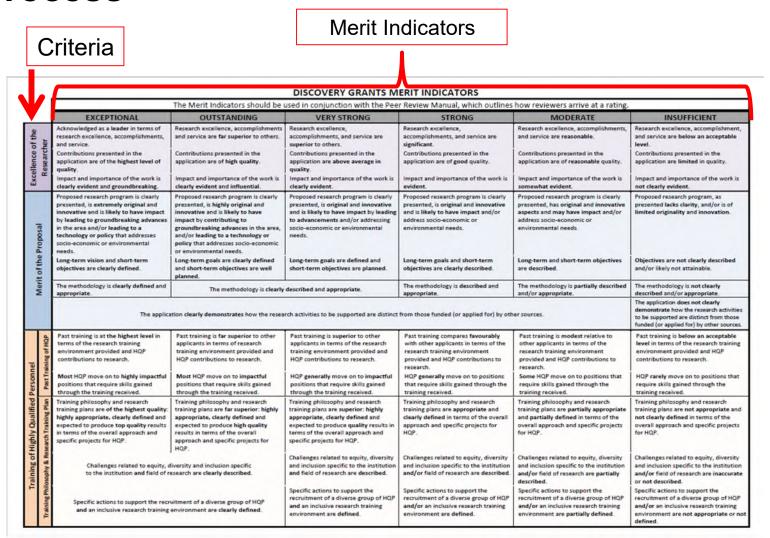
- <u>Contributions to research</u>: list of presentations, interviews and media relations, publications, intellectual property and recognitions
- Contributions to training: list of supervisory activities

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"

Review Process



Review Process

Step 2: Funding Recommendations

- Applications grouped into 'bins' of comparable merit
- Similar overall ratings within an EG receive comparable funding

Review Process

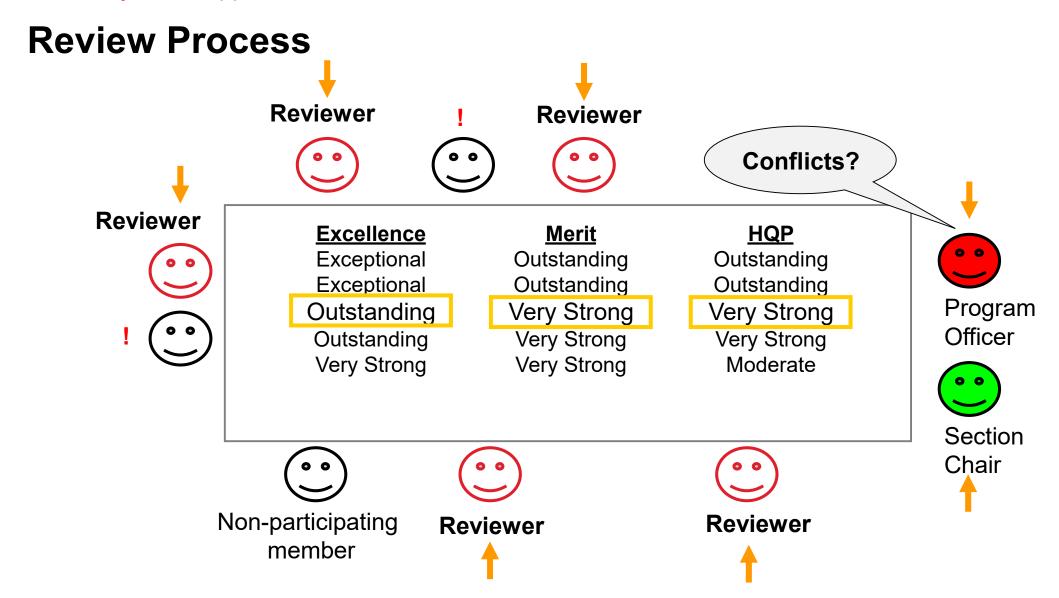
Step 1: Merit assessment

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

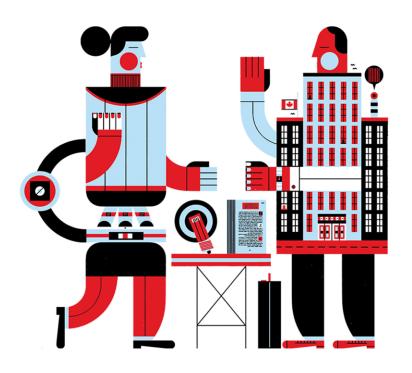
Outstanding – Very Štrong – Very Strong

Step 2: Funding Recommendation

Funding Bin	Α	В	С	D	E	F	G	Н	I	J	К	•••	P
Value	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$



Full application overview and tips (Part 2 of 3)



Equity, Diversity and Inclusion (EDI)

EDI within Evaluation Criteria

Excellence of the Researcher

Applicants are asked to describe past contributions to the promotion of equity, diversity and inclusion in the research enterprise (if they contributed this way).

Merit of the Proposal

 Applicants are expected to describe consideration of sex, gender and diversity in the research design (where applicable to the field of research).

Contributions to the Training of HQP

- Applicants are required to describe EDI considerations in their future approaches to recruitment, training and mentoring.
- Applicants are asked to describe specific actions implemented in support of EDI in their past training
 of HQP (if they contributed this way).

Excellence of the Researcher

Assessment based on achievements demonstrated over the last active **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

Excellence of the Researcher

Members will assess this using information from:

- Most significant contributions (up to 5)
 - Highlight quality and impact
- Samples of research contributions
 - Up to 4 attached with application within the last active six years
- Additional Information on Contributions
 - Choices of venues, order of authors, etc.
- CCV contributions, recognitions, activities
- Leaves of absence attachment (if applicable)

Excellence of the Researcher

Most significant contributions:

- Describe up to five most significant research contributions and highlight quality & impact
- List all types of research contributions
- Explain your role in collaborative research activities
- Give other evidence of impact

Excellence of the Researcher

CCV:

- Recognitions (honors, prizes and awards, etc.)
- Activities (international collaborations, event administration, editorial activities, organizational review, knowledge and technology transfers, etc.)
- Memberships (service on committees)
- Contributions (publications, books, patents, etc.)

Merit of the Proposal

Assessment based on the following elements:

- Originality and innovation
- Significance and expected contributions to NSE research
- Clarity, scope of objectives, and appropriateness of methodology
- Feasibility
- Consideration of sex, gender and diversity in the research design (where applicable to the field of research)
- Appropriateness and justification for the budget
- Relationship to other research support

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
 - Portal section (12000 characters)
 - CIHR and/or SSHRC summary and budget pages
 - CCV research funding history (applied & held)

Merit of the Proposal

Relationship to other research support All grants from CIHR and SSHRC:

- Proposed ideas, objectives and expenses are entirely distinct from support held or applied for
- Anticipated contributions to research resulting from the DG will be distinct from the ones resulting from CIHR or SSHRC support held or applied for

Merit of the Proposal

Relationship to other research support CIHR Foundation Grants (FG):

DG applicants that hold or receive funds from a CIHR
Foundation Grant must provide convincing evidence that
support from DG is essential to carry out the work proposed.

Merit of the Proposal

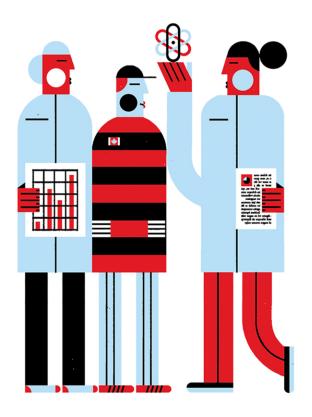
Relationship to other research support Sources other than CIHR and SSHRC:

- Proposed ideas and objectives can be the same
- Proposed expenses must be distinct from support held
- Proposed expenses may be the same for support applied for, however applicants must indicate that no duplication of funds will occur if all applications are successful

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 be to advance knowledge in one or more of the NSE disciplines.
- Applicants should refer to:
 - Selecting the Appropriate Federal Granting Agency
 - 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.

Full application overview and tips (Part 3 of 3)



Contributions to the training of HQP

There are two key elements; 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)

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

Past contributions to the training of HQP

Assessment based on contributions to training over the last **active six years**; 2016-2022 in the absence of eligible delays for the 2023 DG competition.

Includes three components:

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

Focus on quality and impact of training

Past contributions to the training of HQP

1. Training environment (1/2)

 research training and development opportunities provided for HQP (e.g., science outreach and engagement, interdisciplinary research, promoting EDI in the NSE, collaborations, interaction with the private and public sectors)

Past contributions to the training of HQP

1. Training environment (2/2)

- Challenges or barriers encountered in ensuring an inclusive research and training environment (if you participated this way)
- Specific actions implemented to support equity and inclusion in the research training environment (if you participated this way)
 - Specific actions can occur at any stage of training
 - There is no priority or value placed on different stages
 - You are not expected to participate at every stage

Past contributions to the training of HQP

2. HQP awards and research contributions

- Awards and scholarships of individual HQP can be described when prior consent has been given
- HQP should be indicated in CCV using "*" on research contributions (usually as co-authors) when prior consent has been given

Applicants are instructed to summarize HQP presentations in application; do not list them in the CCV.

Past contributions to the training of HQP

3. Outcomes and skills gained by HQP

- Most significant HQP outcomes and how applicant's training contributed to HQP's success
- Successful outcome?
 - Any outcome in which the HQP has impact
 - Impact can be in the NSE or in other fields, but it must be clear how skills gained in the applicant's research training environment are being used by HQP
- Note impact of delays in training (those of HQP or the applicant)

Past contributions to the training of HQP

Within the CCV

- Use asterisk (*) to identify HQP co-authors in CCV when prior consent has been given
- Include present position in CCV (career, further studies) when prior consent has been given
- Do not select "academic advisor" in CCV

Within the application

- Describe the nature of HQP studies and their level of involvement in your research
- Explain your role in any co-supervision
- Explain any delays in training (e.g., leaves taken by HQP)

Future plans for training

Include two components:

- 1. Training Philosophy
- 2. Research Training Plan
- Must include consideration of equity and inclusion in planned approach to HQP training
- Focus on quality, suitability and clarity of plan.
- Must be planned training in the NSE
- Applicant's role should be defined in any planned co-supervision.

Future plans for training

1. Training Philosophy (1/2)

- Existing challenges or barriers to inclusion and advancement of underrepresented groups, specific to the applicant's research context
- Planned approach to promoting the participation of a diverse group of HQP, taking into account equity and inclusion in recruitment practices, mentorship approaches and initiatives aimed at ensuring an inclusive research and training environment

Future plans for training

1. Training Philosophy (2/2)

- Approach to training HQP, how does the applicant intend to train the future generation of scientists and engineers
- Details of mentoring approach
- Intellectual involvement of HQP in the research program
- Type of research training and development opportunities that will be provided

Future plans for training

2. Research Training Plan

- Suitability and inclusion of HQP in research program and specific anticipated projects within NSE;
- Anticipated outcomes, planned future contributions to knowledge, and development of new skills or knowledge;
- Value of projects for HQP;
- Justification if any limitations to HQP training;
- Explanation of planned co-supervision or collaboration, if appropriate.

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

Available Resources

- Discovery Grants Information Centre
- Discovery Grants Program Description
- Discovery Grants Resource Video
- Peer Review Manual
 - Includes information on each of the three criteria and the merit indicators.
- HQP FAQ Document
- Webinars on how to apply

NSERC Contacts

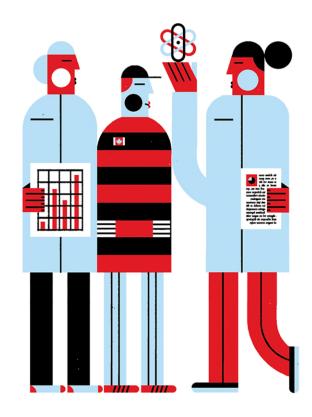
Discovery Grants Program (including eligibility)	resgrant@nserc-crsng.gc.ca
NSERC Staff	First name.last name@nserc-crsng.gc.ca
Deadlines, acknowledgement of applications and results	Your university Research Grants Office (RGO)
Financial Administration	financialmonitoring@nserc-crsng.gc.ca
On-line Services Helpdesk	webapp@nserc-crsng.gc.ca

NOI Overview and Tips

Useful Links

- CCV, NOI and instructions: http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/index_eng.asp
- Resource Videos: http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Resource-Informatives eng.asp
- Financial Administrative Guide: https://www.nserc-crsng.gc.ca/InterAgency-Interorganismes/TAFA-AFTO/index_eng.asp
- Evaluation Groups and Research Topics: http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DGPList-PSDListe_eng.asp
- NSERC program information in relation to COVID-19: https://www.nserc-crsng.gc.ca/Media-Media/NewsDetail-DetailNouvelles_eng.asp?ID=1139

2. Competition 2022 Results



Thank You!

2518 Discovery Grants (DG) Applications

468+ Evaluation Group (EG) Members 12 950+ Reviews by EG members 6687+ External Reviewers Reports

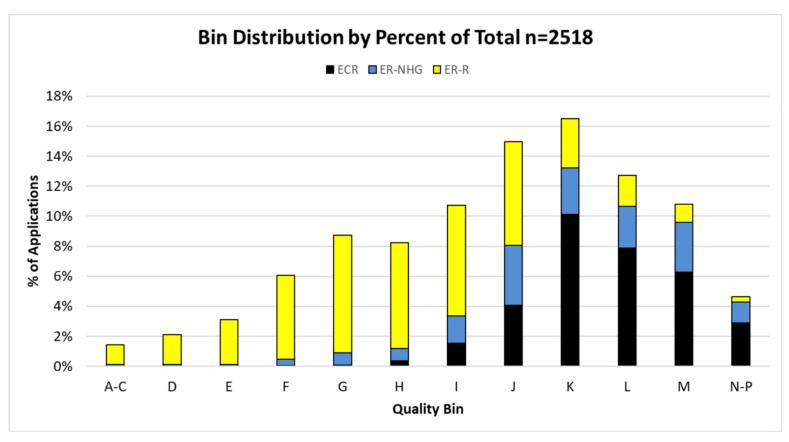
I'd like to offer my sincere thanks to all committee members and external reviewers for their hard work and dedication in the 2022 Discovery Grants competition, which was conducted virtually. Your tremendous efforts during these unprecedented times have helped keep Canada's research enterprise strong in the midst of this pandemic. I hope that you, your families, and your colleagues are safe and healthy, and remain so in the future.

- Alejandro Adem, NSERC President

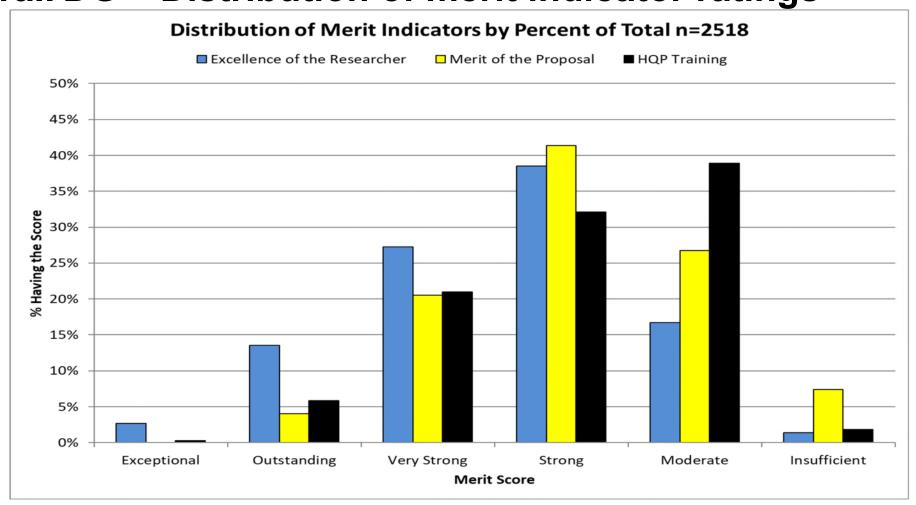
Overall DG – Results by Applicant Category

	Early Career				Total
	Researcher (ECR)	Not Holding a Grant (ER-NHG)	Returning (ER-R)	All Established Researchers	
# of applications	837	474	1207	1681	2518
# of awards	529	192	994	1186	1715
Success Rate	63%	41%	82%	71%	68%
Average Grant (yearly)	\$28,386	\$33,868	\$43,292	\$41,766	\$37,638

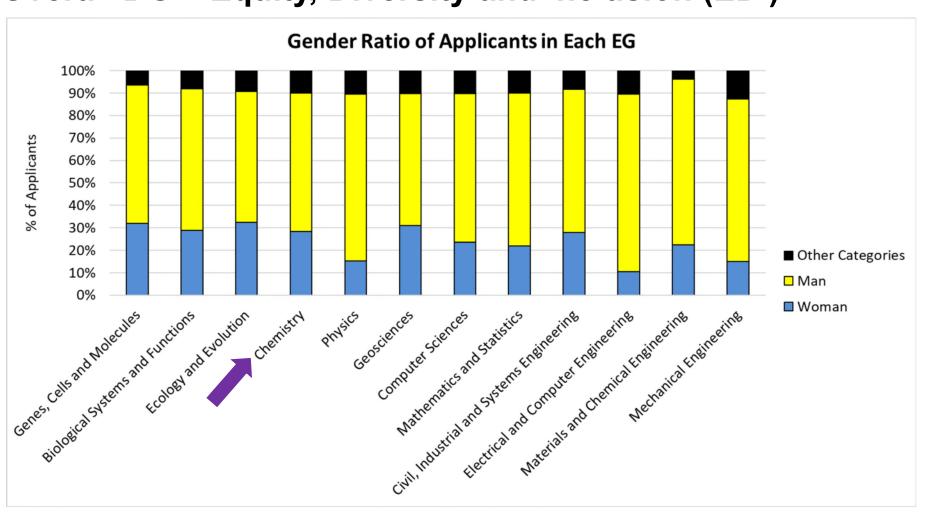
Overall DG – Results by Applicant Category



Overall DG – Distribution of merit indicator ratings



Overall DG – Equity, Diversity and Inclusion (EDI)



Overall DG – Equity, Diversity and Inclusion (EDI)

		Women	Men	Other Categories
Early Career Researchers (ECR)	Number of Awards	294	502	41
	Success rate	65%	63%	51%
Established Researchers Returning (ER-R)	Number of Awards	251	824	132
	Success rate	82%	82%	82%
Established Researchers Not	Number of Awards	84	340	50
Holding a Grant (ER-NHG)	Success rate	40%	41%	38%

2022 Discovery Grants Results

EG 1504 – Chemistry - Results by Applicant Category

	<u>ECR</u>		<u>ER</u>		
Applicant Status	ECR	Returning	Not Holding a Grant	Total ER	Total
Applications in Competition	23	99	19	118	141
Number of Awards	16	89	10	99	115
Success Rate	70%	90%	53%	84%	82%
Average Grant	\$25,500	\$49,640	\$36,800	\$48,343	\$45,165

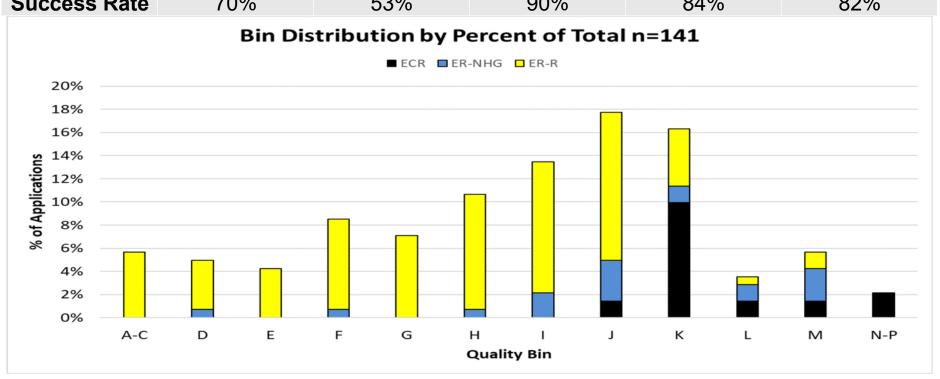
ECR: Early Career Researchers, **ER:** Established Researchers.

*Not holding a grant established researchers include those that are returning unfunded, first-time academic but with more than 5 years previous unsupervised research experience.

2022 Discovery Grants Results

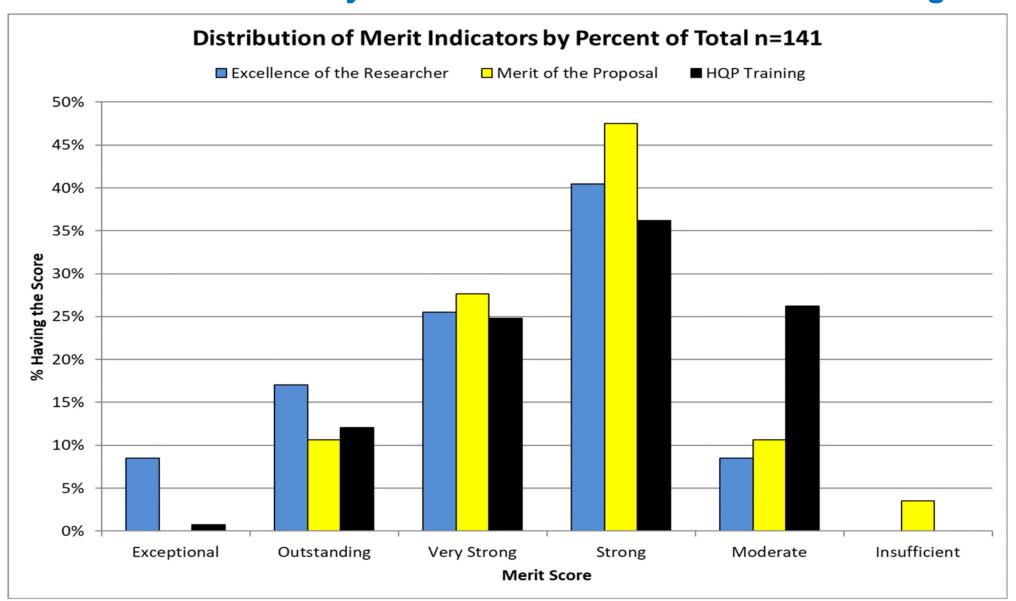
EG 1504 – Chemistry – Bin distribution by Applicant Category

	Early Career Researcher	Establ					
	(ECR)	Not Holding a Grant (ER-NHG)	Returning (ER-R)	All Established Researchers	Overall		
Success Rate	70%	53%	90%	84%	82%		
Din Distribution by Dovesnt of Total n=141							



2022 Discovery Grants Results

EG 1504 - Chemistry – Distribution of merit indicator ratings



2022 Competition

EG 1504 - Chemistry - External Reviewer reports

Reviewers contacted	Number who accepted	Accept rate	Reports received	Submit rate
971	522	53.7%	420	80.45%

Number of submitted reports	Number of Applications	Percentage of Applications
0	1	1%
1	17	12%
2	34	24%
3	39	27%
>3	50	36%
3 reports or more (target)	89	63%

Research Tools and Instruments (RTI)

Program webpage:

https://www.nserc-crsng.gc.ca/professors-professeurs/rtii-oiri/rti-oir_eng.asp

	2017	2018	2019	2020	2021	2022
Budget	\$30.5M	\$25.1M	\$25.3M	\$30.7M	\$25.3M	\$25.0M
# Appl.	748	1043	1005	893	811	713
# Funded	241	208	210	248	201	207
Success Rate	32%	20%	21%	28%	27%	29%
Funding Rate	33%	21%	22%	29%	25%	29%

Research Tools and Instruments (RTI)

Program webpage:

https://www.nserc-crsng.gc.ca/professors-professeurs/rtii-oiri/rti-oir_eng.asp

	Overall	Chemistry
Number of Applications	713	94
Number of Awards	207	27
Success Rate	29%	28.7%
Amount Awarded	\$25.0M	\$3.4M
Funding Rate	29%	29.7%

Discovery Development Grants (DDG)

Program webpage:

https://www.nserc-crsng.gc.ca/professors-professeurs/grants-subs/discoverypilot-decouvertepilote_eng.asp

	2017	2018	2019	2020	2021	2022
Awarded	54	34	24	47	22	28

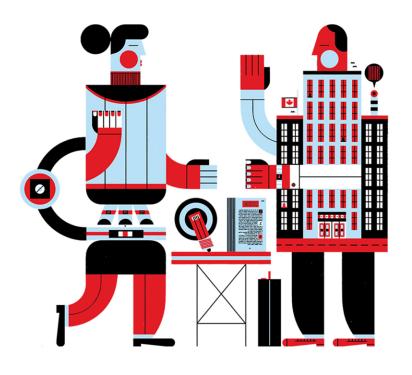
Statistics

For more information on DG and other Research Grants results:

- 2022 competition statistics posted on the web: https://www.nserc-crsng.gc.ca/professors-professeurs/discoverygrants-subventionsdecouverte/index_eng.asp
- New resource: Competition Statistics Dashboards for DG and RTI.

Contact resgrant@nserc-crsng.gc.ca if you have any questions.

3. **Research Grants** and Scholarships (RGS) Program Updates



RGS Program Updates

2023 Discovery Grants Competition

As the global pandemic situation remains fluid, to ensure effective and timely delivery of the 2023 Discovery Grants competition and the safety of participants, the Discovery Grants review meetings will take place by videoconference once again this year following the successful delivery of the 2021 and 2022 competitions. Moreover, NSERC will be better positioned to provide more concrete direction on competition planning for future years after staff have integrated into our new NSERC headquarters (later this year).

NSERC is committed to maintaining a peer review process of the highest quality, including fairness and consistency between evaluating committees and across competition years.

Contact: resgrant@nserc-crsng.gc.ca

RGS Program Updates

Support for Early Career Researchers (ECRs)

Early Career Researchers are applicants who have held an independent academic position for 5 years or less.

- Five year window adjusted for any eligible delay in research
- All eligible leaves taken (e.g. parental, bereavement, illness of applicant or family) are now credited as twice the amount of time taken

NSERC devotes additional funds to support ECRs through

- Increases to Discovery Grants
- Discovery Launch Supplement

ECRs re-applying for the first time have the option of extending their DG by one year with funds in addition to the Discovery Grants one-year extension with funds due to COVID-19.

RGS Program Updates

RTI Program

Application deadline date is **October 25**; Research Portal

Current change:

 Applicants and co-applicants awarded in April will not be eligible to apply in October for the next year's RTI competition

Recent changes:

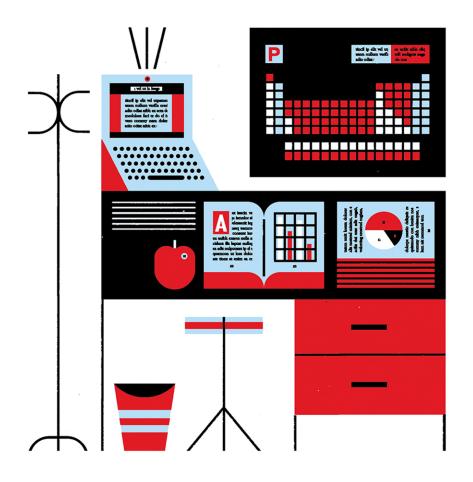
- Changes to selection criteria (names have been shortened, and 2nd criterion no longer assesses the excellence of the researcher)
- Clarified instructions in Budget Justification section and added a template budget table applicants are to use to show tax and currency exchange rates and totals
- Confirmation of Financial Contribution documents are no longer required and should not be submitted

NSERC News

Guidelines on assessment of contributions to research, training and mentoring

Released in May 2022, the new <u>Guidelines</u>:

- Promote NSERC's support of research excellence in Canada and incorporate the principles of the Declaration on Research Assessment (DORA)
- Recognize and value a broader range of contributions, including outreach and mentoring, emphasizing their quality and impact
- Permit applicants to select from a broader variety of contributions and suitable indicators to demonstrate their impact
- Clarify eligible interruptions in research, training and mentoring
- These guidelines replace the <u>Policies and Guidelines on the Assessment of Contributions to</u> <u>Research and Training</u> and the <u>Guidelines for the Preparation and review of Applications in</u> <u>Engineering and the Applied Sciences</u>



Questions?

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