

# NSERC Update



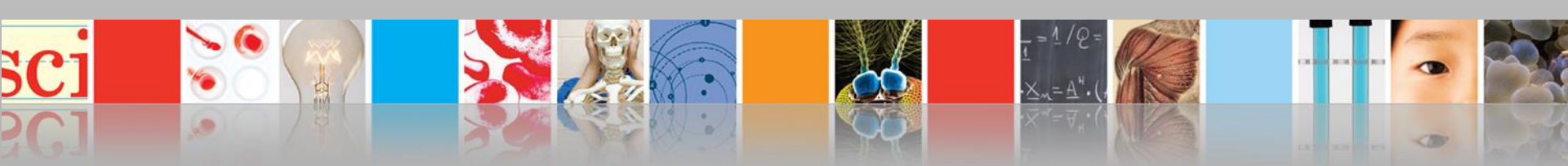
# October 12, 2017

## Dave Bowen – Deputy Director

# Rawni Sharp – Team Leader

## Tiffany Lancaster – Program Officer

# Kenn Rankine – Program Officer



# Overview

- Federal Science and Innovation Update
- Policy and Funding Opportunity Updates
- 2017 Discovery Grants Competition Results
- Questions



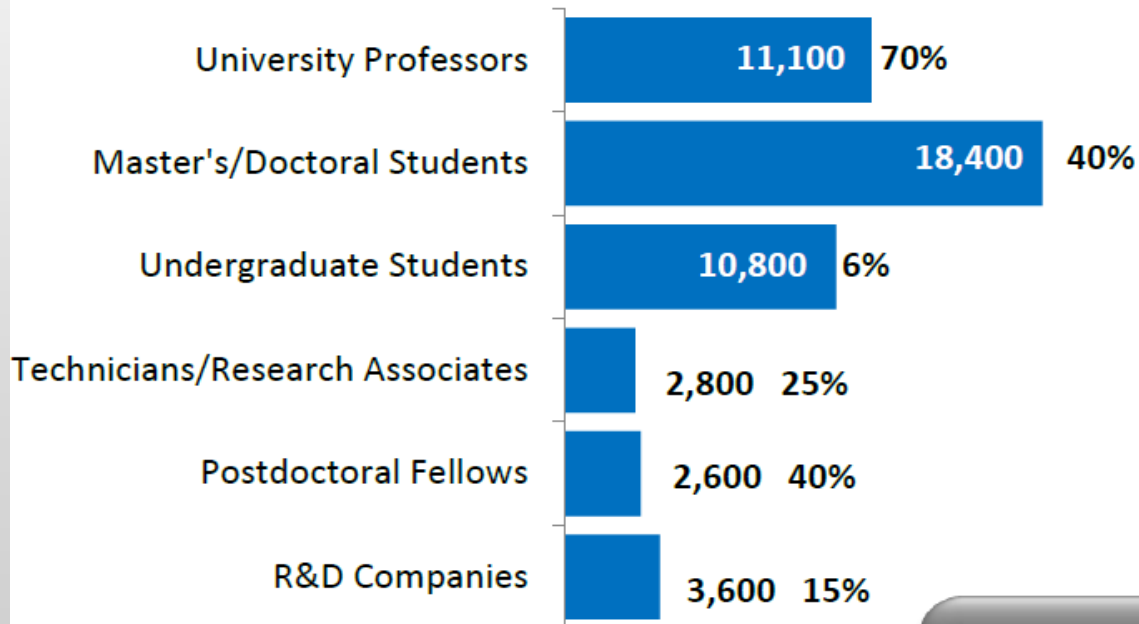
# 2017 Federal Science Review

- The Advisory Panel on Federal Support for Fundamental Science presented its report on April 10, 2017
- Recommendations include:
  - increased investment in independent investigator-led research
  - increased coordination among the granting councils and CFI
  - new oversight body for the federal research and innovation ecosystem



# NSERC Overview

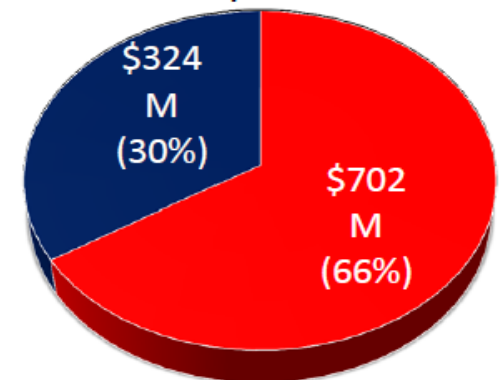
## Clients and Partners



% indicates share of eligible population supported directly and indirectly.

## NSERC Budget 2015-16

Total: \$1.1 billion



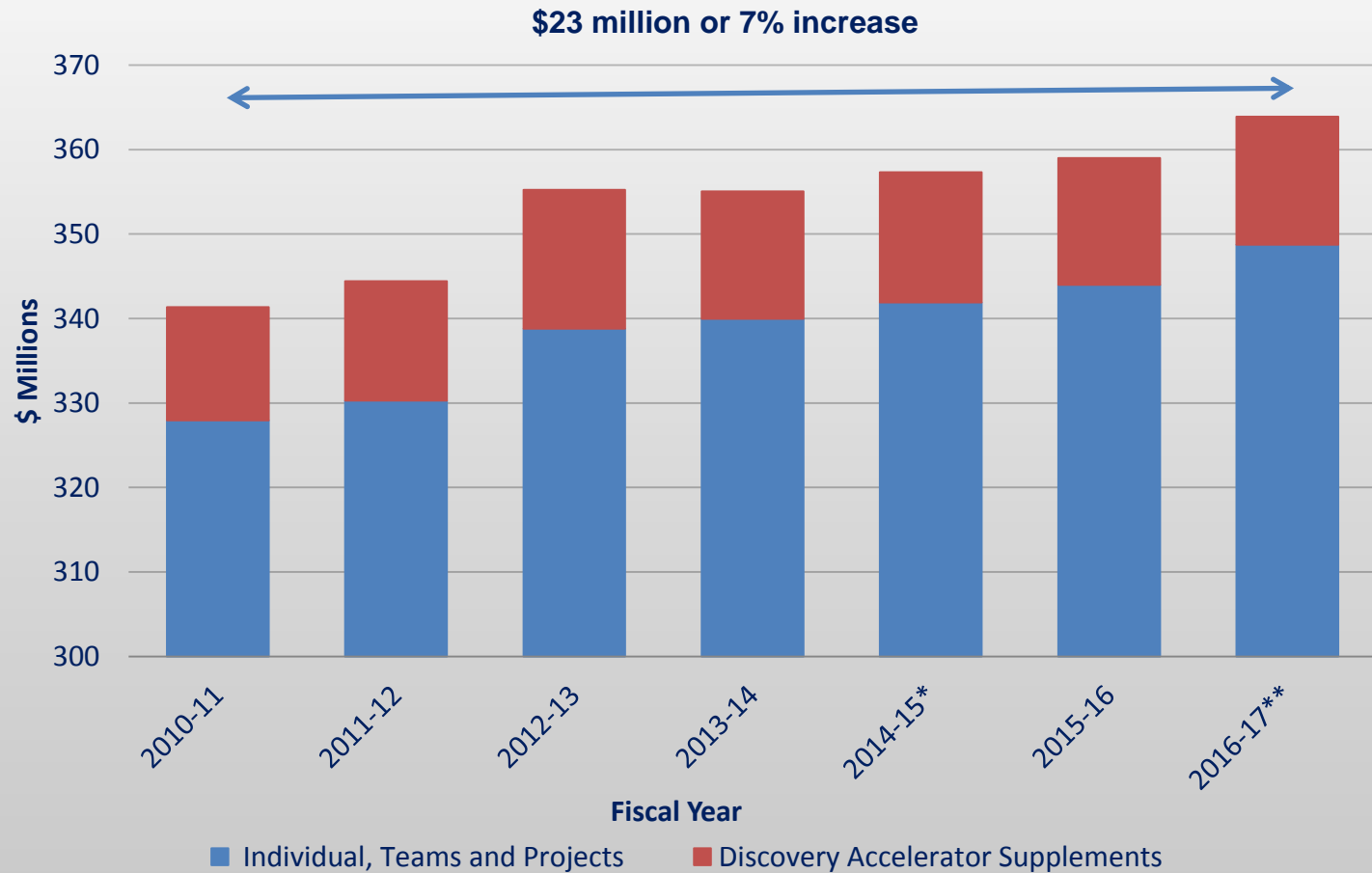
- Discovery (includes Scholarships & Fellowships)
- Innovation

## Colleges & Polytechnics

- 80% of eligible institutions have received College and Community Innovation grants

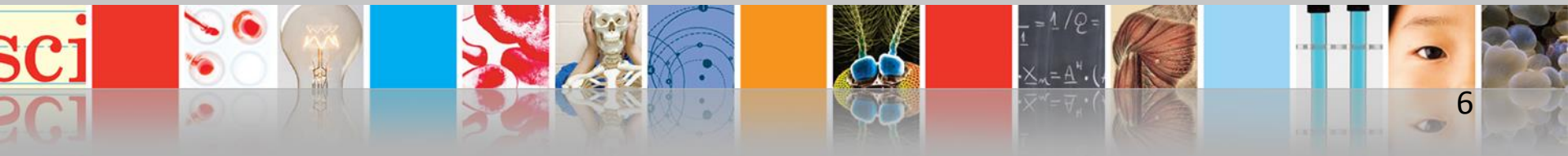


# NSERC Discovery Grants Funding



\* Includes additional funding received resulting from Federal Budget 2014

\*\* Projected expenditures for 2016-2017

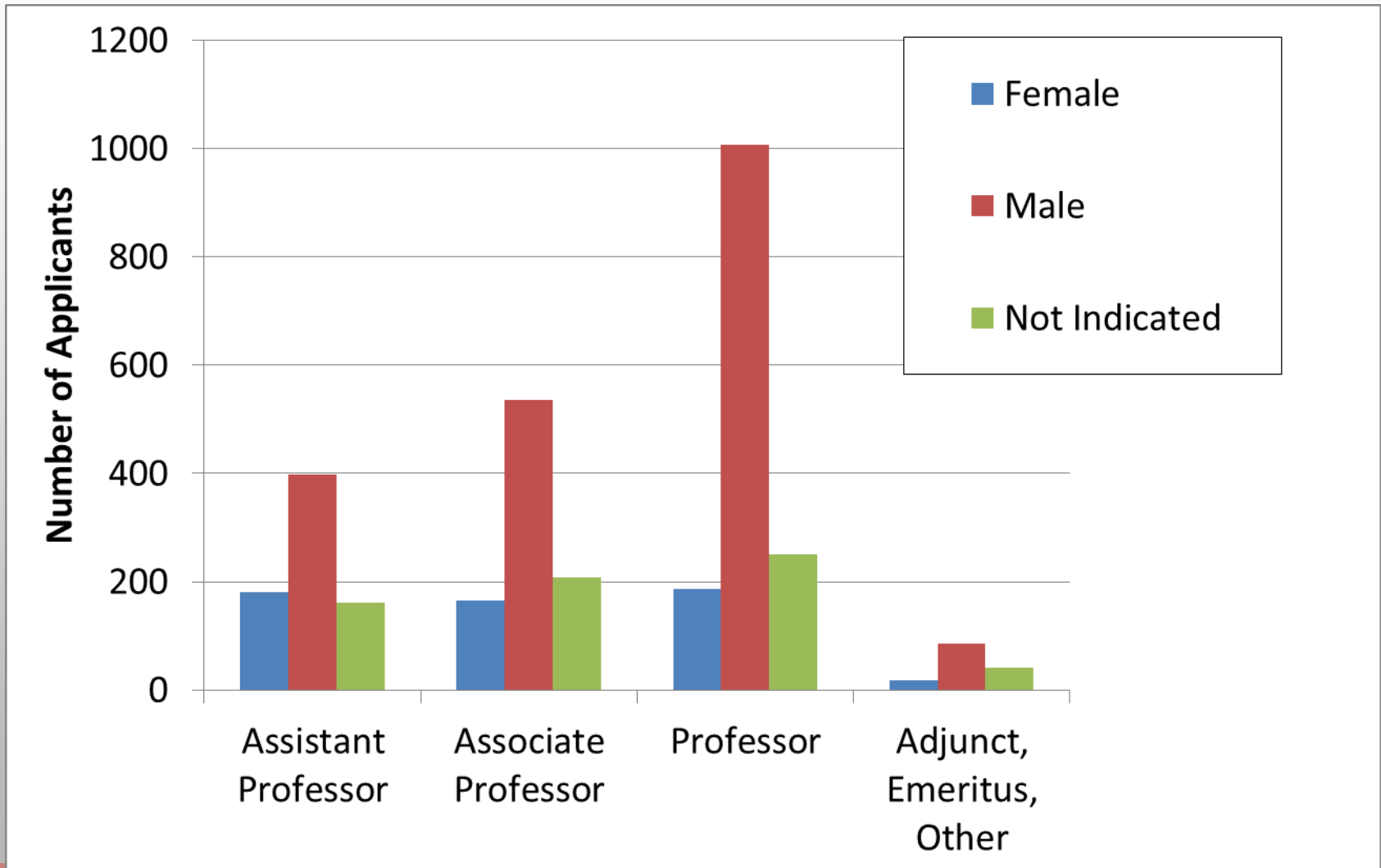


# NSERC 2020

- Foster a science and engineering culture in Canada
- Launch the new generation
- Build a diversified and competitive research base
- Strengthen discovery-innovation dynamic
- Go global



# Discovery Grants Applicants 2017



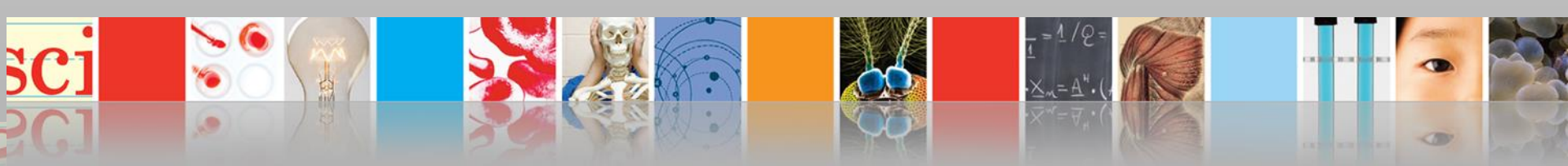
# Discovery Grant Success Rate by Sex and Evaluation Group, 2017 Competition

		Success Rate			Percentage of Applicants		
Evaluation Groups		Female	Male	Not Indicated	Female	Male	Not Indicated
<b>1501</b>	Genes, Cells and Molecules	62.5%	58.6%	63.2%	23.5%	69.5%	7.0%
<b>1502</b>	Biological Systems and Functions	54.4%	61.6%	50.9%	28.2%	60.0%	11.8%
<b>1503</b>	Evolution and Ecology	71.9%	74.7%	66.0%	18.8%	53.5%	27.6%
<b>1504</b>	Chemistry	77.4%	73.3%	68.0%	17.6%	68.2%	14.2%
<b>1505</b>	Physics	80.0%	73.9%	73.9%	11.0%	63.5%	25.4%
<b>1506</b>	Geosciences	69.6%	71.6%	57.4%	11.9%	56.5%	31.6%
<b>1507</b>	Computer Science	66.0%	57.5%	69.5%	14.2%	54.1%	31.7%
<b>1508</b>	Mathematics and Statistics	88.9%	87.0%	85.9%	12.7%	54.0%	33.3%
<b>1509</b>	Civil, Industrial and Systems Engineering	68.6%	76.0%	68.5%	14.4%	63.4%	22.2%
<b>1510</b>	Electrical and Computer Engineering	72.2%	67.0%	54.2%	6.3%	68.3%	25.4%
<b>1511</b>	Materials and Chemical Engineering	64.7%	71.4%	57.1%	16.3%	63.6%	20.1%
<b>1512</b>	Mechanical Engineering	70.0%	65.8%	61.4%	9.4%	70.0%	20.7%



# What is ARRCU?

- ARRCU is a self-organized working group of Canadian University faculty in Atmosphere-Related Research (ARR) including research on weather, climate, and air quality.
- ARRCU aims to configure university ARR to most benefit Canadians in a time of rapid socio-economic and environmental change.
- ARRCU is developing a 5-7 year strategic plan for University based ARR to develop a better research support environment.



# Policy and Funding Opportunity Updates



Natural Sciences and Engineering  
Research Council of Canada

Conseil de recherches en sciences  
naturelles et en génie du Canada

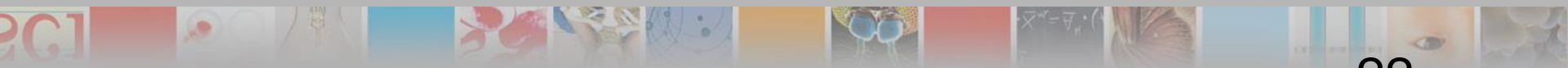
Canada

# Open Access

## Tri-Agency Open Access Policy on Publications

[http://www.science.gc.ca/eic/site/063.nsf/eng/h\\_F6765465.html](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 final, full-text, peer-reviewed manuscript in a repository; and/or
  - Submit final, peer-reviewed manuscript to journal that offers open access within 12 months
- Contact: [openaccess@nserc-crsng.gc.ca](mailto:openaccess@nserc-crsng.gc.ca)

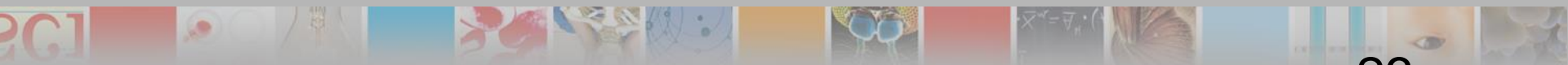


# Data Management

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

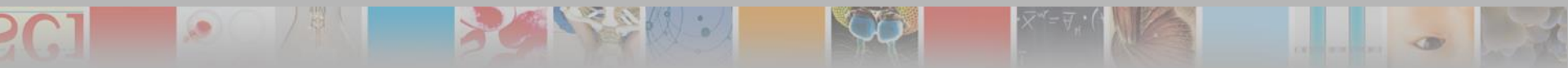
[http://www.science.gc.ca/eic/site/063.nsf/eng/h\\_83F7624E.html?OpenDocument](http://www.science.gc.ca/eic/site/063.nsf/eng/h_83F7624E.html?OpenDocument)

- NSERC, SSHRC and CIHR will be seeking input from the research community on draft policy text and how best to realize the principles presented in the Statement.
- **Visit NSERC's website for news on consultation**  
<http://www.nserc-crsng.gc.ca>



# Financial Administration Updates

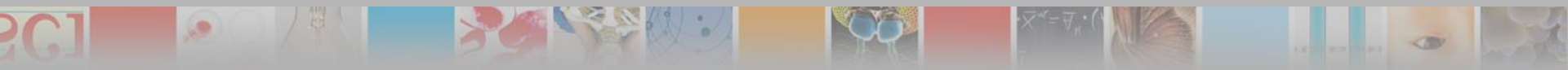
- New version of the Tri-Agency Financial Administration Guide in effect October 1<sup>st</sup> 2017
- The new Grant Amendment Form replaces several forms that have been in place for some time: its purpose is to streamline and standardize approach to grant amendments (e.g. deferrals, extensions, grantee leave, paid parental leave, change of institution, change in eligibility status, changing grant recipients)
- Questions? [Grantsadministration@nserc-crsng.gc.ca](mailto:Grantsadministration@nserc-crsng.gc.ca)



# Primary Caregiver Policy

## NSERC Policy for Primary Caregivers (Pilot)

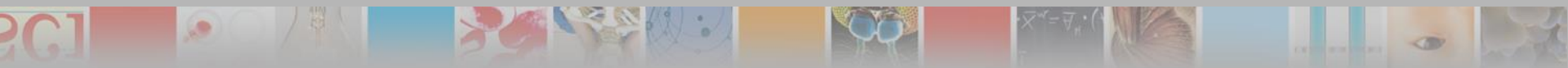
- In place as of March 1, 2016
- Researchers who become primary caregivers following the birth or adoption of a child and who are eligible for maternity or parental leave but decline the leave, may be eligible to receive a one-year grant extension with funds
- Existing policy for those taking leave still applies



# 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.



## Early Career Researcher - New DG definition

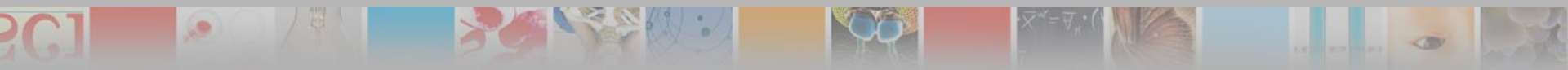
-



# Discovery Grant Updates

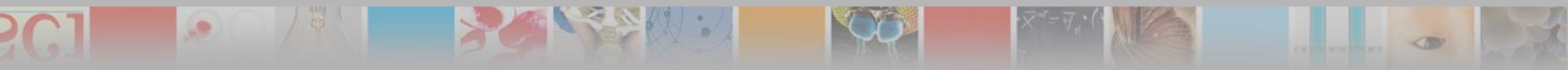
## ECR extension option with funds

- 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



## Highly Qualified Personnel – Literature Change

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

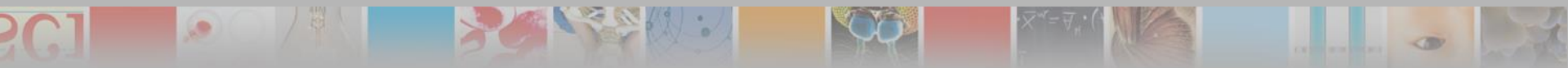


## Highly Qualified Personnel – Literature Change

## Clarification of HQP criterion description this year:

<u>Past contributions</u>	<u>Future plans</u>
<ul style="list-style-type: none"> <li>• Training environment</li> <li>• HQP awards and research contributions</li> <li>• Outcomes and skills gained by HQP</li> </ul>	<ul style="list-style-type: none"> <li>• Training Philosophy</li> <li>• Research Training Plan</li> </ul>

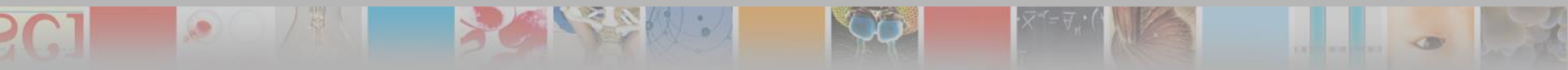
Consult the Instructions for Completing an Application for detailed information  
[http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/DG-SD\\_eng.asp](http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/DG-SD_eng.asp)



# Discovery Grant Updates

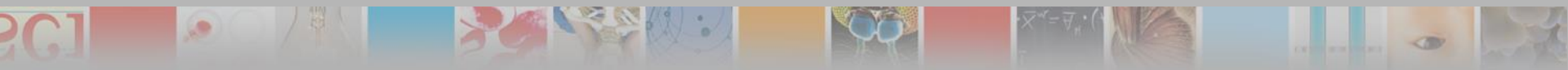
## DND/NSERC Discovery Grant supplement

- 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](mailto:dndsuppmdn@nserc-crsng.gc.ca)



# RTI Program Update

- University quotas have been 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
- Deadline October 25<sup>th</sup>

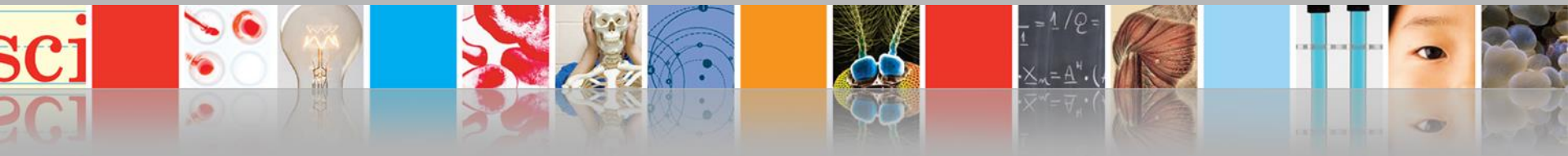
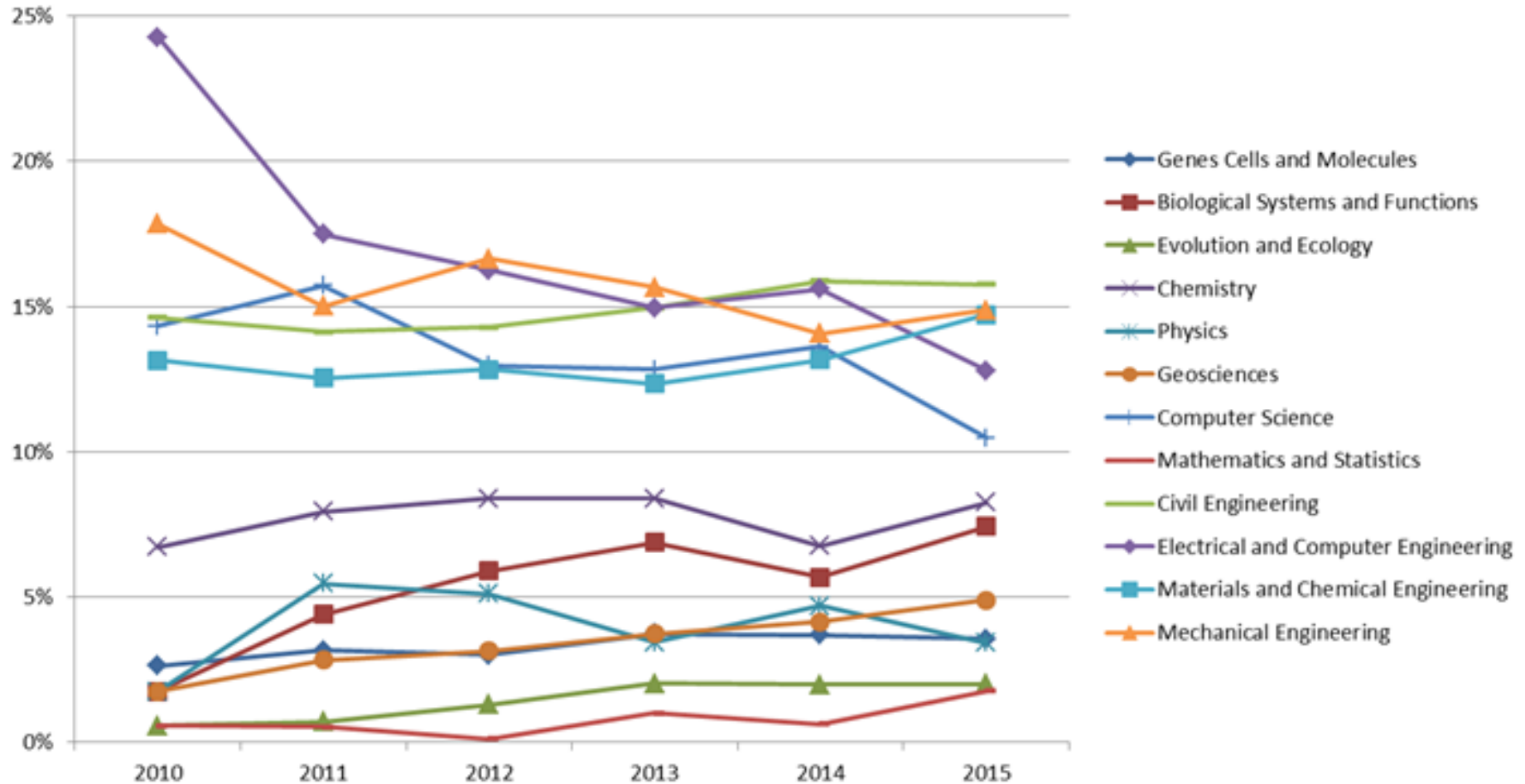


# Discovery Grant & Research Partnership Grant holders

Number of Discovery Grantees (DG) <sup>1</sup> in Fiscal Year 2015-16 Who Also Received a Research Partnership (RP) <sup>2</sup> Grant in Fiscal Year 2015-16			
Evaluation Group	No. of DG Grantees	No. of DG Grantees with RP Grant	% with RP Grant
Materials and Chemical Engineering	589	351	59.6
Mechanical Engineering	597	301	50.4
Electrical and Computer Engineering	770	361	46.9
Civil, Industrial and Systems Engineering	811	363	44.8
Geosciences	640	193	30.2
Computer Science	890	260	29.2
Chemistry	633	183	28.9
Evolution and Ecology	615	173	28.1
Biological Systems and Functions	1,411	207	14.7
Physics	709	102	14.4
Genes, Cells and Molecules	1,171	109	9.3
Mathematics and Statistics	870	45	5.2
Subatomic Physics	202	3	1.5
Total	9,908	2,651	26.8
1. Includes Discovery Grants and Subatomic Physics individual, group and project.			
2. Includes co-investigators.			

# Engage Grants Program

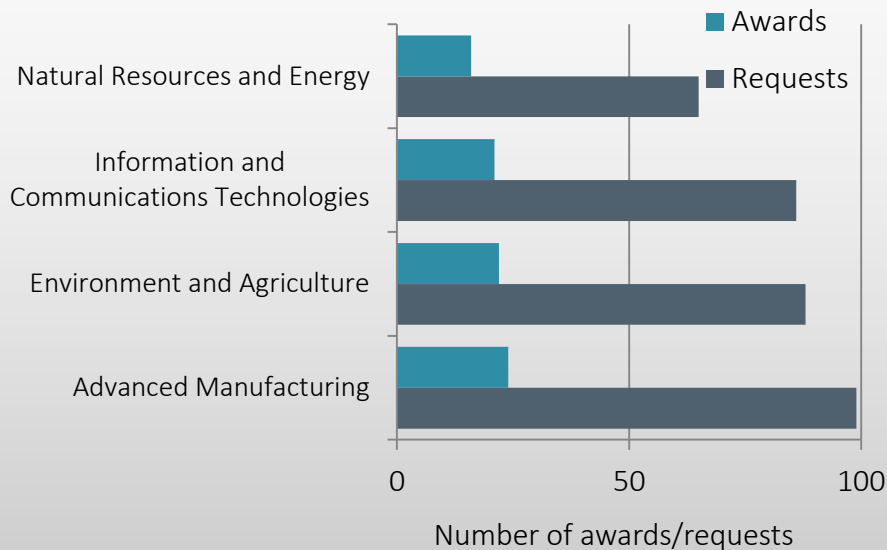
Portion of Engage Applications by Evaluation Group



# Strategic Partnership Grants

## PROJECTS

2016 Competition Results



LOI stage for  
2017  
Competition

25%  
Success  
rate

## NETWORKS

### 2015 Competition Results:

NSERC Canadian Network for Research and Innovation in Machining Technology (NSERC CANRIMT)

**Lead: Dr. Yusuf Altintas, University of British Columbia**

NSERC Canadian Lake Pulse Network

**Lead: Dr. Yannick Huot, Université de Sherbrooke**

NSERC Towards Environmentally Responsible Resource Extraction Network (NSERC-TERRE-NET)

**Lead: Dr. David Blowes, University of Waterloo**

NSERC COHESA: Computing Hardware for Emerging Intelligent Sensory Applications

**Lead: Dr. Andreas Moshovos, University of Toronto**

Flare Emissions from Unconventional Oil & Gas Extraction and Processing: (NSERC FlareNet)

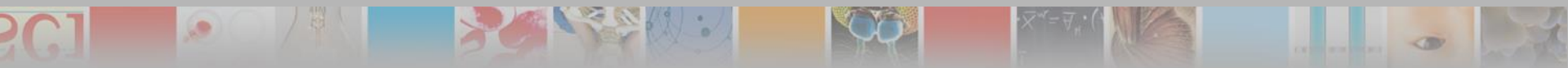
**Lead: Dr. Matthew Johnson, Carleton University**

5

New networks  
from 2015

16

Active  
Strategic  
Networks





# Geosciences Evaluation Group

## EG1506



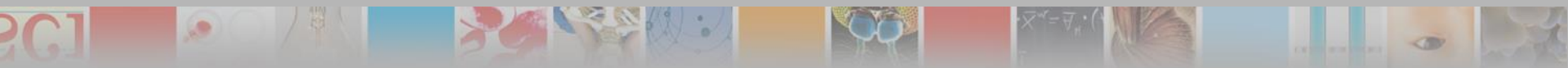
Conseil de recherches en sciences  
naturelles et en génie du Canada

Canada

# 2017 Competition Results

## Overall Discovery Grants

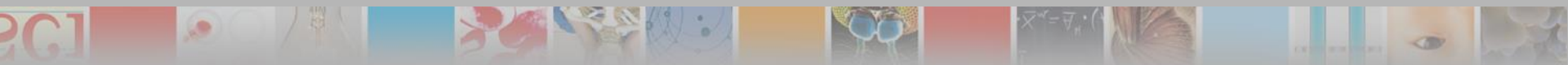
All Evaluation Groups	Early Career Researchers	Established Researcher			Overall
		Renewals	Not Holding a Grant	Total	
# of Applications	562	1,636	1,042	2,678	3,240
# of Awards	385	1,360	409	1,769	2,154
Success Rate	69%	83%	39%	66%	66%
Average Grant	\$25,409	\$37,396	\$26,806	\$34,948	\$33,243



# 2017 Competition Results

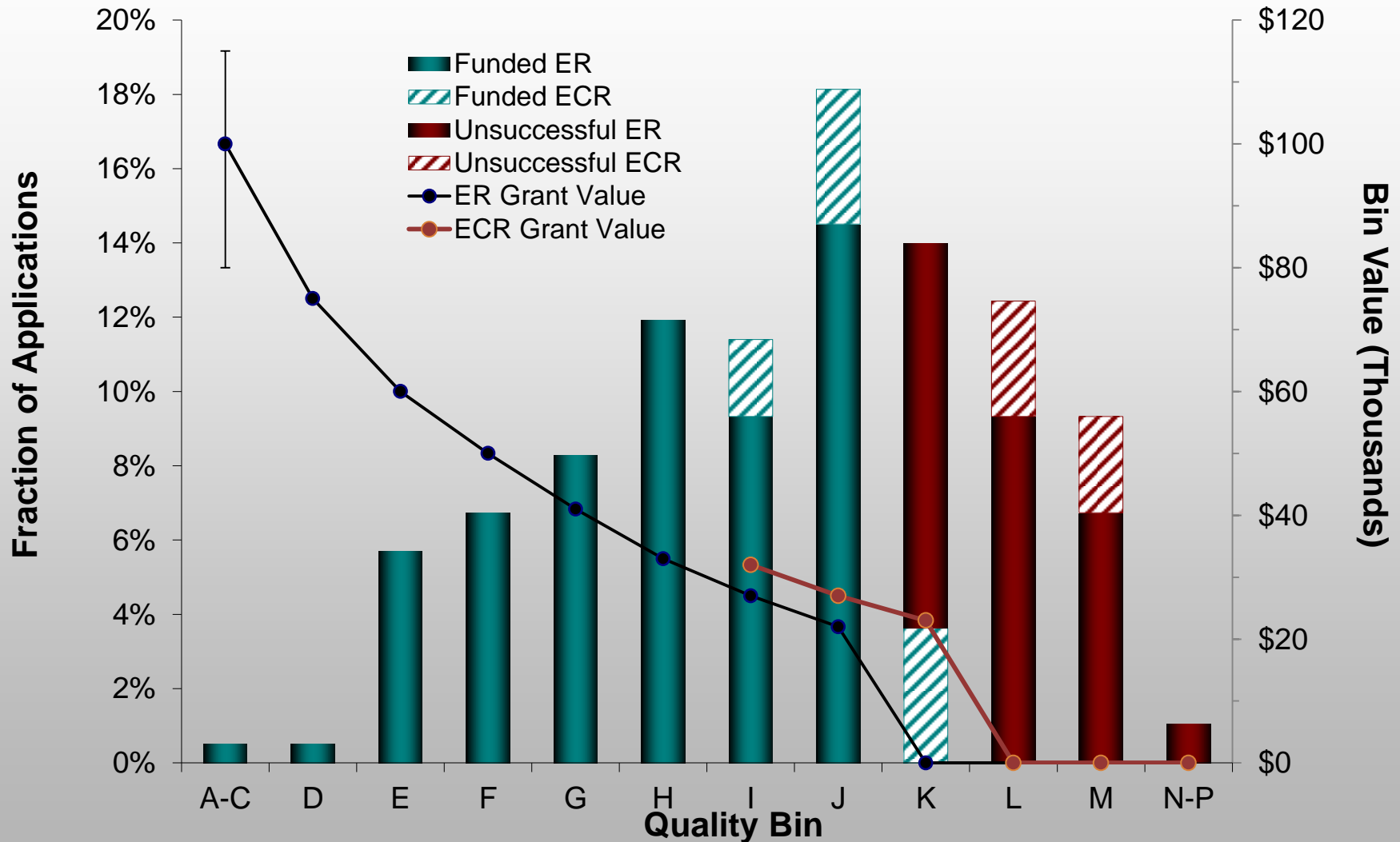
## Geosciences (EG1506)

Geosciences (EG 1506)	Early Career Researchers	Established Researcher			Overall
		Renewals	Not Holding a Grant	Total	
# of Applications	29	102	62	164	193
# of Awards	18	87	24	111	129
\$ Awarded	\$478K	\$3,200K	\$635K	\$3,835	\$4,313K
Success Rate	62%	85%	39%	68%	67%
Average Grant	\$26,556	\$36,781	\$26,458	\$34,549	\$33,434



# 2017 Competition Results

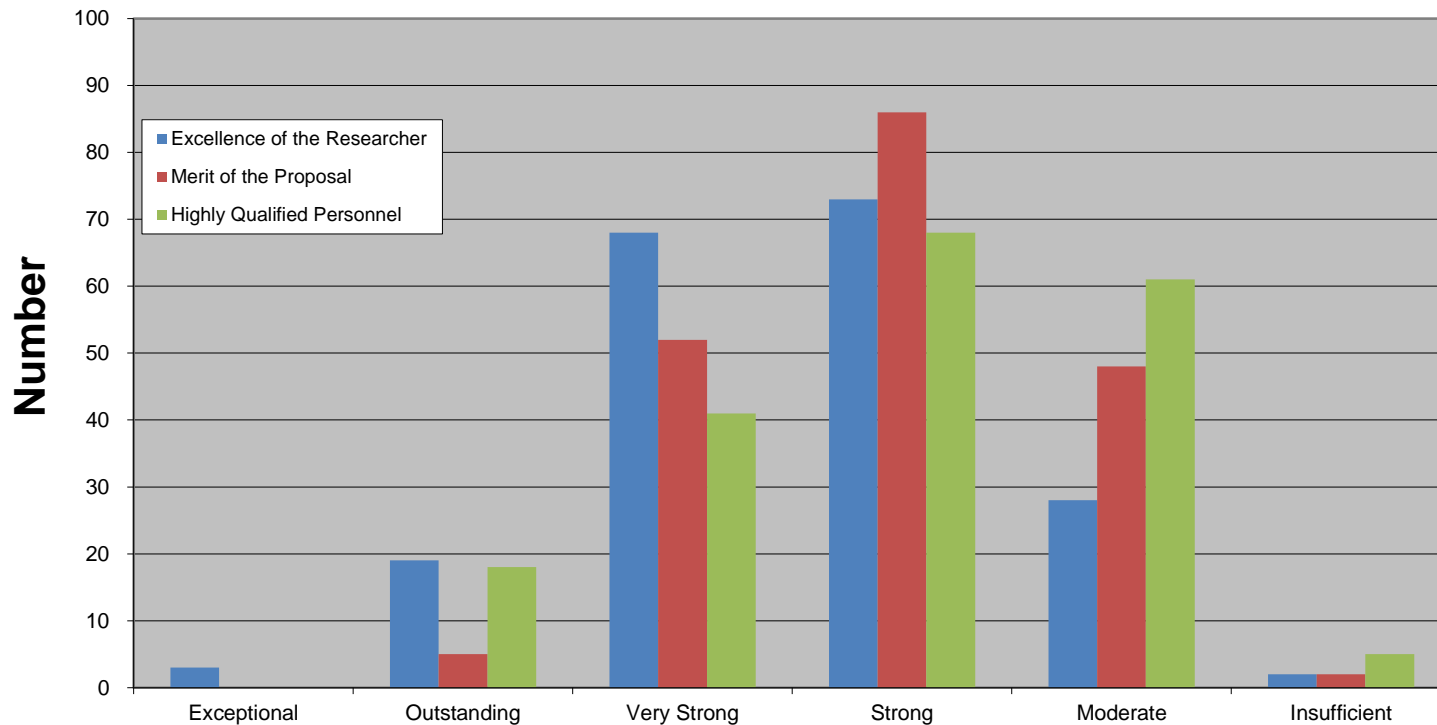
## Geosciences (EG1506)



# Results and Statistics – Geosciences

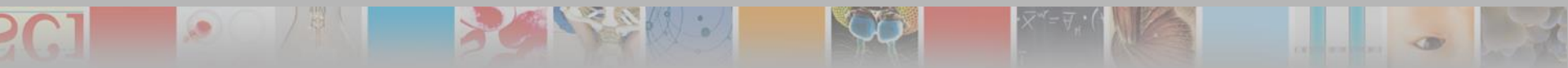
## 2017 DG Competition

Vote Breakdown



# Discovery Accelerator Supplements

- \$120,000 – over three years
- Up to 125 Supplements per year
- Geosciences EG members reviewed all applications and recommended 18 applicants for a DAS
- Executive Committee makes the final decision using the EG recommendations
- Objectives of the DAS program
  - *Highly original and innovative research programs,*
  - *Show strong potential to become international leaders within their field*
- The Executive Committee recommended 11 DAS awards to the NSERC President

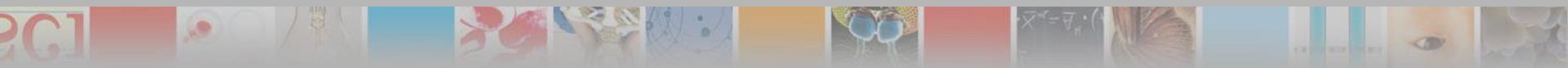
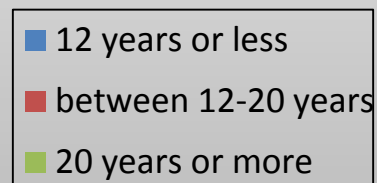
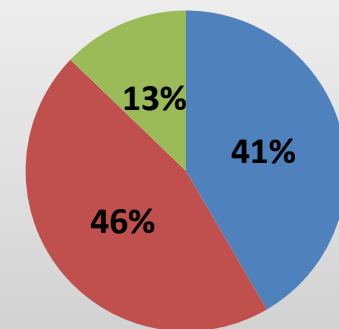


# 2017 Competition Results

## Discovery Accelerator Supplements

Evaluation Group	Awards
Genes, Cells and Molecules (1501)	12
Biological Systems and Functions (1502)	11
Evolution and Ecology (1503)	9
Chemistry (1504)	6
Physics (1505)	6
Geosciences (1506)	11
Computer Science (1507)	19
Mathematics and Statistics (1508)	6
Civil, Industrial and Systems Engineering (1509)	11
Electrical and Computer Engineering (1510)	13
Materials and Chemical Engineering (1511)	10
Mechanical Engineering (1512)	10
Subatomic Physics (19)	1
<b>Total</b>	<b>125</b>

2017 DAS recipients  
years from PhD



# Discovery Development Grants (DDG) Pilot

- ## Results

- 2015, 57 awards
- 2016, 43 awards
- 2017, 54 awards (5 for EG 1506)

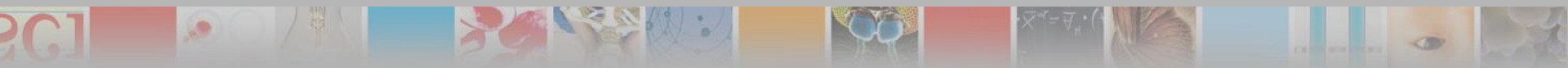


# 2017 Competition Results

## 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.

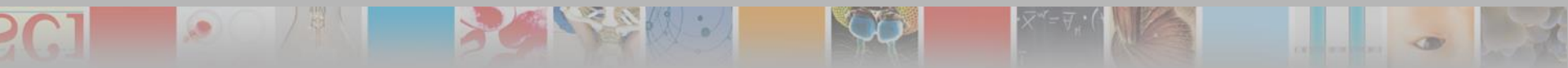
	2014	2015	2016	2017
Budget	\$19.5M	\$25M	\$26M	\$30.5M
# Appl.	468	666	657	748
# Funded	176	218	215	241
Success Rate	38%	33%	33%	32%
Funding Rate	38%	34%	33%	33%



# 2017 Competition Results

# Research Tools and Instruments (RTI) Environmental Sciences

Research Tools & Instruments (Category 1)	2017 Environmental Sciences
Number of Applications	91
Number of Awards	33
Success Rate	36.3 %
Amount Requested	\$9,844,159
Amount Awarded	\$3,361,197
Funding Rate	34.1 %



# 2017 Competition Results

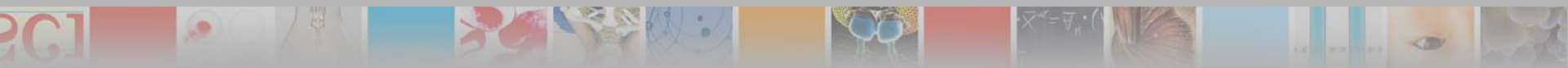
## Operations and Maintenance Support for Research Equipment

## The objective of the 2017 pilot:

- support use of regional and national research facilities in Canada by Canadian university researchers in the NSE;
- provide assistance in covering the operations and maintenance costs of such facilities.

## Results:

- Total of 149 applications were assessed
- Average grant of \$143K
- Total of 28 awards in 2016-17, for a success rate of 19%, and a funding rate of 21%



# 2017 Competition Results

## Northern Research Supplements (NRS)

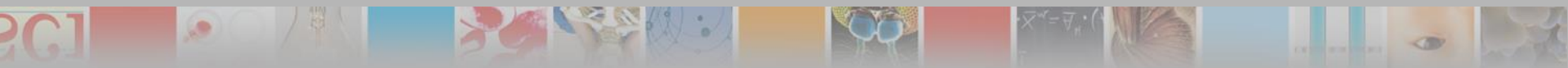
### Objective:

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

### Description:

- Apply in same year as Discovery Grant (DG) application
- \$10,000 to \$25,000/year for duration of the DG
- Award amount based on combination of logistical costs and recognizing outstanding contributions to outreach and interactions with Northerners
- DEADLINE DATE: November 1<sup>st</sup>

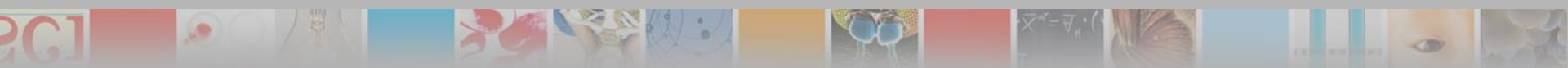
CONTACT: [EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca](mailto:EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca)



# Northern Research Supplements (NRS)

A - represents the total number of eligible applications received on Nov. 1				
B - represents the total amount requested by all eligible applicants per Year				
C - represents the number of applicants reviewed by the cttee., after those not holding a DG were removed				
D - represents the actual success rate of those applicants reviewed by the cttee.				

D - represents the actual success rate of those applicants reviewed by the cttee.



# 2017 Competition Results

## Ship Time Program

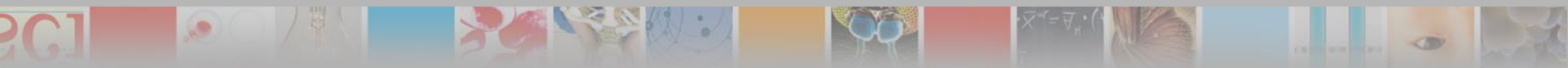
### Objective:

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

### Description:

- Must hold a Discovery Grant
- Duration usually one year
- Results within three months of applying
- DEADLINE DATE: September 1<sup>st</sup>

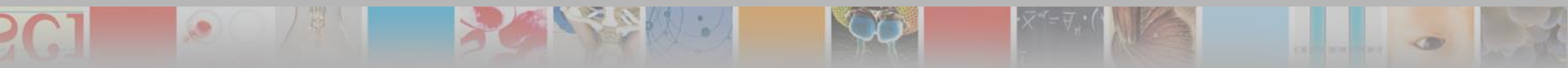
CONTACT: [EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca](mailto:EnviroSciences-SciencesEnviro@nserc-crsng.gc.ca)



# 2017 Competition Results

## Ship Time Program

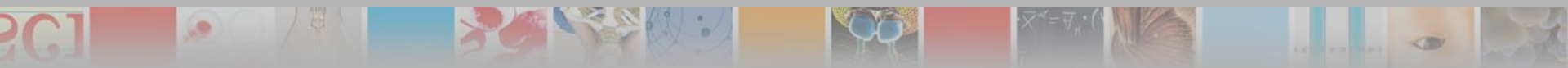
Competition Year	# of apps reviewed	# of apps awarded	Success rate	Funding rate	Total Requested in Competition	Total Amount Awarded
2017	7	5	71.4%	74.6%	\$ 1,288,647	\$ 961,217
2016	11	8	72.7%	72.9%	\$ 1,359,841	\$ 991,279
2015	10	6	60.0%	65.4%	\$ 1,643,194	\$ 1,075,433
2014	9	8	88.9%	67.7%	\$ 1,034,292	\$ 700,378
2013	13	10	76.9%	49.4%	\$ 2,024,427	\$ 1,000,000
2012	8	6	75.0%	70.1%	\$ 738,548	\$ 517,688
2011	13	11	84.6%	75.0%	\$ 1,098,163	\$ 824,169
<b>Average</b>	<b>10.1</b>	<b>7.7</b>	<b>75.7%</b>	<b>67.9%</b>	<b>\$ 1,312,445</b>	<b>\$ 867,166</b>



# Discovery Grants Program

# Objectives

- To promote and maintain a diversified base of high-quality research capability in the natural sciences and engineering (NSE) in Canadian universities.
- To foster research excellence.
- To provide a stimulating environment for research training.





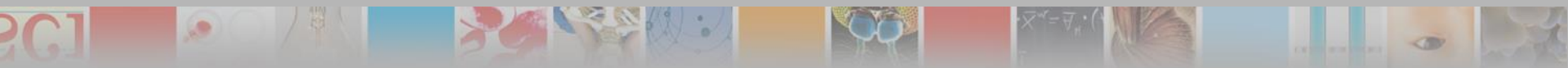
# Evaluation Groups

- 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)



# EG1506 Research Topics

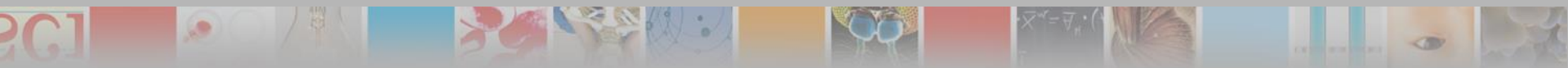
- **GS01 - Petrology & Mineralogy**
- **GS02 - Sedimentology & Stratigraphy**
- **GS03 - Paleontology & Paleobiology**
- **GS04 - Geophysics**
- **GS05 - Economic Geology**
- **GS06 - Tectonics & Structural Geology**
- **GS07 - Geochemistry & Geochronology**
- **GS08 - Volcanology**
- **GS09 - Planetary Sciences**
- **GS10 - Surface Processes**
- **GS11 - Paleo-environmental Sciences**
- **GS12 - Biogeosciences**
- **GS13 - Global Geological Processes**
- **GS14 - Atmospheric Sciences**
- **GS15 - Hydrology**
- **GS16 - Oceanography**
- **GS17 - Soil Sciences**
- **GS18 - Geomatics & Earth Systems Observations**
- **GS19 - Cryology**



# 2018 Geosciences Evaluation Group Members

Group Chair – Diana Allen (Simon Fraser)

- Jean-Pierre Bellenger (Sherbrooke)
- Monique Bernier (INRS)
- Kathryn Bethune (Regina)
- Mark Brandon (The Open University, U.K)
- Thomas Bruulsema (International Plant Nutrition Institute)
- Thomas Buffin-Bélanger (Rimouski)
- John Clague (Simon Fraser)
- Gregory Dipple (UBC)
- Keith Dewing (NRCAN)
- Zoe Finkel (Mount Allison)
- Nicholas Fraser (National Museum of Scotland, Edinburgh)
- John Gosse (Dalhousie)
- Céline Guéguen (Trent)
- Pippa Galen Halverson (McGill)
- John Hanchar (MUN)
- Jacob Hanley (Saint Mary's)
- Kurt Konhauser (Alberta)
- John Percival (NRCAN)
- Scott St.George (Minnesota, USA)
- Steven Siciliano (Saskatchewan)
- Maria Strack (Waterloo)
- Kimberly Strong (Toronto)
- Laxmi Sushama (McGill)
- Bruce Sutherland (Alberta)
- Kristy Tiampo (Colorado Boulder, USA)
- Freek van der Meer (Twente, Netherlands)
- James Whiteway (York)



# NSERC Contacts

Geosciences EG Program Officer	<a href="mailto:tiffany.lancaster@nserc-crsng.gc.ca">tiffany.lancaster@nserc-crsng.gc.ca</a>
Geosciences EG Program Assistant	<a href="mailto:sue.doyle@nserc-crsng.gc.ca">sue.doyle@nserc-crsng.gc.ca</a>
NSERC Web site	<a href="http://www.nserc-crsng">www.nserc-crsng</a>
Deadlines, 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)
Discovery Grants Program (including eligibility)	E-mail: <a href="mailto:resgrant@nserc-crsng.gc.ca">resgrant@nserc-crsng.gc.ca</a> Tel.: 613-995-5829
Use of Grant Funds	E-mail: <a href="mailto:usegrantfunds@nserc-crsng.gc.ca">usegrantfunds@nserc-crsng.gc.ca</a>
On-line Services Helpdesk	E-mail: <a href="mailto:webapp@nserc-crsng.gc.ca">webapp@nserc-crsng.gc.ca</a>

