

# **NSERC Information Session**

**Statistical Society of Canada**

Halifax

June 16, 2015

**Madeleine Bastien, Team Leader  
Stacey Lee-Jenkins, Program Officer**

**Guest Speaker – Dr. Paul McNicholas (EG 1508 – Statistics Chair)**

**Mathematical, Environmental and Physical Sciences Division**



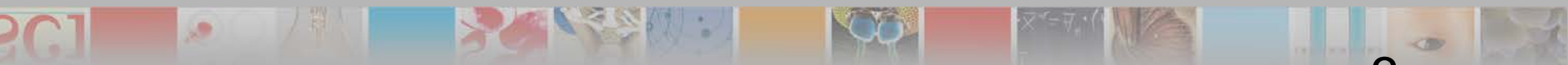
Natural Sciences and Engineering  
Research Council of Canada

Conseil de recherches en sciences  
naturelles et en génie du Canada

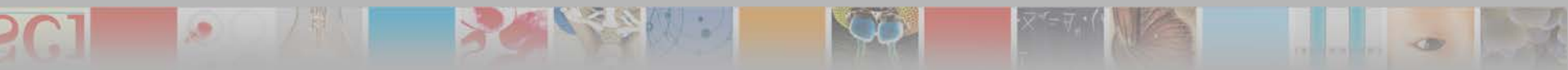
**Canada**

# Presentation Overview

1. Discovery Grant Evaluation Process
2. Discovery Grant Application – Outline & Tips
3. (2015 DG Competition Results)
4. Questions & Discussion

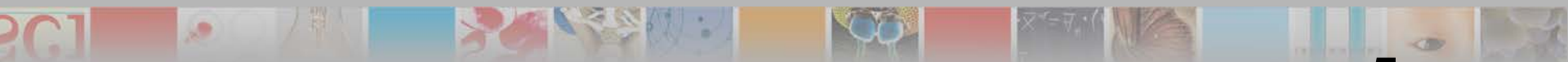


# EVALUATION OF DISCOVERY GRANT APPLICATIONS



# 12 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)



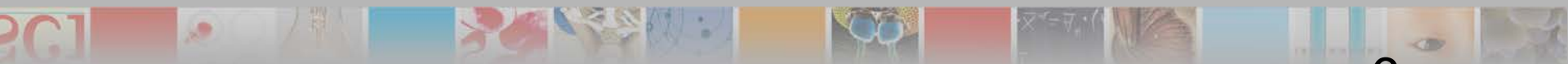
# Roles and Responsibilities in the EG

## ■ Members

- Key participants in the review process (5 per application)
- Act as a reviewer within their EG and for other EGs (joint reviews)
- Input on policy issues related to the discipline

## ■ Executive Committee

- Co-Chairs and Group Chair
- Ensures quality of process (consistency and equity)
- Confirms assignment of applications including joint reviews
- Provides recommendation to NSERC on options to balance the EG budget following review of applications
- Group Chair acts as EG representative on COGS
  - Acts as spokesperson on policies, scientific/engineering issues



# Conference Model

## How It Works

- Inside an Evaluation Group, applications are assessed within Sections.
- Reviewers are drawn from the Evaluation Group's membership as a function of the members' expertise and the need to ensure balanced reviews.
- Members from different Evaluation Groups could participate in the review of any application, if required, to ensure a comprehensive review. Referred to as **Joint Reviews**.
  - Primary Evaluation Group: leads the review (“home” of application).
  - Secondary Evaluation Group(s): provides expert reviewer(s).
  - Reviewer(s) from secondary Evaluation Group(s): among the five reviewers assessing the application (full assessment, participation in deliberations, and vote).

# Life Cycle of a Discovery Grant Application

**August 3**

Submission of Notification of Intent to Apply with CCVs

**September to October**

Initial assignment to EG and contacting of external reviewers

**November 1**

Submission of grant application with CCVs

**Mid-November**

Applications sent out to external reviewers

**Early December**

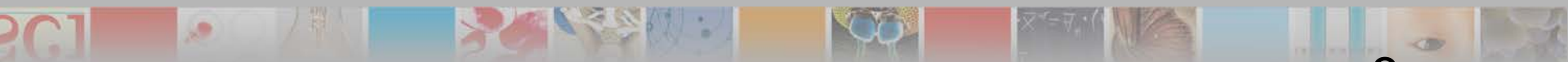
Evaluation Group members receive applications

**February**

Grants competition

**March to April**

Announcement of results



# Notification of Intent to Apply for a Discovery Grant

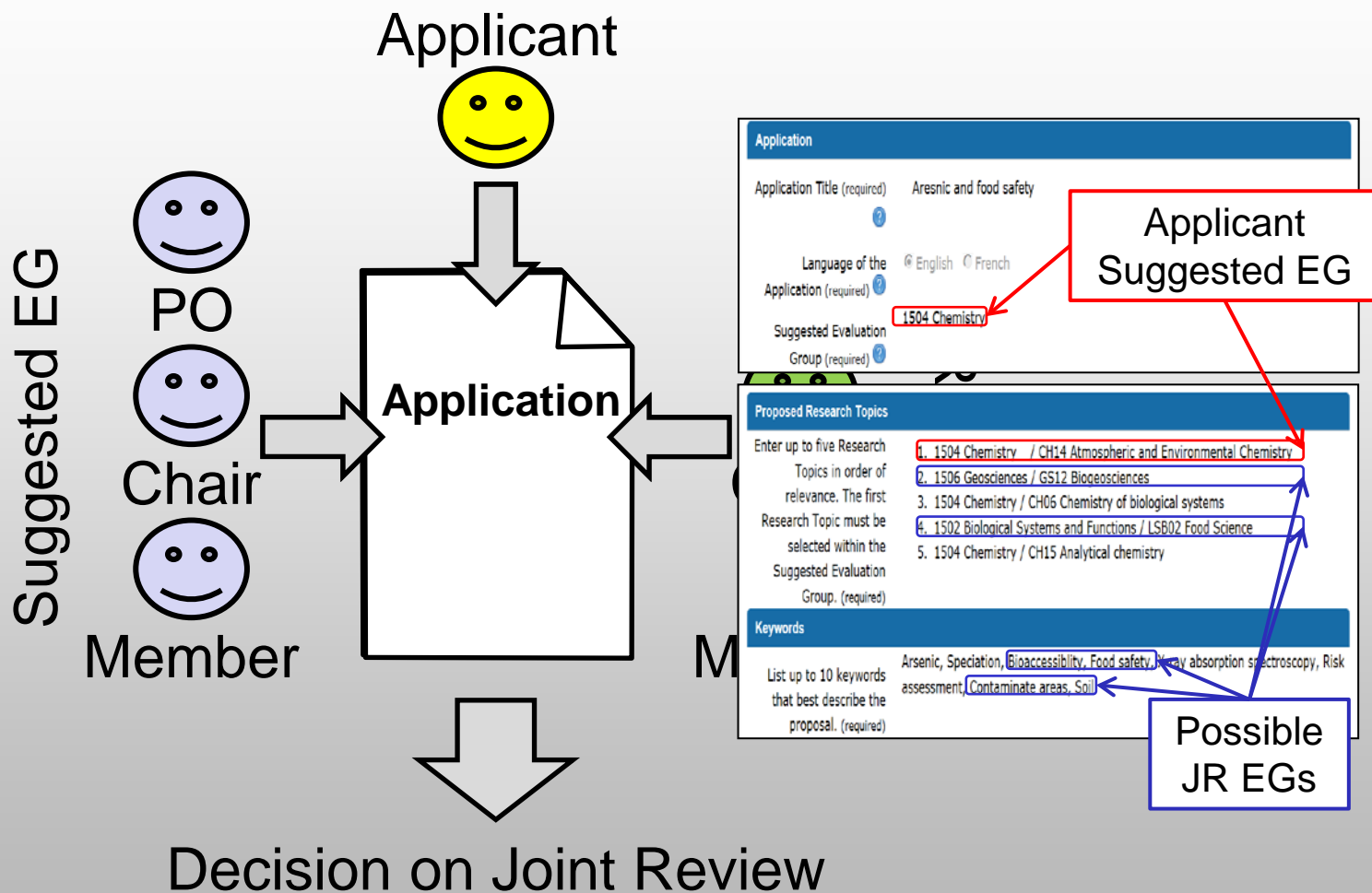
- Used to Identify:
  - the most appropriate EG to review the application
  - the need and potential benefits of a joint review between EGs
  - the external reviewers for the application
- Includes:
  - your research topics in priority order
  - CCV

**Must submit an NOI to NSERC by August 3 if you intend to submit an application**





# Determining a Joint Review



# Evaluation Process Overview

- Two-step process separates **merit assessment** from **funding recommendations**.
- **Merit assessment** uses a six-point scale to evaluate:
  - Excellence of the researcher;
  - Merit of the proposal; and
  - Contributions to the training of HQP.
- Applications grouped into “*bins*” of comparable merit.
- **Funding recommendations**: similar overall ratings within an Evaluation Group (EG) receive comparable funding, with possible modulation related to the cost of research.

**Demystifying the review process for NSERC Discovery Grants**

[http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/DG\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/DG_eng.asp)

# Implementation of the Conference Model

Reader

Second Internal

Conflicts?

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

Reader

Program Officer

Chair

Observer

Reader

First Internal

# Two-Step Review Process

## 1) Merit Assessment

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

Cost of research	High	Normal	Low
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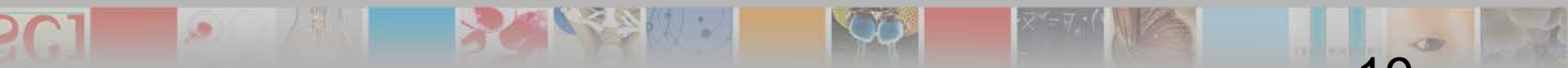
## 2) Funding Recommendation

Funding "Bins"
A (L, N, H)
B (L, N, H)
C (L, N, H)
D (L, N, H)
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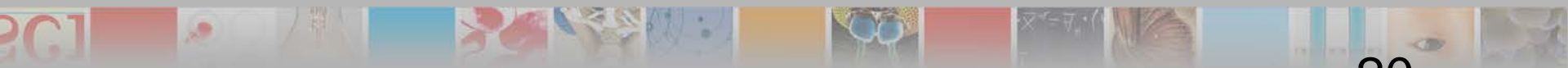
# Discovery Grants Evaluation Criteria

- Excellence of the Researcher(s)
- Merit of the Proposal
- Contribution to the Training of HQP



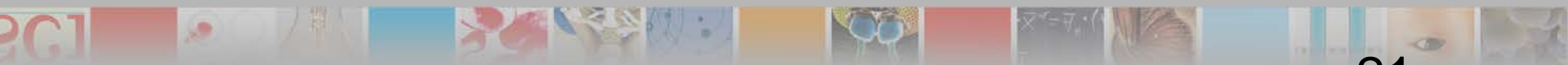
# Excellence of the Researcher

- Knowledge, expertise and experience
- Contributions to research in the NSE
- Importance of contributions



# Excellence of Researcher

- Knowledge, expertise and experience.
- Contributions to, and impact on, proposed and other areas of research.
  - Focus on natural sciences and engineering (NSE)
- Assessment based on the quality and impact of contributions.
- Assessment based on achievements demonstrated over past six years.
  - “Most significant contributions” section may include earlier work if they still have a significant impact (e.g., exploitation of patents).





# Excellence of Researcher

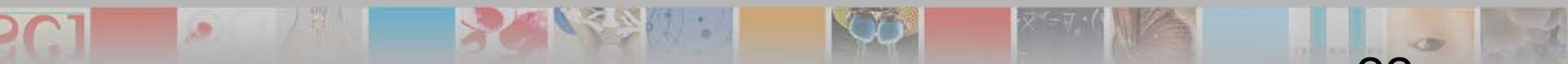
## Location of Information

### ■ In CCV

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

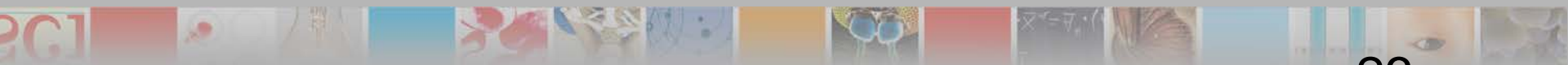
### ■ In Application

- “Most Significant Contributions” section (discusses most significant contributions).
- “Additional Information on Contributions” section (discusses choice of venues, order of authors, etc.).



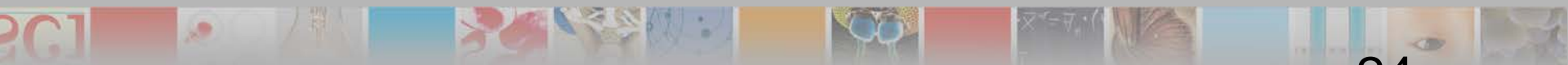
# Scientific or Engineering Excellence of the Researcher

- Describe up to five most significant research contributions (now in **application**) and highlight quality & impact
- List all types of research contributions (**from 2009-2015**)
- Explain your role in collaborative research activities
- List all sources of support
- Give other evidence of impact
- Explain delays in research activity (See Peer Review Manual)



# Excellence of the Researcher - Tips

- Describe up to five most significant research contributions (**in application**) and highlight quality & impact
- Explain your role in collaborative research activities
- Give other evidence of impact in other fields of NSE
- Explain delays in research activity or particular circumstances that might have affected productivity (See Peer Review Manual, Section 6, for details)

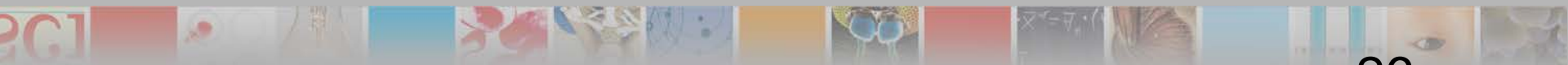


# Merit of the Proposal

- **Originality and innovation**
- Significance and expected contributions to research, and potential for impact **(in NSE)**
- Clarity and scope of objectives
- **Clarity and suitability of methodology**
- Feasibility
- Extent to which the proposal addresses all relevant issues
- Appropriateness and justification of the budget
- Relationship to other sources of funding

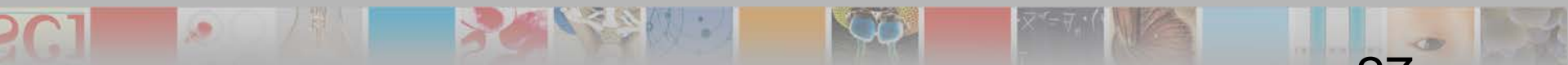
# Merit of the Proposal - Tips

- Keep in mind that two audiences read your application - expert and non-expert (use plain language)
- Provide a progress report on related research
- Position the research within the field and state-of-the-art
- Clearly articulate short- and long-term objectives
- Provide a detailed methodology and realistic budget
- Consider comments/recommendation you may have received from previous applications.



# Tips from Evaluation Group Members

- **Do...**
  - Be original and creative, but also show you have the expertise to carry out the program
  - Have long term vision and short term plan
  - Integrate HQP training into the proposal
- **Don't...**
  - Propose an unfeasible number of objectives
  - Propose a project or a series of disconnected projects
  - Use a lot of jargon and acronyms
  - Be vague when describing methodology
  - Only reference your own publications



# Contributions to the Training of HQP

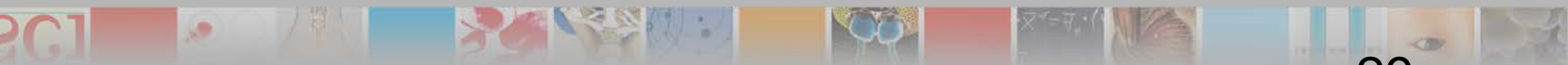
- Quality and impact of contributions to training during the last **six years**
  - Past training record outside NSE counts, but...
- Proposed plan for future training of HQP in the NSE
- Enhancement of training arising from a collaborative or interdisciplinary environment (where applicable)

Read the Policy and Guidelines on the Assessment of Contributions to Research and Training.

[http://www.nserc-crsng.gc.ca/NSECRSNG/Policies-Politiques/assesscontrib-evalcontrib\\_eng.asp](http://www.nserc-crsng.gc.ca/NSECRSNG/Policies-Politiques/assesscontrib-evalcontrib_eng.asp)

# Contributions to the Training of HQP - Tips

- **New:** Use an asterisk to identify students who are co-authors on the listed contributions (in your CCV)
- Explain your role in co-supervision or academic advisor activities
- Explain any delays that might have affected your ability to train HQP
- Describe nature of HQP studies
  - HQP ranges from undergraduate theses and summer projects to postdoctoral levels, and includes technical and other research personnel.

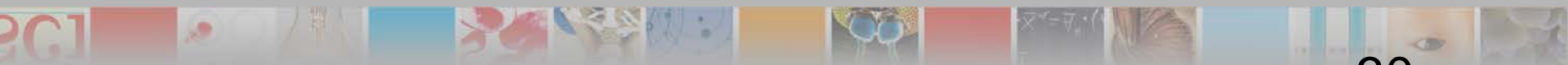




# Contributions to the Training of HQP - Tips

## Training Plan

- Describe the nature of the training (e.g., length, specific projects) in which HQP will be involved, the HQP's contributions and pertinence to the research program proposed
- Discuss the training philosophy and the expected outcomes
- Clearly define your role in any collaborative research and planned joint HQP training

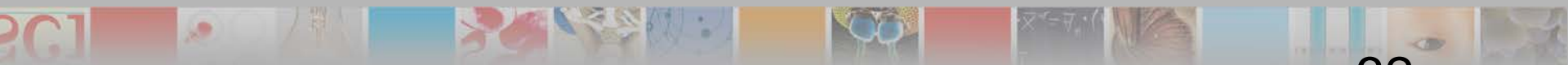


# Tips from Evaluation Group Members

- **Do...**
  - Describe your involvement and interaction with HQP
  - Describe the nature (PhD, master's, undergraduate), length of time (summer project vs. thesis) and type of training (course-related or thesis)
  - Fully describe the nature of co-supervision
  - Include present position for past HQP
  - Include all levels of HQP, including undergraduates
  - Make sure projects are appropriate for level of HQP proposed
- **Don't...**
  - Just list numbers
  - Have name withheld on all entries
  - Have a blanket statement, be specific

# Application Process for Discovery Grants

- Instructions are available on NSERC's Web site.
  - [http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/index\\_eng.asp](http://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/index_eng.asp)
- Applicants should carefully read the instructions on how to complete the NOI and NSERC CCV.
- Applicants are encouraged to complete their CCV as soon as possible as it can be time consuming to populate its fields the first time.



# Support Tools for the DG Program

Natural Sciences and Engineering Research Council of Canada  
Conseil de recherches en sciences naturelles et en génie du Canada

Canada

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## Resource Videos

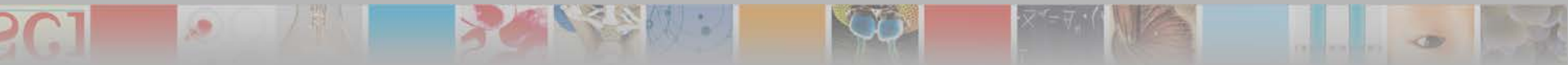
 **Submitting an NSERC individual Discovery Grant application through the Research Portal**  
This set of videos has been created to assist researchers to submit an NSERC individual Discovery Grants application through the Research Portal. Each video represents a step in the application process and complement the [Instructions](#).

 **Putting Your Best Foot Forward: How to Prepare for a Successful NSERC Site Visit**  
NSERC's site visit process is a critical part of the peer review process for large grants. This video provides an overview of "best practices" NSERC-funded researchers, their industrial partners, and top university and college administrators use to prepare for an effective site visit.

 **Tips on applying for an NSERC Discovery Grant**  
This video provides practical tips to help applicants write a better proposal for an NSERC Discovery Grant. It features interviews with members of the Evaluation Groups that review applications.

[http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/Index\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/Index_eng.asp)

# 2015 DG COMPETITION RESULTS



## Overall DG Statistics – 2015 Competition

	Number of Applications	No. of Awards	Amount Awarded	Success rate	Average Grant
<b>Early-Career Researchers<sup>1</sup></b>	<b>492</b>	<b>320</b>	<b>\$8.38M</b>	<b>65%</b>	<b>\$26k</b>
<b>Established Researchers</b>					
Applicants who held a grant	<b>1664</b>	<b>1368</b>	<b>\$48.0M</b>	<b>82%</b>	<b>\$35k</b>
Applicant not previously holding a grant <sup>2</sup>	<b>1063</b>	<b>404</b>	<b>\$10.8M</b>	<b>38%</b>	<b>\$26.7k</b>

1. Average Grant amount Includes ECR supplement.

2. Includes returning unfunded applicants and experienced researchers submitting a first application.

# Mathematics & Statistics Competition

## Results for 2015 (2014)

	No. of Applications	No. of Awards	Amount Awarded	Success Rate	Average Grant
<b>Early-Career Researchers<sup>1</sup></b>	<b>41</b> (31)	<b>24</b> (19)	<b>\$408k</b> (\$277k)	<b>59%</b> (61%)	<b>\$17k</b> (\$14.6k)
<b>Established Researchers</b>					
Applicants who held a grant	<b>143</b> (170)	<b>121</b> (147)	<b>\$2,368k</b> (\$2,698k)	<b>85%</b> (86%)	<b>\$19.6k</b> (\$18.4k)
Applicants not previously holding a grant <sup>2</sup>	<b>56</b> (60)	<b>25</b> (25)	<b>\$371k</b> (\$400k)	<b>45%</b> (42%)	<b>\$14.8k</b> (\$16.0k)

1. 'Average Grant' amount includes ECR supplement.

2. Includes returning unfunded applicants and experienced researchers submitting a first application.

# 2015 Discovery Grants Competition – Mathematics and Statistics

success rate (average grant)

	Established Researchers		Early-career Researchers
	Applicants who held a grant	Applicants not previously holding a grant	
Statistics	82% (\$18.7k)	48% (\$14.7k)	52% (\$15.4k)
Pure & Applied Mathematics	86% (\$20.0k)	42% (\$14.9k)	71% (\$19.3k)

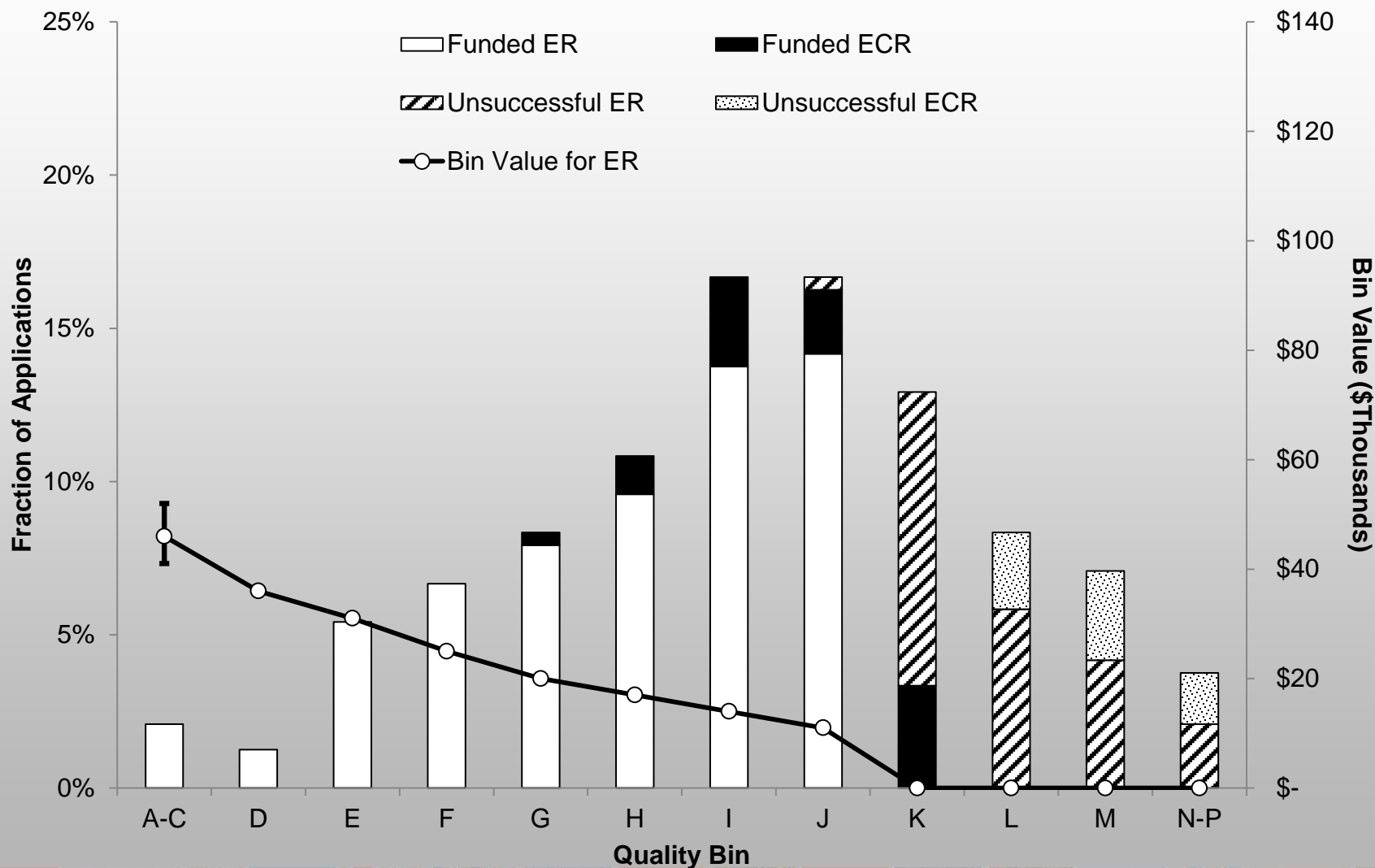


# Bin Values – Mathematics and Statistics 2015

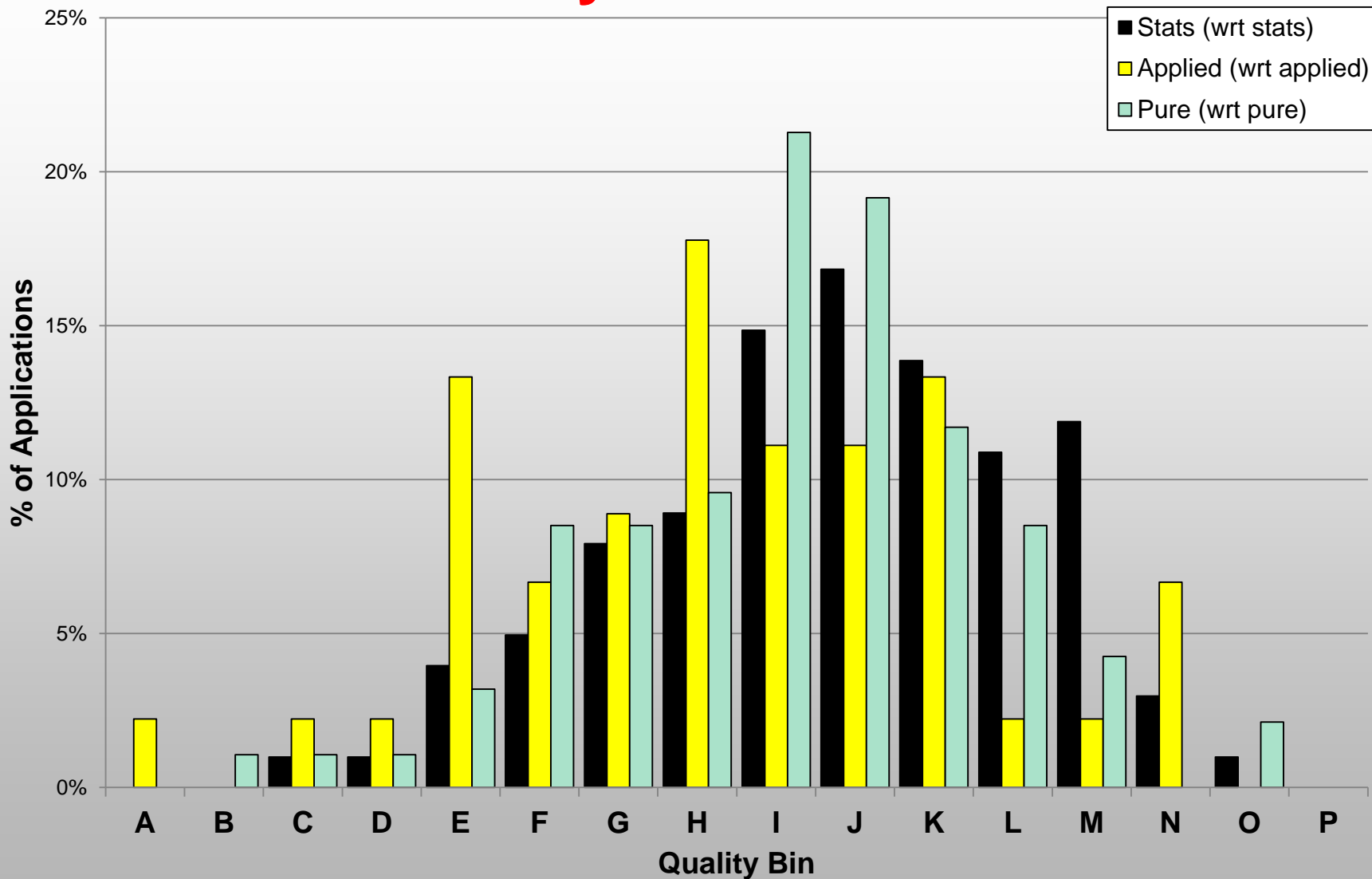
*(\$5k top-up for ECRs must be added to all bin values except for Bin K)*

Bin	2015 Value	2014 Value	2013 Value	2010 Value	Typical Rating
A	\$52,000		\$56,000	\$53,000	EEE
B	\$46,000	\$50,000	\$47,000	\$48,000	EEO
C	\$41,000	\$45,000	\$44,000	\$44,000	EOO
D	\$36,000	\$38,000	\$38,000	\$40,000	OOO
E	\$31,000	\$34,000	\$34,000	\$35,000	OOV
F	\$25,000	\$28,000	\$29,000	\$30,000	OVV
G	\$20,000	\$23,000	\$23,000	\$24,000	VVV
H	\$17,000	\$18,000	\$19,000	\$20,000	VVS
I	\$14,000	\$14,000	\$15,000	\$15,000	VSS
J	\$11,000	\$11,000	\$11,000	\$12,000	SSS
K	\$13,000 <sub>(ECR)</sub>	\$12,000 <sub>(ECR)</sub>	\$15,000 <sub>(ECR)</sub>	\$12,000	SSM
L-P	-	-	-	-	-

# 2015 Discovery Grants Competition

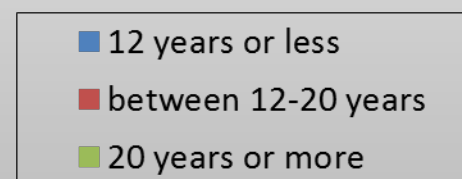
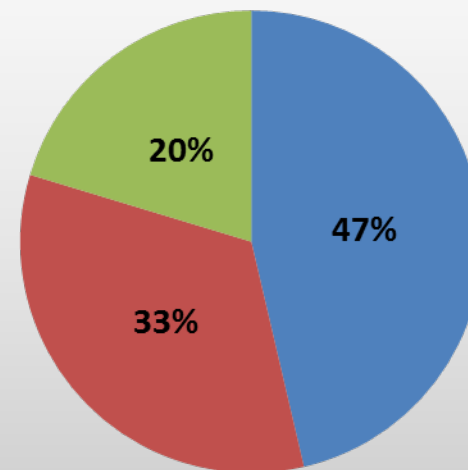


# 2015 Quality Bin Distribution



# Discovery Accelerator Supplements 2015 Competition Results

Evaluation Group	Awards
Genes, Cells and Molecules (1501)	11
Biological Systems and Functions (1502)	11
Evolution and Ecology (1503)	10
Chemistry (1504)	7
Physics (1505)	5
Geosciences (1506)	13
Computer Science (1507)	16
<b>Mathematics and Statistics (1508)</b>	<b>8</b>
Civil, Industrial and Systems Engineering (1509)	11
Electrical and Computer Engineering (1510)	13
Materials and Chemical Engineering (1511)	9
Mechanical Engineering (1512)	10
Subatomic Physics (19)	1
<b>Total</b>	<b>125</b>



6 in Math & 2 in Stats

# *Thank you!*

## To Contact Us:

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➤ **Questions?**

