

ANNUAL REPORT

2009 COMPETITION

GSC 18

The Evolution and Ecology Grant Selection Committee

May 2009

The numbers and statistics contained in the report do not represent the final and official results of the competition; they are included to help the reader understand the context of the competition. The final and official numbers and statistics are the ones presented to the Committee on Grants and Scholarships (COGS) during their spring meeting following the competition. Note that the numbers and statistics contained in the GSC annual report should not be used for any other purpose than the GSC Annual Report.

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Robert Roy

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Overview – 2009 GSC 18 Competition

The appendices provide an overview of matters raised by the Committee in relation to the 2009 competition as well as relevant data. The Co-Chairs wish to draw particular attention to the following:

The major change to this year's evaluation procedure was that past funding levels were not used as a starting point for determining the new recommended grant level. Applications were rated on three separate criteria: Excellence of the researcher, Merit of the Proposal, and Training of Highly Qualified Personnel (HQP). The rating determined into which bin the applications would be placed. After all grants were rated, and according to the committee's budget, dollar amounts were assigned to each of the bins. From a high of \$150k in Bin 'A' (please note, no applicants received a rating that would put them into Bin 'A', for details on the results see the tables and charts in Appendix A.), to a low of \$0 in Bin 'P'.

At the time each application was evaluated, the committee also decided whether the research had a high, normal or low cost. A high or low cost would see their grant increased or reduced by 6-15% from the dollar amount associated with their bin. Most applications were deemed to be of 'normal' cost. There was discussion on the categories of HQP, in particular, what weight to give undergraduates with no information on nature of training. For example, the training of summer assistants was given a lower weight than that of honours students, although the major focus was on graduate training. For undergraduates, NSERC should recommend a glossary of terms to avoid confusion.

GSC18 continued with the successful "conference model" implemented in 2006, with plenary sessions on the first day and concurrent sessions on the remaining days. Again, the grant applications were grouped by theme. The proposals had been assigned to 10 research theme areas (see Appendix 1). Readers moved between research themes as required. In 2009 the process ran smoothly, given the changes being incorporated into the system this year.

The number of readers was lowered from six to five to reduce the reading workload of the members and to simplify the logistics of the conference format. The final funding recommendation was based on the third vote (or median vote of 5) instead of the fourth vote from the top, as used previously.

The competition lasted 5 days. The overall quality of comments to applicants was excellent, requiring very little editing, with a few exceptions. The Chairs of the 2010 competition are urged to make it very clear to new members that first internal reviewers should prepare draft comments at the time of reading the proposals, focus comments exclusively on matters that will benefit applicants, and make the comments available for editing by the rest of the committee without delay.

The Research Tools And Instruments (RTI) portion of the competition was again split into two sections – “field” and “lab”. The funding rate was 22% and the success rate was 21%. There were a total of 23 RTI grants awarded for a total amount of \$1,145k.

List of Appendices

Statistics from the 2009 Competition	11
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List of Tables and Figures

Table 1: Summary of GSC 18's 2009 competition results	11
Figure 1: A comparison of incoming and outgoing Discovery Grants for GSC 18 (2009 competition)	8
Figure 2: A comparison of incoming and outgoing Discovery Grants for GSC 18 (2008 competition)	8
Figure 3: Grant level distribution for GSC 18	12
Figure 4: Value of Grants Awarded in 2009 competition for GSC 18	13

GSC 18 2009 Policy Meeting Minutes

February 19, 2009

Present

Co-Chairs:

Marc-André Villard
Ellie Prepas

Members:

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Peter Chapman
Stephen Dobson
Guy Drouin
Glenys Gibson
Brian Husband
Karen Kidd
Claude Lavoie
Hugh Maclsaac
Dennis Murray
Hervé Philippe
John Post
Bernard Roitberg
Lyle Whyte
Joseph Yavitt

Group Chair: Nigel Roulet

NSERC Staff:

Matt Vincelli (Program Officer)
Dave Bowen (Team Leader, Environmental Sciences)
Norman Marcotte (Director, Environmental Sciences, Physics & Program Operations)

Introduction

The committee held an extensive discussion of a number of items relevant to the functioning of the competition as well as important developments in the future of NSERC in general and the Discovery Grant program in particular.

GSC18 reaffirms its belief in the central role of the Discovery Grant program as the foundation of university research in Canada. As practising scientists, we are profoundly convinced that in combination with the Post-Graduate Scholarship and Post-Doctoral Fellowship programs, the Discovery Grant program accounts for a large fraction of the privileged position of Canadian scientific research internationally.

A. Operational matters

1. The conference model

Overall the conference model worked well, although the committee recognized the special effort by NSERC staff to minimize scheduling conflicts and reorganize the schedule when a group went over their allotted time.

To consider for next year;

(1) closer adherence by all groups to the allocated time per applicant, including all setup and personnel exchanges required,

(2) mechanism allowing to set aside applicants that require additional time, whether because of inevitable logistic issues or aspects of the application. Inevitably discussions which involved committee members who had worked together during the competition tended to go into greater depth. The climate of every member's opinion counting equally was echoed throughout the competition.

2. The number of members per panel

Five panel members per application were sufficient to include the critical level of expertise. Conflicts of interest were minimized by the pre-screening process.

Each room had eight or nine members available at any given time. This was a large enough pool for each application to have access to the appropriate expertise.

3. The value of external referees

As observed in past years, external reviews varied in their degree of usefulness. No particular suggestion was made to increase the overall quality of external reviews.

4. Review of GSC structure

The applications which were handled by Evolution and Ecology this year fit well with the ten themes chosen.

The themes are new this year, having been created by an ad-hoc panel of former committee members during the summer of 2008. If the old themes were described as “what do you call yourself”, the new themes are described as “tell us what you do”. For example, some of the old themes were Microbial Ecology and Physiological Ecology, whereas some of the new themes include Evolutionary Processes and Evolution and Ecology of Behaviour. The difference may seem subtle, but the themes are well designed and useful.

Ten themes were deemed sufficient.

The reorganization of NSERC’s Research Grant Division that is expected in the coming years should have little impact on GSC 18 because we already use the conference model. As it has been successful for us, we hope that it will work well once broadly implemented.

5. Paper vs. electronic distribution of material

Views varied on value of paper versus electronic versions of material. Both versions should continue to be provided to the panel, based on the preference of members. However, to make the electronic versions more appealing, CDs should be double-checked to reduce errors (e.g. missing applications) and the possibility of providing searchable PDFs should be considered.

6. Usefulness and quality of spreadsheets

The spreadsheets were useful. There are no further suggestions on this topic.

B. Broader matters

Impact of the Discovery Accelerator Supplements on the Discovery Grant program

The Committee supports the continuation of the Discovery Accelerator Supplements to keep outstanding scientists in Canada.

Decoupling new from past awards

The “bin” approach was initiated to decouple previous awards from new awards.

The results show that there was greater variance between old and new grants under the bin system. The average difference between incoming and outgoing grant in 2008 was approximately \$5800; in 2009 the difference more than doubled, to approximately \$12,600. See Figure 1 & Figure 2.

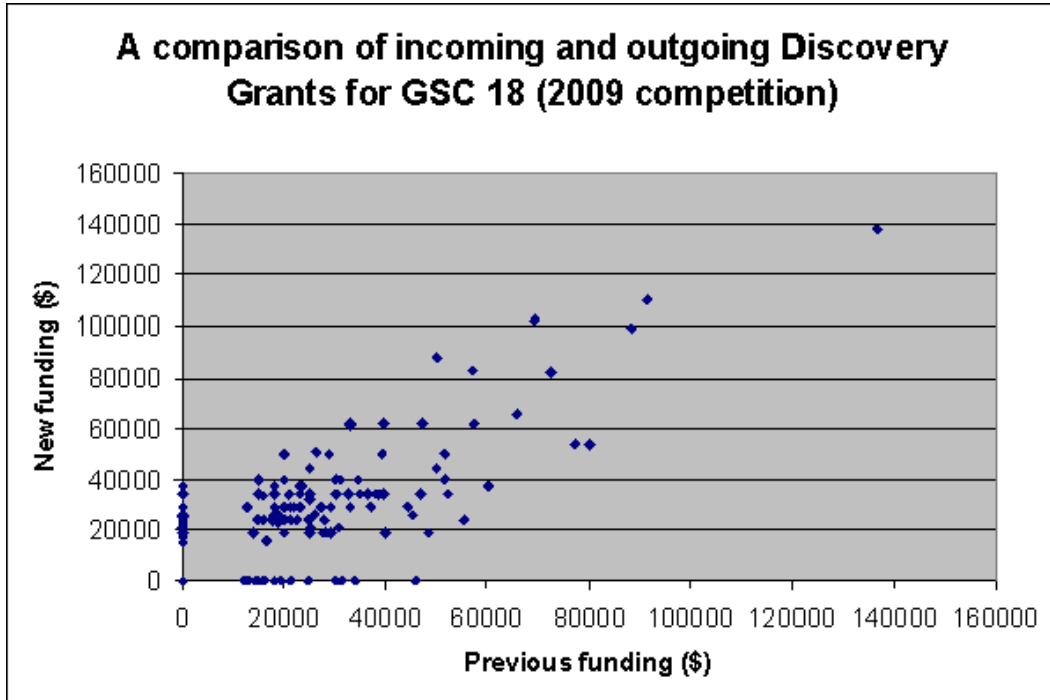


Figure 1

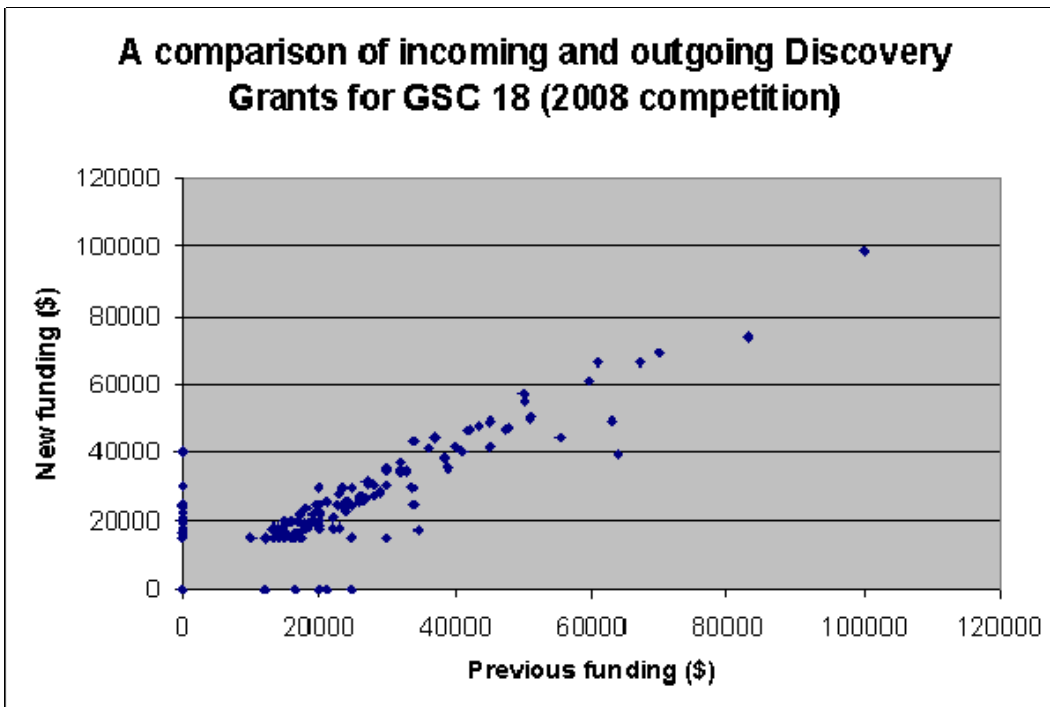


Figure 2

Small vs. Large Universities

A possible contradiction was pointed out between the guidelines sent to GSC members in November 2008 and the instructions given on site at the beginning of competition week. Specifically, the document entitled "Instructions for review and evaluation of DG applications" stated that "applicants from small universities may face particular challenges..." and that GSC "members should be sensitive to the impact of these circumstances...".

At competition week, however, GSC members were instructed to review all applications on the same scale, irrespective of other considerations. Although one year may not be enough to document a trend, NSERC should keep track the performance of applicants from small universities under the new and former evaluation procedures. If there are indicators that the new set up unfairly disadvantages qualified researchers from smaller institutions, then steps should be taken to address the problem.

One-year awards

Considerable discussion took place during the competition on appropriate situations for one-year awards. Consensus was found for cases where there was sufficient evidence that substantive progress was feasible within the time limit available before the next competition.

What constitutes HQP

The form should provide more information in terms of undergraduate training. The value of a laboratory assistant, field assistant, or other, needs to be spelled out, such that it can be compared with graduate student training. A standard glossary should be provided by NSERC to reduce variability in terminology with regards to non-graduate trainees.

Separating the evaluation of the science from funding allocation

Separating the evaluation of science from the funding allocation left some ambiguity in terms of how details of the budget were to be considered. The role and importance of the budget in the assessment of proposals should be reconsidered before the 2010 competition. Also, the weighting of the three criteria – researcher excellence, proposal merit and HQP needs consideration – as the third is included to some extent with the first and second criteria. Further, is equal weighting appropriate for the criteria?

Greening of NSERC

The Committee was in agreement that NSERC should be vigilant in terms of setting standards which minimize the Committee's imprint on the environment.

Membership

Discussion was held in terms of membership replacements. Members were encouraged to submit suggestions to the program officers. The Committee thanked retiring members Glenys Gibson, Stephen Dobson, Brian Husband, Bernard Roitberg and Ellie Prepas for their dedicated service. The latter two were former-serving

members of GSC18 returning for one year in consideration of the unusually high turnover in committee membership this year. The Committee also thanked Marc André Villard and Ellie Prepas for co-chairing the process and being ever vigilant with the spirit of excellence. The co-chairs and whole committee thanked NSERC personnel, Dave Bowen, Kenn Rankine and Matt Vincelli, as well as Robert Roy who pinch hit for the competition. NSERC staff went out of their way to ensure a smooth operation and positive climate in this transition year.

Process of assignment of values to individual bins

The process involved three phases; initial estimates by the program officers based on summary statistics from past competitions, detailed discussion at the completion of the competition by Committee members and NSERC staff, and final revisions by NSERC staff in consideration of past distribution of funding and applications with fatal flaws. Overall, the process was exhaustive and extended the delivery of competition results by three weeks.

Mentoring

Group review of the process in early December and again at the beginning of the competition week was an essential aspect of building consistent approaches to application review and binning. A mentor system for new committee members should be considered for the fall orientation meeting or similar introduction to the process.

Statistics from the 2009 Competition

Table 1: Summary of GSC 18's 2009 competition results

GSC 18

Evolution and Ecology

Discovery Grant Statistics	Totals
Number of Applications	188
Number of Awards	137
Success Rate:	73%
% of Overall Avg. Grant (\$28630.212)	117%
Average Grant:	\$33,361
Funding:	\$4,688,848

Acronyms (from Peer Review Manual)	
FN:	First-time new applicant
RUN:	Returning unsuccessful FTA
FA:	First-time experienced non-academic applicant
FNA:	First-time experienced non-academic applicant
RF:	First-time research applicant
RU:	Second or more research applicant
RL:	Returning unsuccessful applicant

First Time Applicants (FTAs)	Totals	FN	FA	FNA
Number of Applications	44	28	13	3
Number of Awards	28	21	5	3
Success Rate:	64%	75%	38%	100%
% of Overall Avg. Grant (\$28630.212)	77%	73%	65%	76%
% of Budget:	14%	16%	3%	1%
Average Grant:	\$22,888	\$20,762	\$27,000	\$22,333
Funding:	\$838,088	\$438,000	\$135,000	\$67,000

Returning	Totals	R\$	RF\$	RUN	RU
Number of Applicants	144	78	38	3	28
Number of Awards	108	70	27	1	10
Success Rate:	75%	90%	71%	33%	36%
% of Overall Avg. Grant (\$28630.212)	127.68%	144.80%	103.90%	69.89%	79%
% of Budget:	69.94%	83.20%	17.82%	0.37%	8%
Average Grant:	\$38,388	\$41,255	\$28,843	\$17,000	\$22,585
Funding:	\$5,521,848	\$2,887,848	\$800,350	\$17,000	\$225,650

**Evolution & Ecology Grant Selection Committee (GSC 18)
Discovery Grants Program, 2009 Competition
Grant Level Distribution**

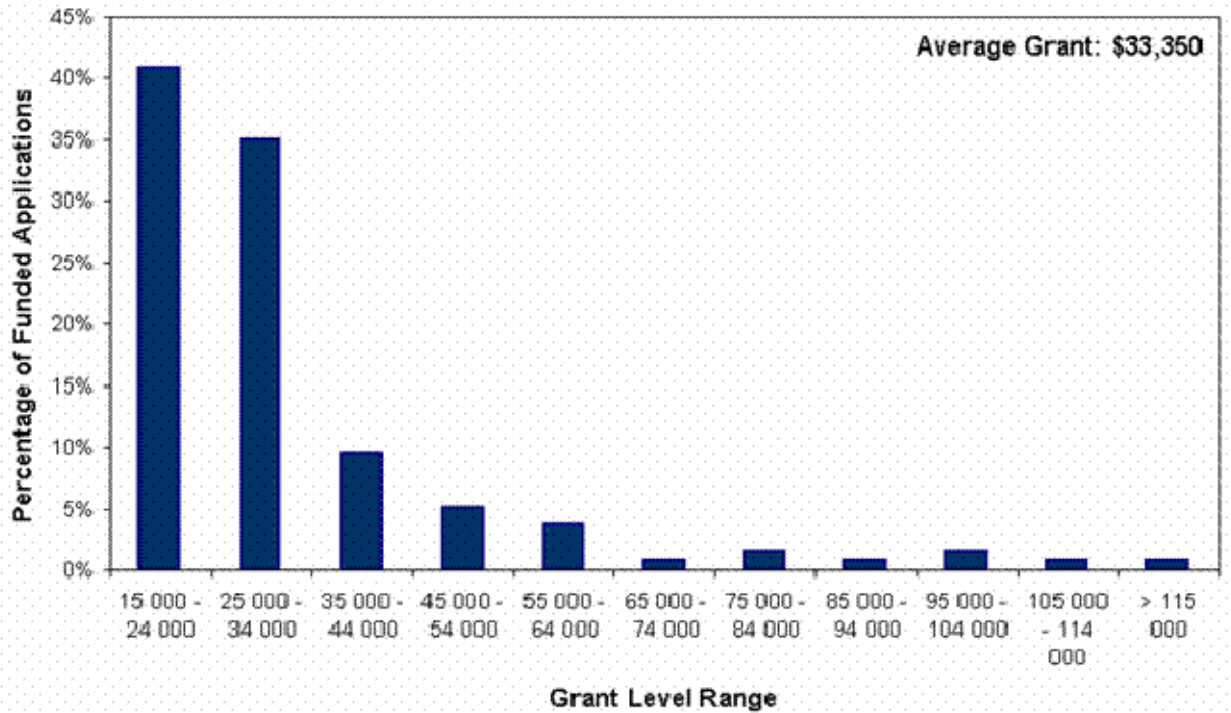


Figure 3: Grant level distribution for GSC 18

2009 Competition - Discovery Grants Program

Evolution & Ecology Grant Selection Committee (GSC-18)

Grant Level Range	Number of Funded Applications	Percentage of Funded Applications
15 000 - 24 000	56	40.9%
25 000 - 34 000	48	35.0%
35 000 - 44 000	13	9.5%

45 000 - 54 000	7	5.1%
55 000 - 64 000	5	3.6%
65 000 - 74 000	1	0.7%
75 000 - 84 000	2	1.5%
85 000 - 94 000	1	0.7%
95 000 - 104 000	2	1.5%
105 000 - 114 000	1	0.7%
> 115 000	1	0.7%

Figure 4: Value of Grants Awarded in 2009 competition for GSC 18