NSERC Discovery Grant Writing Session
The Basics of a Discovery Grant

Presenters: Dr Neeloffer Mookerjee, Internal Medicine/Immunology
Ms Andrea Craig, Research Grants Officer (NSERC)

A106 Chown Boardroom
22 September 2015, 9:30 – 11:30 a.m.
NSERC Discovery Grant Writing Session
The Basics of a Discovery Grant

Presenters: Dr Stephen Pistorius, Physics & Astronomy
Ms Andrea Craig, Research Grants Officer (NSERC)

E2 – 223 E.I.T.C.
24 September 2015, 9:30 – 11:30 a.m.
Finding the Office of Research Services

Start here!

Then go here
Research Services Homepage

ORS Overview
- Organization Chart

FAQ
- How do I apply?
- Grant or Contract
- Acronyms

Workshops/Resources
- Workshops & Presentations
- CAURA West Conference
- Concur Travel & Expense Tool
- New Faculty Orientation 2015
- Research Ethics at the U of M Research Facilitators

ORS Funding Updates
- Weekly Funding Update
- My Research Tools
- Tri-Agency Bridge Funding Program

Three Funding Streams
- Internal UM Funding
- External Funding
- Institutional Funding (external sources)

My Research Tools - MRT
- Overview
- FAQ
- Research Experts Search Overview

Forms
- Research Grant & Contract Forms
- Internal UM Funding
- Preliminary Access to Funding (RPA) MTA & PI Questionnaire
- Legal Services Templates
- More >>>

Useful Links
- Office of Research Ethics
- Environmental Health & Safety
- Financial Services
- Legal Affairs
- Student Research Jobs
- University Policies

Contact Us
- Staff Directory

Office of Research Services
540 Machray Hall, 185 Dysart Road
University of Manitoba, Winnipeg, MB R3T 2N2 Canada
Phone: 204-474-9118 Fax: 204-474-5025

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Eligibility

• Subject Matter
  www.nserc-crsng.gc.ca/NSERC-CRSNG/Policies-Politiques/subjectevalHealth-sujetevalSante_eng.asp

• For Faculty

Be clear about the eligibility of both of these before you begin!
Program Vs. Project

“The Discovery Grants Program supports ongoing programs of research (with long-term goals) rather than a single short-term project or collection of projects.”
Summary of Changes to the Discovery Grant Program, 2012-2013

• Use of NSERC’s headers in 5-page proposal

• New section: HQP Training Plan

• Budget justification limited to 2 pages; references page max. increased to 2

• Mandatory inclusion (attachment) of budget and summary pages for CIHR or SSHRC
Summary of Changes to the Discovery Grant Program, 2014-2015

- DGs submitted on NSERC Portal
- CCV replaces Form 100 in Portal
- Narrative portions of Form 100 now found in Portal application
Evaluation Mechanics

How will my NSERC Discovery Grant application be evaluated?
Evaluation Mechanics

1. Evaluation Groups
2. Peer Review System
3. 3 Equally-Weighted criteria
1. Evaluation Groups

12 discipline-based Evaluation Groups:

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

### EG: Average Award Amounts (2015-2016) and Success Rates (Early Career/Established-Renewing)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Early Career</th>
<th>Established-Renewing</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1501 – Genes, Cells &amp; Molecules</td>
<td>$34,502</td>
<td>38,196</td>
<td>56/74%</td>
</tr>
<tr>
<td>1504 – Chemistry</td>
<td>$22,929</td>
<td>53,383</td>
<td>64/94%</td>
</tr>
<tr>
<td>1505 – Physics</td>
<td>$28,227</td>
<td>43,865</td>
<td>76/88%</td>
</tr>
<tr>
<td>1507 – Computer Science</td>
<td>$23,778</td>
<td>31,696</td>
<td>64/75%</td>
</tr>
<tr>
<td>1508 – Mathematics &amp; Statistics</td>
<td>$17,000</td>
<td>19,570</td>
<td>59/85%</td>
</tr>
<tr>
<td>1509 – Civil, Industrial and Systems Engineering</td>
<td>$23,941</td>
<td>29,157</td>
<td>72/85%</td>
</tr>
<tr>
<td>1510 – Electrical &amp; Computer Engineering</td>
<td>$24,357</td>
<td>32,633</td>
<td>88/82%</td>
</tr>
<tr>
<td>1512 – Mechanical Engineering</td>
<td>$23,071</td>
<td>29,407</td>
<td>88/75%</td>
</tr>
</tbody>
</table>

2. Peer Review Process

- Researcher submits application to NSERC
- Experts from around the world review the research proposal
- Expert review committees meet to recommend for or against funding
- NSERC reviews the recommendations and approves final funding
- NSERC provides feedback to applicant

In the conference review model, your proposal will be read by FIVE PEOPLE: 2 Assessors, 3 Readers - each with a vote
## 2-Step Review Process

<table>
<thead>
<tr>
<th>Excellence of researcher</th>
<th>Exceptional</th>
<th>Outstanding</th>
<th>Very Strong</th>
<th>Strong</th>
<th>Moderate</th>
<th>Insufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merit of proposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribution to training of HQP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of research</td>
<td>High</td>
<td>Normal</td>
<td>Low</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Funding “Bins”

- A (L, N, H)
- B (L, N, H)
- C (L, N, H)
- D (L, N, H)
- N
- O
- P
3. Equally Weighted Criteria

- Excellence of the Researcher
- Training of HQP
- Merit of the Proposal

See “Discovery Grants Merit Indicators” handout
# Discovery Grants Merit Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Very Strong</th>
<th>Strong</th>
<th>Insufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact</td>
<td>The accomplishments presented in the application were deemed to be superior in quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be solid in quality, impact and/or importance.</td>
<td>A rating in any of the three categories of ‘insufficient’ will result in an unsuccessful application.</td>
</tr>
<tr>
<td>Originality</td>
<td>Proposed research program is clearly presented, is original and innovative and is likely to have impact by leading to advancements and/or addressing socio-economic or environmental needs. Long-term goals are defined and short-term objectives are planned. The methodology is clearly described and appropriate. The budget demonstrates how the research activities to be supported are distinct from and complement those funded by other sources.</td>
<td>Proposed research program is clearly presented, is original and innovative and is likely to have impact and/or address socio-economic or environmental needs. Long-term goals and short-term objectives are clearly described. The methodology is described and appropriate.</td>
<td>Proposed research program is clearly presented, is original and innovative and is likely to have impact and/or address socio-economic or environmental needs. Long-term goals and short-term objectives are clearly described. The methodology is described and appropriate.</td>
</tr>
<tr>
<td>Training</td>
<td>Training record is superior to other applicants, with HQP contributing to quality, original research. Many HQP move on to appropriate positions that require desired skills, obtained through training received. Research plans for trainees are appropriate and clearly described. HQP success is likely.</td>
<td>Training record compares favourably with other applicants. HQP generally move on to positions that require desired skills, obtained through training received. Research plans for trainees are appropriate and described. HQP success is likely.</td>
<td>Training record may be missing. Applicants may be moving on to positions that do not require desired skills, obtained through training received. Research plans for trainees are not appropriately described. HQP success is unlikely.</td>
</tr>
</tbody>
</table>

Note: This information is based on the Peer Review Manual (Chapter 6) which outlines how reviewers arrive at a rating.
Proposal Composition

Answering the call
Proposal Composition – Overall

- Researcher Excellence
- HQP Training
- Proposal Merit

Researcher Excellence

HQP Training

Proposal Merit
Budget & Budget Justification

- You must **justify** the cost of what you are requesting – each budget item
- Also reveals details about your plans
- Consider a Gantt chart if it helps to clarify HQP involvement
- **Ask for what you need** to carry out proposed research, within reason (avg grant is $26k/yr)
- NSERC set **page limit of 2** – use fully, but discuss budget **only**

- Salaries / Stipends
- Equipment
- Materials
- Travel
- Dissemination
- Other
Tri-Agency Open Access Policy on Publications

“Grant recipients are required to ensure that any peer-reviewed journal publications arising from Agency-supported research are freely accessible within 12 months of publication.”


University of Manitoba supports self-archiving: MSpace

- http://libguides.lib.umanitoba.ca/oa-publishing/self-archiving

UM NSERC site has links to policy, FAQ, and MSpace

- http://umanitoba.ca/research/ors/NSERC.html
Relationship to Other Research Support

• Discuss relationship - conceptual or budgetary

• Include HQP support details for each other source

• CIHR funding must be seen as separate – reviewers will be highly critical of blending of CIHR/NSERC funds
Proposal
What · Why · Who · How · Outcome · Impact

Provide details on:

• **Recent research progress** related to the proposal (or attributable to your previous DG)

• **Objectives** : short- AND long-term

• Pertinent **literature** : put your research into context

• **Methods** and proposed approach

• Anticipated **significance/impact**
Most Significant Contributions to Research

- the last 6 years
- appropriate to proposal
- narrative style
- discuss the importance of the contribution to your target community (advancements, influence…)
- for collaborative contributions, elaborate on your role

Focus on your role, and the impact the contribution made – avoid summarizing findings alone.
Additional Information on Contributions

Opportunity to explain or highlight items that deserve attention, like:

- Journal choice
- Author order
- Identification of HQP authors
- Relevant items not captured in CCV
Highly Qualified Personnel

• all types of HQP; MSc & PhD the most (unwritten)
• visible throughout proposal
• be explicit: who, doing what
• what do you offer to HQP currently?
• what will you offer to HQP if funded?
• signed consent form or an email
HQP Training Plan

• Info pertinent to plans for HQP only
• Describe the work
• Discuss relevance and involvement
• Expected training outcomes
• Training value
• Co-supervisory details/plans
Past Contributions to HQP Training

• last 6 years

• your role and its positive impact
  – publications?
  – awards?
  – present position

• specialized methodologies/techniques?

• interdisciplinary or industrial collaborations?
Proposal Summary

What • nature of work to be done

Why • to whom is the research important?

Who • briefly - introduce the team

How • briefly - your plan to meet objectives

Outcome • anticipated results

Impact • anticipated benefits

Write in plain language

Easiest to write last
Discovery Grant Resources

- UManitoba-maintained NSERC page:
  umanitoba.ca/research/ors/NSERC.html
- Discovery Grants Information Centre:
  www.nserc-crsng.gc.ca/Professors-Professeurs/DGIC-CISD_eng.asp
- Discovery Grant Program Guidelines/“Program Literature”:
- Resource Videos
  http://www.nserc-crsng.gc.ca/Professors-Professeurs/Videos-Videos/Index_eng.asp
- Complete 2014-2015 Peer Review Manual:
Final Thoughts

Clear
Consistent
Complete
Compelling

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