NSERC Discovery Grants
Sept 23, 2013

Harold Aukema
Human Nutritional Sciences
Merit Indicators

• Criteria: Excellence of the Researcher, Merit of the proposal, HQP training

• Ratings used: Exceptional, outstanding, very strong, strong, moderate, inadequate

• http://www.nserc-crsng.gc.ca/Professors-Professeurs/DGIC-CISD_eng.asp
### 6.13. DISCOVERY GRANTS MERIT INDICATORS

<table>
<thead>
<tr>
<th>Merit of the Proposal</th>
<th>Exceptional</th>
<th>Outstanding</th>
<th>Very Strong</th>
<th>Strong</th>
<th>Moderate</th>
<th>Inefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training of HQP</td>
<td>Acknowledged as a leader who has continued to make, over the last six years, influential accomplishments at the highest level of quality, impact and/or importance to the community.</td>
<td>Proposed research program is clearly presented, is highly original and innovative and is likely to have impact by leading to groundbreaking advances in the area and/or leading to a technology or policy that addresses socio-economic or environmental needs. Long-term visions and short-term objectives are clearly defined. The methodology is clearly described and appropriate. The budget clearly demonstrates how the research activities to be supported are distinct from and complement those funded by other sources.</td>
<td>The accomplishments presented in the application were deemed to be of high quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be of moderate quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be of negligible quality, impact and/or importance.</td>
<td></td>
</tr>
<tr>
<td>Training record</td>
<td>Training record is at the highest level, with HQP contributing to top quality research. Must HQP move on to positions that require highly desired skills, obtained through training received. Research plans for trainers are appropriate and clearly defined. HQP success is highly likely.</td>
<td>Training record is superior to other applicants, with HQP contributing to high quality research. Must HQP move on to positions that require highly desired skills, obtained through training received. Research plans for trainers are appropriate and clearly defined. HQP success is highly likely.</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, has original and innovative aspects and may have impact and/or address socio-economic or environmental needs. Long-term goals and short-term objectives are described. The methodology is partially 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, as presented lacks clarity, and/or is of limited originality and innovation. Objectives are not clearly described and/or likely not attainable. Methodology is not clearly described and/or appropriate. The budget does not clearly demonstrate how the research activities to be supported are distinct from and complement those funded by other sources.</td>
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<td>Training record is acceptable but may be weaker relative to other applicants. HQP do not, in general, move on to positions that require skills obtained through training received. Plans for training activities are described and should contribute to HQP success.</td>
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The Discovery Grants Merit Indicators should be used in conjunction with the Peer Review Manual (Chapter 6) which outlines how reviewers arrive at a rating.

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<tr>
<th>Cost of Research</th>
<th>High</th>
<th>Normal</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majority of justified expenses represent costs higher than the norm for the research area.</td>
<td>Majority of justified expenses are within the norm for the research area.</td>
<td>Majority of justified expenses are lower than the norm for the research area.</td>
<td></td>
</tr>
</tbody>
</table>

(1) Possible examples include: Cost of training of HQP; equipment intensive research and/or high user fees; particularly expensive or frequent consumables; travel (for collaborations, field work, access to facilities, conferences, …)
### 5.13. DISCOVERY GRANTS MERIT INDICATORS

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<th>Ng</th>
<th>Very Strong</th>
<th>Strong</th>
<th>Moderate</th>
</tr>
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<td>accomplishments presented in the application were deemed to be superior quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be solid in their quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be of reasonable quality, impact and/or importance.</td>
<td>The accomplishments presented in the application were deemed to be of acceptable quality, impact and/or importance.</td>
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<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 clearly described. HQP success is likely.</td>
<td>Training record is acceptable but may be modest relative to other applicants. Some HQP move on to programs or positions that require desired skills, obtained through training received. Plans for trainees are described and should contribute to HQP success.</td>
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Training record is acceptable but may be modest relative to other applicants. Some HQP move on to programs or positions that require desired skills, obtained through training received. Plans for trainees are described and should contribute to HQP success.

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Training record is acceptable but may be modest relative to other applicants. Some HQP move on to programs or positions that require desired skills, obtained through training received. Plans for trainees are described and should contribute to HQP success.
Excellence of researcher

• Knowledge, expertise and experience
  • Does take into account career stage

• Quality of contributions to, and impact on, the proposed and other areas of research in the NSE
  • Volume plus quality – may not use other metrics – but you can put these in
  • Papers, grants, abstracts, books, reports, presentations, patents, consultations, awards, recognitions
    • Put everything in, but quality does matter so do prioritize for space
  • Are you a good citizen? – review papers, service to professional organizations
  • Productive from past funding? (no automatic renewals) – point out papers from DG funding
Excellence of researcher

• Importance of contributions
  • Make it clear in significant contributions
  • Explain journal choice or if restricted to 2-3 journals
  • Explain role in publications
  • Highlight HQP
  • For some committees, industry connections may be important

• (For group applications) complementarity of expertise between members and synergy
Merit of proposal

• Originality and innovation
  • Make sure literature review is comprehensive, but clear
  • Not all reviewers are experts in your particular field

• Significance and expected contributions to research
  • External reviews helpful here for committee
  • Summarize achievements from previous grant
  • Show how current proposal fits in with previous grant
  • Include HQP in here as appropriate (2-3 over 5 years?)
  • Program, not a project
  • Not a cookie-cutter approach – should be discovery

• Clarity and scope of objectives
  • Include ~2-3 projects as part of the whole proposal
Merit of proposal

• Clarity and appropriateness of methodology
  • Space is an issue, but provide sufficient methodology to demonstrate feasibility

• Feasibility
  • An overly ambitious proposal is seen as lacking understanding of the nature of the research

• Discussion of relevant issues

• Appropriateness / justification of budget
  • Make case is your research is expensive
  • Most important thing is to be realistic, but ask for enough!

• Relationship to other sources of funds
  • Especially if health related
  • Use budget justification to highlight HQP
Contributions to HQP training

• Quality and impact of past contributions
  • Make clear that your students publish, present and go on to NSE positions – with some exceptions
  • Quality is important, so merit of the proposal can influence this
  • Are they just “a pair of hands”?
  • Highlight awards, achievements, publications, present position
  • All trainees count equally in theory, but an established investigator without PhD students should explain why, or explain if all are undergraduate students
  • “name withheld” okay, but a lot of these would raise questions
Contributions to HQP training

• Appropriateness of the proposal for the training of HQP
  • Do not underestimate this, especially if you are new
  • Articulate a clear plan for mentorship – meetings, supervision, conferences

• Training in collaborative and interdisciplinary environment (if applicable)
  • Quality of environment matters
Committee deliberations

- Whole grant evaluated in 15 min
- 5 people read the grant
- First 2 reviewers are given most time in general
- The merit indicator sheet and evaluation forms are the guide
- All reviewers declare their ranking
- All 5 secret votes are tabulated immediately and median score for each merit indicator is the final score
- Budget gets very little time – only if costs are higher or lower than average, or if it is unrealistic, which shows lack of understanding
- Then a discussion if it should be nominated for an accelerator grant
- It works well
Successful grants

• Get others to read your grant and do not argue with their feedback
  • Pledge to say nothing (no “but it is in there right here in this paragraph!”)
  • If they had questions it means it is not clear. End of story. Figure out why and correct it.
  • The reviewers cannot get clarification, so the onus is on you to be clear.
    • Highest awardee last year at the U of M had several others read his grant, and he revised it based on feedback.

• Follow instructions