The Perspective of a Granting Application

Granting applications should be "action oriented". They should be:

- Provider centered – service attitude
- Future oriented – work you wish to do
- Persuasive- "sell" the proposed research/project to the reader
- Personal – conveys the enthusiasm of the applicant
- Team-oriented – feedback and peer review guided
- Concise – clear, simple, focused
- Accessible – cater to a broad audience

What makes a proposal competitive?

- Significance (important area of research, may be identified by granting agency)
- Original approach
- Significance (will it make a significant contribution to the area of inquiry)
- Knowledge and experience of the applicant and research team in the discipline
- Experience in essential methodology
- Succinct, logical and focused project plan
- Realistic amount of work
- Sufficient detail
- Cost effective

Top Ten Reasons for Application Not Being Funded (as identified by NIH)

1. Lack of original ideas
2. Diffuse, unfocused, or superficial Research Plan
3. Lack of knowledge of relevant published work
4. Lack of experience in essential methodology
5. Uncertainty concerning future directions
6. Questionable reasoning in experimental approach
7. Absence of acceptable scientific rationale
8. Unrealistically large amount of work
9. Lack of sufficient experimental detail
10. Uncritical approach[1]

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[1] Robert Porter PhD, "Coaching Researchers to Write Successful Grants", June 15, 2014

Before you begin writing your application, ask yourself these questions as a starting point:

- What are you passionate about as a researcher?
- What is the problem that you want to investigate and why is it important?
- How is the existing knowledge or practice inadequate?
- Why is your idea better?
- How is it new, unique different?
- What will it contribute and who will benefit from it?

Common application pitfalls and strategies to avoid them:

SUCCESS = GOOD IDEAS-PITFALLS

[2]Pitfall 1: Poor Fit - *Verify the match*

- Develop your funding search skills
- Study program goals and eligibility
- Make contact with someone at the funding agency before starting your proposal
    - Read funding announcements and funding requirements carefully; note questions
    - Research previous awards
    - Where possible, send a brief overview of the proposed project to the funding agency
    - Inquire about alternative funding sources

Pitfall 2: Poor organization - *Structure the proposal*

- ALWAYS follow the format provided by the funding agency! Where none is provided build your own case in distinct sections:
    i. Problem statement; or Significance of the Research
    ii. Purpose, Overall goal + study objectives (always cite the "fit" with agency or program objectives)
    iii. Research Design or Workplan (Activities + Timelines)
    iv. Applicant Qualifications and Capabilities
    v. Evaluation Plan: Expected Outcomes; Knowledge Translation
    vi. Budget (Summary + Justification including quotes etc.)

Pitfall 3: Weak argument - *Prove the Importance of your Project*

- State your purpose and case for need up front; build a compelling argument
    - Sell your idea, Set the stage, Lay out the problem (Who Cares?)
        - Get the reviewer interested at the outset
        - Identify the importance – stress the need

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[2] Robert Porter PhD, "Coaching Researchers to Write Successful Grants", June 15, 2014

- Summarize the state of the art
- Describe technical challenges to solving the problem and potential benefits
  - State the theme – Your solution
    - Describe the concept and establish credibility
    - Describe your project's fundamental purpose
  - Create a Vision ("So What?")
    - Who how your work will advance the field
    - Envision the world with the problem solved

*** This should be the opening 2-3 paragraph of the proposal's very first section (after the abstract) regardless of what it is called, INTRO, BACKGROUND etc***

Pitfall 4: Gyrating Jargon - *Assume an uninformed but intelligent reader*

- Use clear, accessible language
- Stick with direct statements and **active voice**
- Avoid insider jargon and acronyms

Pitfall 5: Murky Goals & Objectives – *Formulate Specific Measurable Objectives*

- Goal (hypothesis or research question): General statement of the project's overall purpose(s)
- Objective: a specific measurable outcome or milestone

Pitfall 6: Unclear Project Description and Workplan

- Illustrate: Project concept and the work plan
  - Visualize the overall project with a drawing
  - Specify major tasks and timelines; use Gantt charts, calendars or flow charts

Pitfall 7: Deviating from the funding agency guidelines – *Follow the application instructions exactly!*

- Common occurrences
  - Late submission
  - Application too long
  - Fonts, margins, spacing too small
  - Signatures, certifications missing
  - Budget justification missing
  - Insufficient number of copies[3]

early review of your application by Research Services will help to ensure these don't happen[4]

[5]**Pitfall 8: Ignoring review criteria** *(See Appendix A)*

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[3] Robert Porter PhD, "Coaching Researchers to Write Successful Grants", June 15, 2014

- Read evaluation standards carefully
- Touch all the bases – not just the ones you're comfortable with

Pitfall 9: Weak abstract - *Polish the abstract*

- Must be intriguing "First advertisement" of your proposal
- Should reflect entire scope of project
- Summarized project purpose and methods
- Must convey
    - What researcher intends to do
    - Why it's important
    - Expected outcomes
    - How work will be accomplished
- Has to be both concise and complete

THIS MAY BE THE ONLY NARRATIVE THAT SOME REVIEWERS READ!!!

Pitfall 10: Writing solo – *Pre-submission review is NECESSARY*

- Ask seasoned colleagues for comments and suggestions
- Consult local peer review committee, consulting scientists, methods centre
- Ensure that those reviewing your application are qualified to critique proposal content
- Welcome other perspectives and opinions
- Allow time for rewrites

Pitfall 11: Document errors – *Have your application proofread*

- Proofreaders read for form not content
- Must be someone who has no stake in the project
- Root out inconsistencies in format as well as typos, misspellings, grammar etc.

Pitfall 12: Insufficient editing – *Write, rewrite and rewrite*

- Must allow time to prepare, write, review, edit, rewrite

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[4] Robert Porter PhD, "Coaching Researchers to Write Successful Grants", June 15, 2014

Appendix A: Examples of Review Criteria

CIHR (Operating, Catalyst, Teams and Emerging Teams grants) http://www.cihr-irsc.gc.ca/e/4656.html

- **Research approach**
    - Clarity of the research question
    - Completeness of the literature review and relevance to study design/research plan
    - Clarity of rationale for the research approach and methodology
    - Appropriateness of the research design
    - Feasibility of the research approach (including recruitment of subjects, project timeline, preliminary data where appropriate)
    - Anticipation of difficulties that may be encountered in the research and plans for management
- **Originality of proposal**
    - Potential for the creation of new knowledge
    - Originality of the proposed research, in terms of the hypotheses/research questions addressed, novel technology/methodology and/or novel applications of current technology/methodology
- **Applicants**
    - Qualifications of the applicant(s) including training, experience and independence (relative to career stage)
    - Experience of the applicant(s) in the proposed area of research and with the proposed methodology
    - Expertise of the applicant(s) as demonstrated by scientific productivity over the past 5 years. Productivity should be considered in the context of the norms for the research area, applicant experience and total research funding of the applicant.
    - Ability to successfully and appropriately disseminate research findings, as demonstrated by knowledge translation activities.
    - Appropriateness of the terms of the applicants to carry out the proposed research, in terms of complementarity of expertise and synergistic potential.
- **Environment for the Research**
    - Availability and accessibility of personnel, facilities and infrastructure required to conduct the research.
    - Suitability of the environment to conduct the proposed research.
    - Suitability of the environment (milieu, project and mentors) for the training of personnel (if applicable)
- **Impact of the Research**
    - Research proposal addresses a significant need or gap in health research and/or the health care system.
    - Potential for a significant contribution to the improvement of people's health in Canada and the world and/or to the development of more effective health services and products.

- o Appropriateness and adequacy of the proposed plan for knowledge dissemination and exchange.
- 🞣 **Budget and Term Determinations**
    - o Cost effective (at discretion of reviewers)
    - o Adequate budget justification

*** Additional factors to be considered under each criterion may also be described in the funding opportunity details. Contact committee coordinator for further guidance on how to apply individual criteria***

NSERC (Discovery Grants) - http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reviewers-Examinateurs/IntroPRManual-IntroManuelEP_eng.asp

- 🞣 **Excellence of Researcher**
    - o Knowledge, expertise and experience
    - o Quality of contributions to and impact on the proposed and other areas of research in the NSE
    - o Importance of contributions
    - o Complementarity of expertise between members and synergy (where applicable)
- 🞣 **Merit of the proposal**
    - o Originality and innovation
    - o Significance and expected contributions to research
    - o Clarity and scope of objectives
    - o Clarity and appropriateness of methodology
    - o Feasibility
    - o Discussion of relevant issues
    - o Appropriateness/Justification of budget
    - o Relationship to other sources of funds
- 🞣 **Contributions to training and highly qualified personnel (HQP)**
    - o Quality and impact of past contributions
    - o Appropriateness of the proposal for the training of HQP
    - o Training in collaborative and interdisciplinary environment (if applicable)
- 🞣 **Cost of and Rationale for Cost of Research**
- 🞣 **Other**
    - o Realistic Timelines
    - o Special circumstances
    - o Quality of samples of contributions provided
    - o Environmental impact
    - o Ethical Concerns

NSHRF - http://www.nshrf.ca/sites/default/files/peer_review_guidelines_2014.pdf

Establishment Grant

- Academic excellence of the applicant(s) – The proposal must demonstrate:
  - o   knowledge, expertise and experience of applicant(s)
  - o   the applicant(s) relevant research experience including peer reviewed publications, presentations and previous research awards or grants
  - o   the applicant(s) past or potential contributions to, and impact on, the proposed area of research
  - o   the applicant(s) ability to have their findings used by other researchers and end-users (clinicians, decision makers, community)
  - o   complementary expertise among team members (if applicable) and how this creates synergy
  - o   the mentorship relationship and how it contributes to the academic merit of the proposal

- Merit of the Proposal – The proposal must demonstrate:
  - o   originality and innovation
  - o   significance and expected contributions to research
  - o   clarity and scope of objectives
  - o   clarity and appropriateness of methodology including limitations
  - o   the extent to which the scope of the project addresses a specific health research area and its related issues including the need for varied expertise within or across disciplines feasibility
  - o   a dissemination plan that is appropriate, targeted and adequately resourced

- Budget –The proposal must demonstrate:
  - o   appropriateness and justification of the budget
  - o   availability of other sources of funding (if applicable)
  - o   special needs related to the project (e.g., collaborative activities or infrastructure costs, such as user fees)

- Relevance to Nova Scotia - The proposal must demonstrate
  - o   Relevance to improving the health of Nova Scotians.
  - o   Relevance may be demonstrated by addressing any of the following:
    - ▪   how the proposed research addresses health issues of relevance to Nova Scotians
    - ▪   the potential economic impact of the research in Nova Scotia (if relevant)
    - ▪   the potential impact of the research on clinical practice in Nova Scotia (if relevant)
    - ▪   the potential impact of the research on health policy in Nova Scotia (if relevant)

Development/Innovative Grant

When completing evaluation of Development/Innovative Grants, remember the intent of this funding opportunity is to fund applications that will: target a subsequent funding opportunity and in the work plan indicate the steps that will be taken to develop the subsequent application. The required outcome of this grant is the submission of an application (to the competition identified) within 12 months of the one (1) year funding period of this grant.

We interpret the concepts of "development" and "innovative" to include research in its early stages (i.e., development or testing of research methodologies, including novel approaches to solving important health issues). This interpretation encompasses the concept of developing researchers early in their career as well as supporting those with established track records who may wish to branch into new areas of research, both of whom may require preliminary data to assist them with improving the potential for success in acquiring health research funding in a subsequent competition.

- Project description – The proposal must demonstrate:
    - clarity and scope of objectives, goals and target audience(s)
    - clarity and appropriateness of methodology including limitations
    - the potential contribution to the field of research
    - feasibility of the proposed work

- Work plan and plan to apply for funding – The proposal must demonstrate:
    - a clear and realistic plan to apply for the identified grant
    - the proposed research will strengthen a subsequent grant application
    - the timeline is reasonable and activities feasible
    - that the target funding agency/competition is appropriate

- Team composition - The proposal must demonstrate:
    - knowledge, expertise and experience of the applicant(s)
    - relevant research experience
    - how the expertise of the applicant or team members (if applicable) ultimately benefits the project
    - the required skills are available to complete the project

- Developmental or innovative nature of application - the proposal must demonstrate:
    - the extent to which the proposed research is developmental or innovative in nature
    - the importance of this work to the further development of the applicant(s) research program originality
- Merit of the proposal – The proposal must show:
    - Significance and expected contribution to understanding, interpreting, or creating knowledge

o The potential of the research team to succeed in developing a subsequent grant application

SSHRC – Insight Development Grants

http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/insight_development_grants-subventions_de_developpement_savoir-eng.aspx

The following criteria and scoring scheme are used to evaluate Insight Development Grant applications:

1. **Challenge— The aim and importance of the endeavor (50%):**

   o originality, significance and expected contribution to knowledge;
   o appropriateness of the literature review;
   o appropriateness of the theoretical approach or framework;
   o appropriateness of the methods/approach;
   o quality of training and mentoring to be provided to students, emerging scholars and other highly qualified personnel, and opportunities for them to contribute; and
   o potential influence and impact within and/or beyond the social sciences and humanities research community.

2. **Feasibility—The plan to achieve excellence (20%):**

   o probability of effective and timely attainment of the research objectives;
   o appropriateness of the requested budget and justification of proposed costs;
   o indications of financial and in-kind contributions from other sources, where appropriate;
   o quality of knowledge mobilization plans, including for effective knowledge dissemination, knowledge exchange and engagement within and/or beyond the research community where applicable; and
   o strategies and timelines for the design and conduct of the activity/activities proposed.

3. **Capability—The expertise to succeed (30%):**

   o quality, quantity and significance of past experience and published and/or creative outputs of the applicant and any team members relative to their roles in the project and their respective stages of career;
   o evidence of contributions such as commissioned reports, professional practice, public discourse, public policies, products and services, experience in collaboration, etc.;
   o evidence of contributions to the development of talent; and
   o potential to make future contributions.

Note: Adjudicators will only consider information regarding the **last six years** of research contributions. Any career interruptions indicated will be taken into consideration.

Appendix B: Grant Writing Resources

How do you write a successful CIHR application:
http://www.queensu.ca/ors/researchgrantsanddevelopment/workshops/archived/CIHRWorkshopLouiseWinn.pdf