The purpose of a research proposal

The purpose of a research proposal is to:

- convince a reviewer/funder to entrust $$$
- communication tool to present to others
- create a sound plan to follow
- apply for ethics approval

Research Proposal Sections

- Introduction
- Background
- Previous work / preliminary data
- Study justification
- Study significance
**Research Application Components**

- **Budget**
- **Budget justification**
- **CVs / resumés**
- **Ethics approval**

**Letters of support**
- **Letters of collaboration**

**Attachments**
- **Published papers**
- **Sample consent forms or data collection forms**

**Background**

- **Context for problem**
- **Statistics**
- **Literature review**
  - **Completeness**
  - **Relevance to research plan**
- **Should support study justification**

**Timeline**

What you will do and when

<table>
<thead>
<tr>
<th>Activity</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
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<tbody>
<tr>
<td>Review</td>
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<td>Publication</td>
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**KT Plan**

- **Conference presentation or poster**
- **Publishing**
- **Meetings / workshops / educational events**
- **Promotional video**
- **Website content**
- **Policy, guidelines, procedures**

**Letters of Support**

- **Make each different and personal**
- **Describe the problem the research project would address and its importance**
- **State how the research project applies to your program priorities**
- **Specifically state what support you will provide**
Budget
Matching research activities to $$$

Budget Components
Research Personnel
- Research Assistant
- Research Coordinator
- Statistician
- Clinician

Budget Components
Research Personnel
- Trainees
  - Undergraduate student / Co-op student
  - MSc, MPH, MA, PhD, PharmD student (etc.)
  - Clinical student

  FTE rate + benefits x # hours

Budget Components
Applicant Time
- rarely can applicant time be paid for
- usually, applicants are not paid salaries

Budget Components
Services
- Health records
- Microbiology lab
- Pharmacy
- Decision support
- Printer

Budget Components
Services
- Survey company
- Statistician
- Facility rental
- Honoraria
- Catering
Budget Components

Supplies / Equipment
- Office supplies (research related)
- Medical supplies (research related)
- Postage
- Digital recorder
- Laptop

Budget Components

Travel: Conference, other

http://www.grouptravelspecialist.com.au

Budget Preparation

A spreadsheet is helpful

<table>
<thead>
<tr>
<th>Item</th>
<th>Cash</th>
<th>Other Funding</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
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<td>Services</td>
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<td>Catering</td>
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<td>Web posting</td>
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<td>Total</td>
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Budget Justification

Explanation & Rationale
eg) Research Assistant

$55,353 ($55,800 salary at 0.8 FTE plus 24% benefits)

A research assistant is requested at .80 FTE for the one year duration of the funding. The assistant will be responsible for subject recruitment, data collection, and maintenance of the research studies database.

This individual will be supervised by the PI.

The scope of this position demands a trained individual with significant experience in the coordination of research. A Master’s degree is preferred.

Signatures

Principal Applicant(s)
Co-applicants
Institutional
Financial officer

Signatures: FH Research Policy

applicant
applicant’s administrative supervisor
VP Medicine or designate
Meaning of Signatures

FH Research Policy
- the applicant is eligible to apply
- the applicant has sufficient space and resources to do the research
- if an award is made, FH is able and willing to administer the funds on behalf of the granting agency in accordance with the guidelines of the granting agency
- if an award is made, the awardee agrees to abide by the award regulations of the granting agency

Meaning of Signatures

FH Research Policy
- if an award is made, FH will not release funding to the awardee until all award conditions of the granting agency and the FH have been met, including regulatory requirements
- if an award is made, the awardee will use the award only for the purposes for which the award was made
- if an award is made, the awardee will notify FH Research and the granting agency if there is any change in their status that affects the award

Meaning of Applicant Signatures

CIHR
Agrees to assume responsibility for the legal and ethical conduct of the research, for the integrity of the research activities and reported data, and for communicating the results of the research recognizing the contributions of other persons working on the project

Meaning of Institutional Signature

CIHR
He or she is authorized to bind the institution
The institution agrees with the content of the application and will provide the committed resources

Meaning of Institutional Signature

CIHR
The institution will provide grant-holders with the necessary time to do their research
The institution agrees to comply with CIHR's data protection requirements and has adequate safeguards in place to protect sensitive information

Meaning of Institutional Signature

CIHR
The institution agrees to the public release of a summary of the grant and to the publication of the organization's name as a supporter of the initiative
A word about format

Give Yourself Time
Don’t wait for funding announcement to develop research plan and team
Short notice on many RFAs
Anticipate 3x the expected time

Workshop Activity - Letter
Letter of Support
Internal person
External person

Workshop Activity - Budget

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<th></th>
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<th>salary</th>
<th>benefits</th>
<th>TOTAL</th>
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<tr>
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Red numbers = critical path to obtain signatures (a draft of the proposal is sufficient)
Asterisk = time to complete task very often underestimated
Cannot succeed without great content

Readability also important

Leonardo da Vinci

Audience

Keep the audience in mind
what is their level of expertise?
what is their area of expertise?

Audience

Keep the audience in mind
busy + tired people
make it easy for them

4 Cs

Clear
Concise
Correct
Compelling

Clarity

Clarity: First Page

Short introductory paragraph
problem, statistics
Goal
Hypothesis, Research Question
Objectives / Aims
Significance
Clarity: Proposal

Headings
Spell out abbreviations 1st time
Avoid long sentences
Get to the point
Transitions between paragraphs
e.g. however, moreover, in addition to, conversely...

Concise

Avoid a brain dump: ‘need to know’ vs ‘nice to know’
Organize with headings and subheadings
Use graphics

Figures


Figures

A → B → C → D

Figures

http://www.nysdra.org

Figures
Correct
Research plan
Statistical plan
Spelling and grammar
Read guidelines in detail

Compelling
Highlight:
- Significance
- Feasibility
- Innovation
- Qualifications

Compelling
Read the review criteria
Ensure all review criteria are addressed
Make review criteria items easy to spot

Compelling
State how your research addresses priorities
- funder
- your institution
- government
- advisory groups
- health associations

Compelling
Abstract
First page
Be careful with clever titles
Put the most important sentences at the beginning and the end of paragraphs

Style
Use serif font for proposal text
Use sans-serif for figures + tables
Font size 12 (unless figure/table)
Leave 1” margins
**Style**

- Use only left justification
- Use max 2 highlighting styles together
- Be consistent with formatting

**Style**

- Leave white space
- Avoid pages of wall-to-wall text
- Don’t make lists in sentences
- Use bullets
- Don’t use ‘I’
- Use a formal tone

**Style**

- Try to get your hands on examples

**Writing & Editing**

- Iterative process
- First draft: don’t self-edit
- After 1st or 2nd draft, get content feedback
- Later drafts, clean up spelling, grammar, flow
- Employ non-expert readers

**Writing & Editing**

- Write the abstract last
- Write the background second last
- Do an outline

**It’s a learning curve**

- Start small
- Don’t get discouraged
Why Proposals Get Rejected

Problem (58 percent)

The problem is not of sufficient importance or is unlikely to produce any new or useful information (33.1)
The proposed research is based on a hypothesis that rests on insufficient evidence, is doubtful, or is unsound (8.9)
The problem is more complex than the investigator appears to realize (8.1)
The problem has only local significance, or is one of production or control, or otherwise fails to fall sufficiently clearly within the general field of health-related research (4.8)

Approach (73 percent)

The proposed tests, or methods, or scientific procedures are unsuited to the stated objective (34.7)
The description of the approach is too nebulous, diffuse, and lacking in clarity to permit adequate evaluation (28.8)
The overall design of the study has not been carefully thought out (14.7)
The statistical aspects of the approach have not been given sufficient consideration (8.1)

Investigator (55 percent)

The investigator does not have adequate experience or training for this research (32.6)
The investigator appears to be unfamiliar with recent pertinent literature or methods (13.7)
The investigator's previously published work in this field does not inspire confidence (12.6)
### Why Proposals Get Rejected

**Investigator (55 percent)**

- The investigator proposes to rely too heavily on insufficiently experienced associates (5.0)
- The investigator is spreading himself too thin; he will be more productive if he concentrates on fewer projects (3.8)
- The investigator needs more liaison with colleagues in this field or in collateral fields (1.7)

**Other (16 percent)**

- The requirements for equipment or personnel are unrealistic (10.1)
- It appears that other responsibilities would prevent devotion of sufficient time and attention to this research (3.0)
- The institutional setting is unfavorable (2.3)
- Research grants to the investigator, now in force, are adequate in scope and amount to cover the proposed research (1.5)

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**Never Fear**

The Health Research Intelligence Unit is on the case!

[http://www.birthdaydressup.com](http://www.birthdaydressup.com)