Visiting Scholar Program

Writing techniques for grant proposals: An "easy read" for your reviewers
Territorial Acknowledgement

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Writing techniques for grant proposals: An "easy read" for your reviewers

This session is a follow-up to the expert panel discussion: How to write a winning grant proposal

- Video
- List of University of Alberta resources and supports
Writing techniques for grant proposals: An "easy read" for your reviewers

Technique #1: Give your reviewers a map
Technique #2: Give your reviewers a break
Technique #3: Give your reviewers reasons to care
Writing techniques for grant proposals: An "easy read" for your reviewers

Technique #1: Give your reviewers a map
- Visuals
- Informative headings
- Topic sentences
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Technique #1a: Give your reviewers a map
- Visuals
Muscle

glucose → lactate

glycogen

Liver

glucose (gluconeogenesis) → lactate

glycogen

Blood

Source: [Wikimedia commons](https://commons.wikimedia.org/wiki/File:Blood_glucose.png)
Inclusion Criteria:
- Adults aged ≥18 years and ≤65 years (18 and 65 are included);
- With informed consent;
- Clear medical history of traumatic brain injury;
- Within 12 h after injury;
- Acute supratentorial epidural hematoma and signs of brain stem compression on CT scan, representing the leading cause of operation, despite any other minor intracranial injuries associated (e.g., subarachnoid hemorrhage and contusion);
- The admitting neurosurgeon considers that the epidural hematoma needs to be evacuated with a craniotomy or decompressive craniectomy.
- Unilateral mydriasis or bilateral mydriasis before the operation;

Exclusion Criteria:
- Previous intracranial surgery prior to trauma;
- Patients with a Glasgow Coma Score of 3, with bilateral fixed and dilated pupils, bleeding diathesis or defective coagulation, or other injuries that were deemed to be unsurvivable;
- Patients who had an injury of the oculomotor nerve;
- Patients are considered to be operated mainly due to the following pathological changes on CT: subdural hematoma, intracerebral hemorrhage, large size infarction, etc., but not because of epidural hematoma;
- Severe pre-existing disability or severe co-morbidity which would lead to a poor outcome even if the patient is supposed to a good recovery from the TBI;
- Pregnant female.

Follow up one, three, six months post-injury.

Remove DC finally during the operation due to deterioration

Fig. 1 Study flow chart

Source: Yang et al., Trials
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Technique #1b: Give your reviewers a map
- Informative headings and sub-headings
Main Heading 1
Sub-heading 1
Text

*Sub-sub-heading 1.1*
Text

*Sub-sub-heading 1.2*
Text

Sub-heading 2
Text

*Sub-sub-heading 2.1*
Text

*Sub-sub-heading 2.2*
Text
Background

Literature review

Text

*Studies of children aged 1 to 5 years*

Text

*Studies of children aged 6 to 16 years*

Text

Comparing data on different age groups

Text

*Data on disease prevalence*

Text

*Data on disease progress*

Text
Informative headings: Some good examples

- The first problem: Vulnerable populations in an under-served setting
- Why is *C. elegans* an excellent model system to study mitochondrial diseases?
- An experienced multidisciplinary project team
- Aim 1: Identify symptoms and practices with the greatest impact on care and patient experience
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Technique #1c: Give your reviewers a map
- Topic sentences
Recent advances in genetic manipulation have extended the potential for understanding structure-function relationships for proteins. Site-directed mutagenesis offers clues about how small alterations change function. A single amino acid change can be correlated with measurable changes in functional properties. The eventual goal of this work is to design and synthesize proteins that perform new and desirable functions. These designer proteins are often desirable for industrial or pharmaceutical applications.
Enzymes that are classed as serine proteinases have an unusually reactive serine residue in the enzyme active site, which is key to catalysis. Essential histidine and aspartic acid residues work with the serine as the “catalytic triad.” Two general families of serine proteinases are known: the chymotrypsin-like enzymes and the subtilisins. Members of both these families use the same mechanism of catalysis, but they differ completely in their 3D structure except in the arrangement of their catalytic triad. These two families are believed to have developed through convergent evolution.
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Technique #2: Give your reviewers a break
- Simple formatting
- Shorter and simpler sentences
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Technique #2a: Give your reviewers a break
- Simple formatting
Revised Grants Evaluation Criteria - Interpretation Guidelines

The revised grants evaluation criteria apply to all operating, catalyst, team and emerging team grant applications. The factors listed under each criterion may be supplemented by additional factors, and the relative importance of the criteria varied, in order to align the review process with the funding opportunity objectives.

Guidelines for the interpretation of the individual criteria:

Criterion #1: Research Approach. This criterion concerns the description of the research plan and can encompass whether the writing style facilitates understanding of the plan (clarity of the research question) and whether the proposed research can be successfully concluded as described (feasibility of the research approach and anticipation of difficulties). Clarity of rationale for the research approach and methodology refers to whether the reasoning behind the overall strategy is clearly presented.

Criterion #2: Originality of the Proposal. For this criterion, original research is defined as research that will yield new knowledge. Typically, this refers to research that has not been carried out previously. However, there are times where replicative studies will yield new knowledge that may be crucial to progress within a field, for example by conclusively verifying or refuting a central or novel hypothesis.
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Technique #2b: Give your reviewers a break
- Shorter and simpler sentences
Example: Too long, too complex

The specific objectives of this funding opportunity are to understand how to implement evidence-informed interventions in different urban contexts and populations so that they result in positive and equitable health outcomes in real-world settings, including understanding how specific interventions can be adapted to different regions, ages, cultures, genders, or conditions, and how the interventions can be scaled given unique social, political, economic, cultural, and geographical contexts.
There is an agreed upon importance to enhance research and partnerships by: harnessing big data from cohort studies, genomics and other "-omics" such as proteomics, metabolomics, microbiomics, epigenomics; clinical, social and other records; new drugs and other therapies; artificial intelligence; and address unmet needs (e.g. research with Indigenous communities, research on the social determinants of health and health inequalities, positive health and well-being, policy-driven research, patient-oriented research, precision medicine, parental health, environmental health, mix-method research, and qualitative research).
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Technique #3: Give your reviewers reasons to care

- In your summary page
- On your proposal’s first page
- In your hook
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Technique #3a: Give your reviewers reasons to care

- In your summary page
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Technique #3b: Give your reviewers reasons to care

- On your proposal’s first page
Elements of a strong first page

• a short, informative, striking opening sentence that gives immediate context
• the overall goal of the research
• why the research is important and relevant
• how the research fits with your previous work
• the hypotheses or research questions, and how they will be approached (e.g. theoretical framework)
• a brief outline of specific aims and methods
• a summary of expected outcomes and potential impact, to remind reviewers of the bigger picture
• your map visual
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Technique #3c: Give your reviewers reasons to care

- In your hook: a short, informative, striking opening sentence that gives immediate context
Examples of hooks

• Protein folding is a pivotal biological process in both health and disease.
• Glaucoma is a common as heart disease.
• Autism is the most severe form of a spectrum of neurodevelopmental disorders.
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RSO resources on writing for reviewers
How to write clearly for the reviewer
How to write a striking summary page
Writing a successful research summary for CIHR grant applications
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Questions
or comments?
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