“How to apply Smarter and not Harder”

- GRANTMANSHP on applying successfully for research grants -
The art of "grantsmanship" will not turn mediocre science into a fundable grant proposal. But poor "grantsmanship" will, and often does, turn very good science into an unfundable grant proposal. Good writing will not save bad ideas, but bad writing can kill good ones.
This workshop will help you in:

- What grants are suitable for students?
- When best to encourage students to write grants?
- What common challenges face students writing grants?
- Create every element of a Strong grant applications
- Use a variety of Funding Research Tools to find funders most likely to support your project
- Review Proposals the way funders do, so you will understand what works and what doesn’t, and why!
- Collaborate with others to plan an effective Research Program
What grants are suitable for students?

When best to encourage students to write grants?

What common challenges face students writing grants?
HELP!........................WHERE DO I START?

◆ For any funding scheme you will need to ‘fit’ your proposal with the **Mission and Objectives of the funding agency**

◆ You must keep these aims in mind throughout the grant writing process.
HOW SHOULD I PREPARE?

• Read colleagues’ successful grant applications

• Before you write your application and while you are writing it, put yourself in the position of the reviewers....
GENERIC
GRANT WRITING TIPS.....

• Presentation - avoid wads of text as it puts the reader off.

• Communicate a sense of commitment and enthusiasm to your assessors.

• No-one gets it right the first time - write and rewrite!!

• Read the application aloud to yourself.

- This way long worded text and unclear explanations will quickly become evident
Preparation - Timelines (ideal!)

• **1 year before deadline:**
  – Identify possible interesting projects – discuss your ideas with colleagues
  – Complete and write up as much current work as possible
    • publications for applications must be ‘published’, ‘in press’ or ‘submitted’ – ‘in preparation’ will not count

• **6 months before deadline:**
  – Write an initial draft of the main proposal
  – Obtain comments from colleagues

• **6 weeks before deadline:**
  – Finalise budget (quotes, etc) and overall application

• Dedicate yourself to making a truly good job of it
Grant Application Guidelines

• Follow the Guidelines !!!
  – **Page limit**: stay within the page limit
     • if there is a **required font**: use it
  – **Keep them with you when writing, keep referring to them**
  – Do not think that the over-worked and tired reviewer will be so impressed by your science that s/he will ignore your display of rebellion

  • s/he will be concerned to be fair to applicants who stick with the rules
  • s/he will think you’re incapable of managing a grant

  → a sloppy application = an applicant who does sloppy science
Grantsmanship = Salesmanship

• To have a successful application, you have to sell:
  – your self
  – your project

• You have to convince the Funding Body/ Industry that:
  – your project must be funded
  – you are the best person to undertake it
  – it must be funded now

• Know your Funder/ Industry
  – know how/who your application will be evaluated
You and Your Team

• **Have just the 1 author**
  – get others to write parts requiring their knowledge or expertise, but **re-write to ensure consistency**
  – avoid multiple styles in formatting and expression

• Aim to give the impression that the application has been put together in a focused way by applicants who know each other well and collaborate → with one taking leadership

• Concentrate on the **most significant results of your research**, describe what makes your contributions unique

• Make your **claims specific** – and justify them
Selling Your Self

• Be positive. Be enthusiastic. Be confident.

• Use impersonal statements of fact.

• Don’t bull…. Don’t be arrogant.

• Don’t whinge!
Selling your Project – Clarity

- **Write a reviewer-friendly application**
  - they’ll be reading 100’s in their evenings or weekends

- **Do not assume that your reviewer is an expert in your field of expertise**
  - indeed: assume that your reviewer is **not**
  - do not use acronyms without definitions
  - avoid technical jargon and complexity

- **Write the abstract/summary in clear lay terms**
  - run it past colleagues who are not specialists in your field
- Make sure that **important points are made** – and stand out – in the **first sentences of paragraphs**
  - use boldings, sub-headings

- Do whatever you can to make your application easy – and **a pleasure to read**
  - make it look good
  - use consistent styles

- **When you have completed the application:**
  - revisit the aims and objectives
  - rewrite the abstract / summary
Now – Does your application still Fit the Funder?

- Funding bodies give you money not because you need it, but because you can help them carry out their mission
  - Small schemes/foundations may not list selection criteria → if not, match to scheme & organisation purpose & objectives
  - Where they exist – address the Selection Criteria
  - Give the criteria their due weight
    - eg. if “Significance and Innovation” is worth 30% for an application with a 10p limit, don’t give this criterion 1 para
  - Answer the questions! – eg. from ARC Discovery rules:
    - Does the research address an important problem?
    - How will the anticipated outcomes advance the knowledge base of the discipline?
    - Are the aims and concepts novel and innovative?
    - Will new methods or technologies be developed?
Selling Your Project – in Summary

✓ Be simple. Be ambitious but: Be realistic.

✓ Be positive. Be enthusiastic.

✓ You have to convince your Funder that your project is absolutely worth funding, and now.

✓ Do not be repetitive, verbose, or negative.

✓ Do not be over-ambitious = naïve.
Finally - Peer Review!

- The most important feedback you can get on an application will be that of your peers.
- So: start early, give yourself time to obtain it!

- Choose someone who is not an expert in your field, and ask them to focus on:
  - the organisation and clarity of your application
  - whether or not your application adequately sets out what you will actually do with the grant funds
  - the timeframe for the research
- And: choose someone who is an expert in your field, and ask them to focus on the science and methodology.

- As a general rule: the ECRs who produce high quality applications and who succeed in obtaining grants are those who have been encouraged and supported by their colleagues/Mentors.
Common Errors to Avoid

For **new applicants**:

- The proposal is unrealistically ambitious. There are no clearly defined priorities and the timetable is unrealistic, with no sense of what can realistically be accomplished during the project.

- The literature and background reviews are uncritical.

- There are no results of pilot studies or other preliminary data.

- The budget is unrealistic or inadequately justified.
Common Errors to Avoid

For **established** applicants:

- The application is fragmented and disjointed, with different parts written by junior colleagues and cobbled together.

- The applicant relies on their track record to get the grant, and fails to go into sufficient detail.

- The proposal is **too cautious and doesn’t venture into new and unexplored territory** - more of the same.
Track Record

What you can to enhance your track record

✓ Access smaller grants (eg. JCU Grants) for pilot data
✓ **Publish** in the realistically best possible formats available, and on a sustained basis
  ✓ Use impact factors...standing in the field...open access,
✓ **Present** at relevant conferences
✓ Join and become active in relevant **academic societies**
✓ **Collaborate with industry**, undertake some contract research
  • obtain evidence of the impact and benefit of your work
✓ Become involved in **collaborations** - local, national, global
✓ It’s essential to have research run on the board with intended partner investigators
✓ Become a grant reviewer
✓ Get an insight on what it is like
✓ Consequently change your approach to grant-writing
✓ A **mentor is essential** - get advice from someone who knows your particular circumstances
PUBLISH, PUBLISH AND PUBLISH!!!
The first page of ANY research proposal is the most critical → make or break

Need to:
- Identify the problem to address
- Highlight gap in knowledge
- State your hypothesis
- Say how you may have discovered something exciting
- Describe the aims that you have to address this hypothesis
  - Broad aim and multiple specific aims
- Broadly state the main outcomes and significance
PROPOSED RESEARCH

1. AIMS
Gastrointestinal parasites are an enormous global health problem, particularly in developing regions of the world, yet many of these remain neglected tropical diseases. Infected humans suffer from a range of conditions including impaired nutrition and cognitive development, intestinal obstruction, anaemia, diarrhoea and occasionally death. Of note, diarrhoea causes 17% of deaths of children under 5 years old (Morris et al., 2011) – more than double the mortality rate due to malaria, four times that of measles and eight times that of HIV/AIDS. Diarrhoea inflicted by parasites is caused by the inflammatory response against the infectious agent, even though the nature of the immune response to intra-cellular (protozoa) or multi-cellular (helminth) parasites differs greatly. One explanation for why such diverse infections elicit similar intestinal immunopathology is that there is a common immunological mechanism that regulates immunity and inflammation in the intestine. In order to develop safe and effective new therapeutics or vaccines against parasitic disease, more needs to be known about how the immune system controls these parasites and the potentially damaging inflammation that accompanies infection.

Our hypothesis is that the P2X7R/NLRP3 axis is a common pathway that controls inflammation associated with diverse gastrointestinal parasites. Accordingly, we believe that following infection-induced damage to tissues, adenosine triphosphate (ATP) and other damage-associated molecular patterns (DAMPs) are released, which are sensed by purinergic receptors on immune cells, provoking inflammatory cytokine expression, and the processing and release of these cytokines via inflammasomes. In new preliminary data, we have identified a previously unrecognised role for a purinergic receptor (P2X7R) and the NOD-like receptor, pyrin domain-containing 3 (NLRP3) inflammasome in regulation of immunity and intestinal inflammation following infection with a gastrointestinal parasite. Our aim is to elucidate the molecular and cellular mechanisms that regulate inflammasome-dependent immune responses to parasitic infection of the intestine, by using the model parasite, *Trichuris muris* to:

AIM 1: Characterise the molecular mechanism(s) by which *Trichuris* infection, and *Trichuris*-secreted antigens activate inflammasomes.
AIM 2: Define the *in vivo* requirement for NLRP3- and NLRP1-dependent inflammasomes in regulating immune responses and intestinal inflammation following parasitic infection.
AIM 3: Assess the role for ATP as a DAMP that elicits inflammasome-dependent intestinal immune responses to parasitic infection via purinergic receptor (P2X7R) signalling.
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Real Future Impact
External Commitment
Distinctive Angle
Scaling Toward Critical Mass

- **Real future impact**: What will be the tangible benefit for Queensland, and how long will it take to happen?
- **External commitment**: What is the involvement of, and commitment from, your external collaborative partners and end-users?
- **Distinctive angle**: What is in it for Queensland, and why is Queensland the place to conduct the research?
- **Scaling towards critical mass**: How, and with whom, will you be collaborating on your research, locally (i.e. state-wide) as well as nationally or internationally, to achieve quality and significant capability in Queensland?
“Publish or Perish” has now evolved into “Partner or Perish”

30% Success rate anticipated for Advance Queensland funding

This round received 138 eligible Research Applications and 25 PhD applications

Key Requirement – 1 industry/End user organization

Tips for application –

- Sell your proposal in easy language, covering what the problem it addresses and who will it eventually benefit
- Be aware of technical language
- Showcase the bigger picture rather than detailed scientific research
- Showcase your collaborative links in your application. Cross-disciplinary approach recommended for e.g. Using a physics approach to solve a biological problem
- Highlight through the application, how this research is relevant to QLD (Regional tangible benefits)
Key factors for success

→ Be good at what you do

→ Network with industry that uses what you do

→ Gain trust through delivery of research that meets industry needs

→ Look after good relationships

→ Be in the right place at the right time
Funding Sources:

- American Australian Association
- Arthritis Australia
- Allergy and Immunology Foundation of Australasia
- AusAid
- Australian Academy of Science
- Australian Corel Reef Society
- Australian Institute of Nuclear Science and Engineering
- Bayer Environmental Sciences
- Bill & Melinda Gates Foundation
- Boehringer Ingelheim Fonds
- Cairns Regional Council
- Department of Agriculture
- Far North Queensland Hospital Foundation
- Great Barrier Reef Marine Park Authority
- Meat & Livestock Australia
- World Wide Fund for Nature
Hi Andreas,

Your opportunities this week include Indigenous health scholarship from Australian Rotary Health, AU.

**William Cullerne Bown** - Founder - Phone +44 20 7216 6500

You can also [view this email in your browser](mailto:example@example.com).

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**Funding Opportunities**

**Indigenous health scholarship**

Australian Rotary Health, AU

This enables students of Aboriginal or Torres Strait Islander origin to undertake a course in a wide range of health-related professions. The scholarship is worth AU$5,000 per year.

**Maximum award:** Not known

**Closing date:** 19 Feb 16 (recurring)
Researcher residency

Brocher Foundation, CH

This enables researchers to stay at the centre to start or complete a research project on ethical, legal and social implications of recent medical research and new medical technologies. Successful applicants are offered a workplace and an accommodation for one to four months.

Maximum award: Not known
Closing date: 14 Feb 16 (recurring)

Australia awards fellowships

Australian Agency for International Development (AusAID), AU

These provide Australian organisations the opportunity to deepen and broaden their links with leaders and professionals in developing countries by providing opportunities for mid-career fellows for short-term study and professional development activities in Australia. Fellowships are worth up to AU$25,000 per fellow. Applicants can request additional funding from AU$10,000 to AU$20,000 for follow-up activities outside Australia.

Maximum award: Not known
Closing date: 10 Mar 16 (recurring)
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“The difference between success and failure often results, not just from the quality of the science, but from the quality of the grant application”.

GRANT WRITING SKILLS
IF YOU AREN’T SUCCESSFUL, DON’T GIVE UP!!
IF YOU AREN’T SUCCESSFUL…..

✓ Rejection isn’t the end of the world – don’t take it personally (remember this in the rebuttal letter!)
✓ Learn from the experience – why was it unsuccessful? (more data?-different team?)
✓ Be persistent and resilient! Apply again next year
✓ Try different Funding Bodies!!
The Art of Grantsmanship

By Jacob Kraicer

Writing a successful grant application is an art. Although the science is primarily being evaluated, presentation and respect for the requirements of the funding agency are key aspects that can make or break an application. In this article, Jack Kraicer, former Director of Research Grants at HFSP provides guidelines on preparing grant applications from the moment of conception to the submitting the final proposal.

6. ACKNOWLEDGEMENTS

"Stealing from one source is plagiarism, while stealing from many is research"

- Jacob Kraicer: The Art of Grantsmanship
  - http://www.hfsp.org/how/ArtOfGrants.htm
- The Chronicle of Higher Education – search on grant writing
  - http://chronicle.com/