

Academic grant writing: Enabling factors and challenges

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Start here! Beware



There is nothing as risky as writing a grant that does not fit the funding agency's mission and research priorities; and does not support or augment your organisation's areas of research strength

First think back and then forward



- Have you researched the funding agency's mission, research priorities, funding guidelines, and rules?
- How does your research fit into the funding agency and your own organisation's research priorities? Does it support areas of strength (sustainability) or progress (augmenting), or improve areas of weak performance (lifting)
- If it fits the funding agency's research priorities, do you understand the funding scheme and associated inclusion and exclusion criteria?
- Timeline: do you have sufficient time put a team together, to write the application, to benefit from internal (compliance) as well as peer review (quality).

First think back and then forward

Ensure you understand the significance of the grant scheme you want to apply for. Have different prestige

- **Category 1: Australian Competitive Grants**
- **Category 2: Other Public Sector Research Income**
- **Category 3: Industry and Other Research Income**
- **Category 4: Cooperative Research Centre (CRC) Research Income**

Before moving forward, map the funding scheme



- Need vs want: why do you require funding?

Fellowships	Projects	Programs
<p>Need=salary:</p> <ul style="list-style-type: none">To secure employment especially for ECR/postdoc/MCR for whom getting sustained employment may be a challengeProvide salary for up to 5 years +research supportThe fellowship must also have an innovative research project addressing a specific question	<p>Want= track-record and knowledge generation</p> <ul style="list-style-type: none">Address important gaps in knowledge through multidisciplinary collaborationSupport national and international collaboration to enhance the scale and focus of knowledge generationPromote national and international partnerships between researchers and business, industry or community organisations	<p>Want= track record and capacity building</p> <ul style="list-style-type: none">Innovative, high quality, and transformational collaborative research between researchers, practitioners, and policy makersEffective translation of research into policy, practice and guidelinesFoster and build capacity building

Before moving forward: why do you require funding?

- **Securing employment: Non tenure track positions (teaching or research or both):** contract-based, renewable based on performance; can be upgraded to tenured if you are a star performer. Job insecurity, and pressure to secure ongoing funding (e.g. [non tenure track researchers are supported directly by grants: e.g. Fellowships](#))
- **Career progression: Tenure track academic positions:** Teaching, Research, and Service (the weighting of the three depends on the institution): e.g. 60:30:10 vs 20:70:10 etc. Annual evaluation of performance is the key to sustain ongoing appointment. Job security, but pressure (**Publish or Perish**)

Do not move into the unknown unprepared

- I. How competitive would your application be? How strong is your research environment? How does your previous work inform the grant?

- II. If fellowship, do you have a mentor? What is her/his track research record and national and international standing in your proposed area of research? Have you contacted them to sound out their interest and support?

- III. If project/program:
 - ✓ Can you put together a competitive team? Experience in managing teams?
 - ✓ Have you identified suitable partners? Have discussed your ideas with them and have their buy in?
 - ✓ Do you have you have a history of working together?

- IV. Have you researched the funding agencies success rate, previous recipients' profiles etc. (who you may ask to comment o your draft?)

Now you know what you are up against: you are ready

- **Title:** Do you have a catchy title (not too wordy)? Does it encapsulate what your research is all about?
- **Background:**
 - ✓ Can you articulate what we already know in the proposed field of research and outline what the gaps are?
 - ✓ You cannot solve the world issues in one project: Which of the identified gaps would your project address and why (Rationale)?
 - ✓ Do you have clearly stated objectives and hypotheses to be tested?
- **Methods:** Is the proposed methodology clear and feasible
 - PICO/PECO/PICOT/PICOS framework
 - P – Patient, problem or population; I/E – Intervention/Exposure/Event/ Investigated condition, C – Comparison, control or omparator; O – Outcome(s); T-timeline; S= study design)

Pilot Studies and Feasibility:

- A. **Co-creation/co-design:** research developed in partnership with targeted communities? their level of input or the consultation process? training provided to maximise their participation? Any theoretical foundation to support adopted approach and why the choice?
- B. **Reach:** Can you actually recruit participants successfully? community structures put in place to facilitate recruitment? types of community mobilisation strategies trialled and their success? E.g. Recruitment approach? Consent or participation rate? Enrolment rate? Coverage rate? Response and attrition rate?
- C. **Study tools or instruments:** trialled for understanding, cultural appropriateness, administration time?
- D. **Provisional estimates:** Any project impact or prevalence estimate etc?
- E. **Sample size:** D is critical to justify sample size calculation and power (rather than relying on data from the literature)
- F. **Budget:** B, C, D, and E critical for budget estimates

Now you know what you are up against: you are ready



- **The so what? Benefits and Significance:** What difference would it make to address the identified gap? Any economic, commercial, environmental, social and/or cultural benefits?
- **Expertise and Productivity (1 page)**
- **Summary of the team's track record (2 pages for each CI):**
 - Career highlight/Summary
 - Top 5 publications in the past 5 years (and why the choice)
 - Overall track record in the past 5 years
 - Metrics of research support and outputs
 - Contribution to field of research
 - Supervision and mentoring
 - Research translation (policy, practice and guidelines)
 - Research leadership
 - International standing
 - Professional and community engagement
 - Service to the community

Now you know the funding scheme: have you adequately addressed assessment criteria?

NHMRC Funding scheme	ARC Funding scheme
Medical Research Future Funds (various)	Key dates for Discovery Indigenous 2023
Partnership Projects	Key dates for Australian Laureate Fellowships 2022
Clinical Trials and Cohort Studies Grants	Key dates for Discovery Early Career Researcher Award 2023
Development Grants	Key dates for Future Fellowships 2022
Postgraduate Scholarships	Key dates for Linkage Projects 2021
GACD: A Life Course Approach to Common NCD Risk Factor Prevention and Reduction	Key dates for Industrial Transformation Training Centres 2022
Ideas Grants	Key dates for Industrial Transformation Research Hubs 2022
NHMRC-CIHR Healthy Cities Implementation Science Team Grant Scheme 2021	Key dates for ARC Centres of Excellence 2023
Synergy Grants	Key dates for Discovery Projects 2023
NHMRC e-ASIA 2022 Joint Research Program	Key dates for Linkage Infrastructure, Equipment and Facilities 2023
2021 NHMRC-European Union Collaborative Research Grants	Key dates for Linkage Projects 2022
Investigator Grants	Key dates for Discovery Early Career Researcher Award 2024
Centre for Research Excellence	Key dates for Future Fellowships 2023
	Key dates for Australian Laureate Fellowships 2023
	Key dates for Discovery Indigenous 2024
	Key dates for Industrial Transformation Training Centres & Research Hubs 2023
	Key dates for ARC College of Experts Nominations for 2023

Assessment criteria: example of ARC Fellowships



Scheme	Levels	Investigator/capacity	Project quality	Benefits	Capacity building/Feasibility/Alignment
Australian Laureate Fellowships (project funding + salary (on-cost) support)	Level 1: Professor Level: 5 years Salary: \$172,208 per year (+30% oncost) <i>Project funding:</i> up to \$300,000 per year <i>Research personnel:</i> \$105,732 per year (+30% on cost)/year/personnel <i>Scholarship:</i> \$28,612/ year/ student	40%	25%	10%	25%
Future Fellowships	Three salary levels: 4 years <i>Level A & B:</i> \$163,598 (+30%) <i>Level C:</i> \$198,042 (+30%) <i>Level D or E:</i> \$232,481 (+30%) up to \$60,000/ year for project funding	50%	25%	15%	10%
Discovery Early Career Researcher Award (DECRA)	1 level (Entry level) \$108,106 (+ 30%) up to \$50,000 per year	50%	25%	15%	10%

Assessment criteria: example of NHMRC IGs



Scheme	Levels	Track record, relative to opportunity (70%)	Knowledge
Investigator grant	<p>2 categories: Salary (+ Research support package) up to five years</p> <p>Emerging Leadership Level 1: \$81,030 (\$50,000)/year</p> <p>Emerging Leadership Level 2: \$115,278 (\$200,000)/year</p> <p>Leadership: Three levels-5 years</p> <p>Level 1: \$151,358 (\$300,000-400,000)/year</p> <p>Level 2: \$176,434 (\$400,000-500,000)/year</p> <p>Level 3: \$187,422 (500,000-600,000)/year</p>	<p>Publications (35%)</p> <p>Research impact (20%)</p> <p>Leadership (15%).</p>	<p>30%</p>

What to showcase in your fellowship application?

Assessment Criteria 1: Investigator/capacity

- **Research Opportunity and Performance Evidence** : (appropriate to the discipline/s)
 - Research outputs: Publications & external research income (quality and quantity, Journal ranking and IF, income by grant cat etc.)
 - Must provide 10 best publications from the past 10 years + explanations for each citation publication entry
 - Research impact and translation
- **Research leadership:**
 - Research mentoring: attracting PhD students and Postdocs
 - Research policy and professional leadership
 - Institutional leadership
 - Research programs and team leadership
 - Research program sustainability (clear research programs)
 - Conference invitations/ chairing/organising etc.
 - Esteem factors and awards
- **capability of the candidate to build collaborations** across research organisations, industry and other disciplines both within Australia and internationally

What to showcase in your fellowship application?

Assessment criteria 2: Project quality and innovation

- **advancing knowledge, practice or policy:** contribution to an important gap in knowledge or significant problem;
- **novelty/originality and innovation** of the proposed research (including any new methods, technologies, theories or ideas that will be developed);
- **clarity of the hypothesis, theories and research questions;**
- **cohesiveness of the project design and implementation plan** (including the appropriateness of the aim, conceptual framework, method, data and/or analyses); and
- **extent to which the research** has the potential to enhance international collaboration.

What to showcase in your fellowship application?

Assessment criteria 3: Benefits

- How beneficial is the new or advanced knowledge resulting from outcomes of the research?
- Clear articulation of the economic, commercial, environmental, social and/or cultural benefits for Australia and international communities; and
- Potential contribution to capacity in the Australian Government priority areas



Assessment criteria: example of ARC Fellowships

Assessment criteria 4: Feasibility and strategic alignment

- ❖ Is the project informed by pilot data? E.g. have proposed instruments tested and validated? Proof of access to participants and recruitment methodologies? Sample size informed by data from pilot studies etc.
- ❖ Budget: cost effectiveness of the research and its value for money;
- ❖ Project supports areas of research strength
- ❖ Research environment: associated systems to support the proposed research, availability of the necessary facilities to conduct the research; internal support and resources (internal buy-ins)
- ❖ Etc.

Track record relative to opportunity

CONTRIBUTION TO THE FIELD OF RESEARCH: an exemplar

Over a relative short career in academia (14 years), Professor Renzaho has **336 publications** including 275 peer-reviewed articles, 4 books, 26 book chapters in prestigious edited collections, 31 commissioned policy briefs, monographs or evaluation reports. His papers have been ***cited 42,362 times***, with an **H-Index of 70**, and ***55 highly cited papers with >100 citations*** (Google Scholar). CI Renzaho has published ***collaboratively with 652 academics (co-authors) from 123 institutions in 145 countries***. He has **attracted \$14.12 million in competitive funding and consultancies**, with **\$10.2 million** from category 1 grants and **\$7.96 million** in the last 5 years.

Track record relative to opportunity: Top 5 publications and why

1. Halliday, J. A., Green, J., Mellor, D., Mutowo, M. P., De Courten, M., & **Renzaho, AMN**. Developing programs for African families, by African families: Engaging African migrant families in Melbourne in health promotion interventions. *Family & Community Health*, 2014; 37(1), 60-73.

- The first ever study in Australia to develop culturally appropriate obesity prevention packages for inclusion in obesity prevention interventions and trials. Developed in collaboration with migrant communities, it led to a **\$1.4M NHMRC project grant (APP1138403)**

2. Polonsky, M. J., Ferdous, A. S., **Renzaho, A. M.**, Waters, N., & McQuilten, Z. (2018). Factors leading to health care exclusion among African refugees in Australia: the case of blood donation. *Journal of Public Policy & Marketing*, 37(2), 306-326.

- An industry project with the Australian Red Cross Blood service, that changed the Blood Services practices regarding collecting information on donor's ethnicity. **It led to LP120200065 and LP200301483 .**

3. Telenta, J., Jones, S. C., Francis, K. L., Polonsky, M. J., Beard, J., & **Renzaho, A. M. (2020)**. Australian lessons for developing and testing a culturally inclusive health promotion campaign. *Health promotion international*, 35(2), 217-231.

- **Part of LP120200065 that developed the intervention.** The Intervention won an NSW Multi-Cultural Health Communication Award in 2105 for its engagement with the African Community.

4. etc.

Track record relative to opportunity

Research and policy translation: an exemplar

Prof Renzaho was one of the chief investigators for a Rapid Check Review which **informed the design of \$4.8 million psychosocial services for refugees funded by NSW Ministry of Health in 2019**. CI Renzaho's research leadership has translated into demonstrable **policy and innovative practice outcomes**: (a) the Australian Refugee Health Model; (b) the Partners in Culturally and Appropriately Aged Care model, (c) changes in the Australian Horizontal Fiscal Equalisation to account for migration in GST distribution to states and territories, (d) the Bi-Dimensional Acculturation model, and (e) the Cultural Inclusion framework in Blood Donation.

He has made witness appearances at public hearings to influence policies including the Senate Select Committee on Health to inquire into and report on health policy as well as the National Inquiry into Children in Immigration Detention.

Track record relative to opportunity

Some exemplars:

Professional and Community engagement: Prof Renzaho is an academic Editor of Plos One (Global Health), member of the Western Sydney University's Human Ethics pool of experts (since 2019), and an editorial board member of ANZJPH (since 2011) as well as Food Security (since 2019). CI Renzaho was a member of the NNHMRC's Postdoctoral Reference Group (2012-2016) and NHMRC Assigners Academy for project grants (2018-2019).

National and international standing: In 2018, Prof Renzaho was ranked 3rd in Australia and 10th in the world as a leading researcher in Global Migration Health. He is ranked in the world's top 2% scientists for both the single years impact -2020 and career long impact categories. CI Renzaho has been on 12 Taskforce/expert panel/advisory groups, delivered 40 conference presentations and 13 keynotes and invited presentations in North America, the European Union, South Asia and the Pacific, and Africa. He is a member of the Academic Board for the "Human Rights, Society and Multi-level Governance" international joint PhD programme (3 European and 2 Australian universities).

Track record relative to opportunity: Some exemplars

Supervision and mentoring: Prof Renzaho has co/supervised to completion 12 PhD students and 9 Masters' students, coproducing 68 publications in the last 10 years. He also supervised four Sri Lankan Public Health Medicine Trainees through the Monash-Sri Lankan Public Health Professional Training Program, who then return to take up positions of leadership in the Sri Lankan health service.

Scientific Awards and Honours: Recipient of an ARC Future Fellowship and a Heart Foundation Career Development Fellowship and a ministerial appointment to the Dental Practice Board of Victoria (2008-2012). Winner of the African Media Australia's award for Academic excellence in 2013, most inspiring research leader (AFROSHINE) in 2019, NSW Multicultural Health Communication Awards (Audio-Visual) in 2015 and the School Research Director's award for research excellence (Western Sydney University)

Pilot and feasibility: Some exemplars

Pilot Studies and Feasibility:

Program development, community mobilisation, and recruitment: **CIs Renzaho and Green** developed and trialled the proposed intervention in Melbourne, Victoria, using the **Analysis Grid for Elements Linked to Obesity (ANGELO) framework** in 5 different workshops that included health professionals **(N=9), parents (N=20) and young people (N=17) from disadvantaged migrant communities.**

- This feasibility study achieved a **78% consent and screening rate**, followed by **100% commencement in the intervention**, and **11.4% intervention attrition**
- The implementation of intervention: The intervention **involved 8 weekly, 2-hour group sessions facilitated by qualified and trained community educators.**
- Attendance was excellent: all parents attended at least 3 sessions, 90% attended 5+, and 54% attended all 8 sessions.
- Those who dropped out stated employment and lack of transport as barriers for attendance.
- **Project impact:** Overall there was a positive change in family functioning and all parenting domains³⁴ and there was a **mean change (mean ± sd) of 0.12 ± 0.61 BMIz at 12 months post-intervention from baseline.** However, while our study was a small before-after design, these findings should be confirmed using a randomised controlled trial.

Pilot and feasibility: Some exemplars



Table 1: Table of the intervention contents

Component	Content	Evidence and trialling in pilots
Developing child confidence & social skills	Positive attention/praise, rewarding positive behaviours, setting clear communication strategies, giving clear directions, peer relations and friendship; and displaying empathy	Evidence ⁴¹ ; and Pilot data ^{8, 9, 34}
Improving family relationships and communication	Parent-child relationship, communicating feelings, family rules/limit setting, effective discipline, positive family time and family meetings; and improving children's communication through role modelling e.g. listening, negotiation, and decision making	Evidence ²³ and Pilot data ^{8, 9, 34}
Managing family stress for a healthy family	How to reduce parenting stress through balancing work and family and priority setting; family mediation and problem solving; family rituals and chores; anger management; and managing pocket money	Evidence ²³ and Pilot data ^{8, 9, 34}
Legal issues	Understanding government policies such as corporal punishment, child abuse and domestic violence, and drugs and alcohol; child's health, safety, and wellbeing; and parents' rights, duties, and responsibilities	Evidence ⁴² and Pilot data ^{8, 9, 34}
Healthy food habits	Ultimate Guide to Healthy Eating: understanding healthy eating; food groups, eating out vs. home cooking, portion sizes, healthy breakfasts, lunches and snacks; positive meal times; eating meals together as a family; and making healthy choices at home and away from home	Pilot data ^{8, 9, 34}
Making healthy meals	Healthy lunchboxes, recipe formulation, and cooking methods	Evidence ⁴³ and Pilot data ^{8, 9, 34}
Smart Shopping	Food labels & marketing, smart choices, supervised supermarket tours	Evidence ¹³ and Pilot data ^{8, 9, 34}
Physical activity	Increasing incidental activity, integrating physical activity in family routine, parents as a role model	Pilot data ^{8, 9, 34}

Now you have an application ready to submit and wait



- I. Make sure every one listed on the application has read it and provided comments and all required data
 - ✓ Attention: some will be very invested and help you a lot, others may not but it does not mean they are not interested in being a chief or associate investigator. **ENSURE YOU HAVE THEIR CONSENT TO BE LISTED IN WRITING (EMAIL)**
- II. Get critical reviews from previous successful applicants for the scheme you are applying for. **IT DOES NOT HURT TO GET FIRST HAND FEEDBACK.** Some universities may sponsor an external review of your application. Check with your boss
- III. Ensure that your submission process from the start to the end is checked for compliance by your internal research office. **THIS IS VERY CRITICAL TO ENSURE YOUR RESEARCH IS NOT MADE INELIGIBLE**
- IV. **REBUTTAL:** Once submitted, you will receive assessor's comments. Address comments not the assessor, be objective and concise, address main points, argue points of differences in opinion or counter criticism etc.
- V. **OUTCOME:** successful? Great! Unsuccessful? do not despair, resubmit (takes 2 to 3 times to be successful)

THANK
YOU (:

Any Question (s)