So you need to fund your research…
Or: the art of asking for money

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Outline

- Why need to ask for money
- Basic principles of asking for money
- Seed grants – usually internal pots of money
- Australian Research Council grants
- National Health and Medical Research Council grants (I won't talk about these)
- Industry collaboration grants
- Industry funded R&D
- Philanthropic grants
- Crowd sourcing funding

Why need to ask for money

- Need resources to fund your work e.g. travel money, research assistant/associate, PhD/Masters student, host visitor, equipment, field work costs, consumables, page charges/open access $ to publish, …
- University / company can fund *some* of this… but increasingly less and less
- We – as researchers, or R&D personnel if in industry – increasingly NEED to "hunt for funding" to support our work
- Highly unlikely to get "money for nothing" (we're not on MTV! ☺)
- There are a lot of challenges to overcome…

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Basic principles of asking for money

- Need a project to "pitch" to funders

- Need to find an appropriate funding source

- Need to prepare your "pitch" for your audience:
  - What are you proposing to do ("Project")
  - Why are you the right person to do it ("Investigators")
  - What are the key outcomes and why important ("Benefit")
  - Is it even possible to do this ("Feasibility")
  - When / how long are you proposing to do it for ("Timeline")
  - What sort of resources do you need ("Budget")

- Need to polish the application / presentation is very important

- Need to follow the funder rules, be on time

- Need to deliver! (unless don't want any $ in future/have to pay it back!)

Common features of most/all grant schemes

- Money to distribute ☺ - some may be "in kind" e.g. access to equipment, data
- A set of funding rules saying what looking for, how to apply, timeline, evaluation criteria that will be applied to applications
- Need a team of researches to do the project – individual, 2-4, up to 50-100 !
  - PhD students should discuss with their supervisors before target any grant…
  - Teams usually a mix of experienced researchers, early career researchers
  - Track record is often critical i.e. successful previous research project outcomes, previous successful grants
  - Need a team with suitable expertise for the project proposed
  - Need a team with sufficient capacity for the project proposed

Common features - assessment

- Panel of people to review – sometimes single person or 2-3 ; up to 30+!

- Assessors – people application sent to for expert review

- Decision makers – sometimes separate to review panel

- Set of criteria used to review the grant e.g. investigators / project quality / likely benefit of project / feasibility of project

- Online submission (nearly all these days), Online review, feedback

- "Success rate" - # successful / # submitted (ARC Laureate is ~10% btw! :-o)

- Sometimes can "rebut" expert review comments for decision making panel

- Grant confirmation (successful) ; spending rules e.g. not on personal things!

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Seed Grants

- Most "internal" organization schemes are to "seed" an idea, help prepare for an external grant application / help make the later more likely to succeed

- Usually a range e.g.
  - Early career academic
  - Industry collaboration
  - Overseas visitor
  - Time on supercomputer
  - Access to large medical datasets
  - PhD Travel fund
  - PhD scholarships ☺

- Sometimes 1 decider, but usually a panel, usually high success rate

- Good "practice" for bigger/harder external grants; usually a short final report

ARC Grants

- Two main schemes:

- Discovery projects – enquiry-driven research – DPs, Early Career (DECRA), Mid-career (Future Fellow), top (Laureate), Centres of Excellence

- Linkage – foster collaboration with industry – LP, Transformation Hubs, Training Centres, Equipment & Infrastructure

- Detailed specifications, strict timelines, panel ("Selection Advisory Committee" / "General Assessors") + expert reviewers ("Detailed Assessors")

- Relatively low success rates e.g. 30% LP, 25% DP, 15% DECRA/FF, ~10% Laureate, ~10% Centres of Excellence

- Fund 2-5 year research projects/programmes (up to 7 for Centres)

- Final report @ end for most ; annual report for bigger ones (CoE, ITRH, ITTC)

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ARC Process (summary!!)

- Eligibility check – have you followed the rules??
- Assigned to two GENERAL Assessors (ARC College members) from Selection Advisory Panel
- General Assessor "Carriage 1" assigns to up to 8 Detailed Assessors – mostly other Australian researchers
- Detailed assessors score/write report
- You write a "rejoinder" – your comments on the assessor comments!
- General assessors discuss, score ; ARC normalises the General assessor scores
- ARC ranks, top/borderline ones discussed at panel meeting in Canberra (now a teleconference for Linkage)
- Panel recommends funding list and amount to fund per year to ARC CEO
- ARC CEO recommends funding to Minister; The Education Minister makes funding decision
- You get the result! (up to 9 months after submitting!)

Industry collaboration grants

- Similar to Linkage but often driven by industry partners
- Co-operative Research Centres –CRCs) – VERY large e.g. $50-$100M for 7-10 years ; large number companies and universities
- CRC-Projects - 2-3 years, $1-$3M – 1-5 companies and 1-3 universities
- Researcher Connect (or whatever called now) – 50/50 funded federal government and company
- Various "special" initiatives e.g. AusCyber – cybersecurity R&D grants
- Typically have to write application with more industrial R&D & outcomes
- Industry usually "wins" the grant and subcontracts university researchers to help do work on it
- Regular reporting common – to company and funder

Industry funded R&D

- Industry directly funds R&D project
- Not really a "grant" at all…
- Have to "pitch" to e.g. CEO, CTO, small R&D team, panel
- Some
  - no strings attached e.g. Google award, Samsung, Facebook, Microsoft Research, …
  - with their own funding rules, timelines etc
- Most
  - the company wants an R&D outcome they can use
  - Negotiated ; no real "success rate" as all are typically case-by-case
  - Often no fixed timeframe, size, rules
- Regular informal and formal reporting of progress common

Philanthropic grants

- An individual, family foundation or corporate foundation funds usually "public good", health, environmental project
  - E.g. Bill & Melinda Gates Foundation
- Often have set of rules, timeline like industry collaboration schemes
- Some are more a negotiated project/funding
- Agree a project with more non-commercial outcomes (mostly)
- Some highly selective i.e. low success rate
- Reporting might be periodic to funder(s) or at the end
- Historically this was the most common funding for much of science and the arts – the "rich donor" ; or rich scientist/artist themselves!

Crowd-sourcing funding

- A relatively new approach

- Pitch via a "crowdfunding" site to 1 or more "investors"

- They

  - Do it because they think its important, or

  - They get some agreed share of the outcome e.g. share of selling outcome invention

- Range from quite modest/small-scale to quite substantial funding

- Not just R&D but development of inventions, services, companies…

- Reporting might be periodic or at the end

Summary

- Need money to fund resources needed for research / R&D
- Need a team, a project idea, a pitch to funders
- Low success rates are common in many schemes – perseverance is an undersold virtue!!
- Often try try try again…
- Government schemes fund either discovery research or support academic/industry collaboration
- Industry schemes and organizations and some crowdfunders want targeted R&D for industry outcomes / share of the IP/$ that results
- Philanthropists, some crowdfunders want often non-economic outcomes