Grant Proposal Writing

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Learning objectives

- At the end of this session
  you should be able to
  - Describe basic tenets of the grant writing process
  - Enumerate features of a good grant proposal
  - Delineate factors that increase the chances of getting funded

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Why is this skill needed?

- An essential part of research career
- Researchers depend on 'grant money' for projects, esp. large
- Skills for convincing funding agency that your ideas are worthy and exciting

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Starting points for a grant proposal

1. Seeking funding for a project in hand
2. Developing a proposal to respond to a funding call

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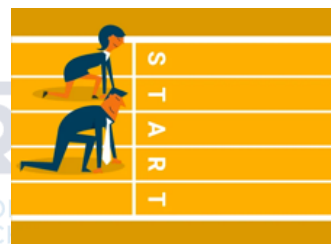
What is a funding call?

- Funding agency asks researchers to submit proposals on a particular topic for a certain amount of money
- Periodic or ad hoc calls
- Synonyms - request for proposal (RFP), call for funding

How to respond to a funding call?

- Researchers have generic proposals ready and keep tracking calls for funding
- Calls usually reach through colleagues or institutions
- Guidelines should be thoroughly read

Steps in responding to a funding call

SECTION II

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Seeking funding for a project in hand

```
[Type of project] → [Find funding agencies] → [Tailor general proposal to call]
                                                        ↓
[You accept or decline] ← [Agency reviews & makes decision] ← [Submit letter of inquiry/ full proposal]
        ↓
[Complete formalities] → [Carry out project] → [Submit report to agency]
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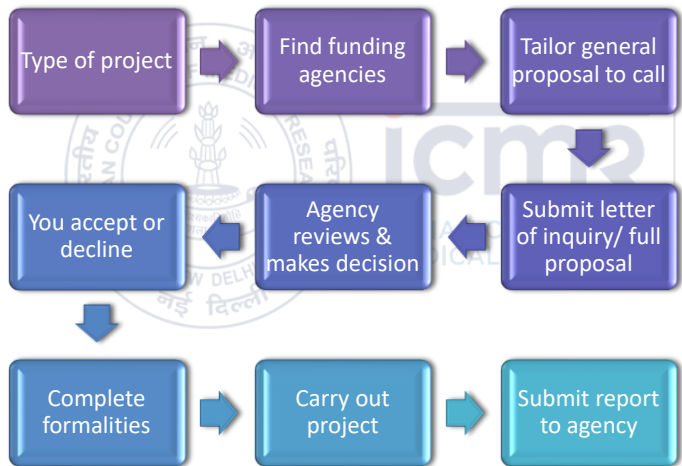
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Type of project

- Is your research
  - Pilot or full-blown research agenda?
  - Thesis or postdoctoral research?
  - Fellowship at an institution that'll support your work?
  - Multi-year clinical project with multiple staff members?

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Type of project

- Refine your topic by asking
  - Why is this topic important?
  - What is the relevance?
  - What are the hypotheses?
  - What are the research methods?
  - Quantitative or qualitative methods or both?
  - Observational/ interventional research?

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Finding funding agencies

- Prepare list of possible agencies
- Funding specific to field
- Match the proposal with priorities of agencies
- Time consuming task
- In the long run yields great benefits

"Even the most appealing proposal in the world is unlikely to succeed if not sent to the right agency"

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Finding funding agencies

- Many sources of information (Database of funding agencies)
- Government Institutions like ICMR, DST, DBT, CSIR
- Most universities have Offices of Research
- Reputable private agencies/NGOs

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Tailoring your proposal

- When writing, assume that you are addressing knowledgeable academic reviewers
- Some questions that reviewers usually ask themselves
  - What is the novelty?
  - Is it worth knowing?
  - How will we know that the conclusions are valid?

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Next steps

- Getting your proposal reviewed by colleagues/experts
- Submission to the agency as per guidelines
- Waiting for the decision

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Next steps

- Accepting/ rejecting from your side
- Administrative formalities (bank details, mandate form)
- Complete the project
- Submit progress/final report as per requirements

Elements of a strong proposal

SECTION III

Develop a general proposal

- Most researchers seek funding from several different agencies

- A good idea to have a general proposal

- Your general proposal should explain your project to a general academic audience
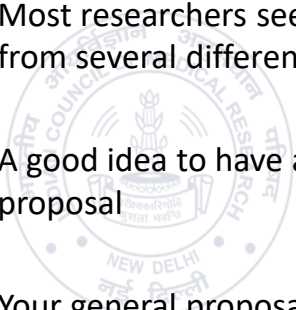
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Organizing your proposal

- Some standard elements
  - Cover letter
  - Title page
  - Abstract
  - Introduction
  - Literature review
  - Project Description
  - **Budget & justification**
  - Timeline
  - References
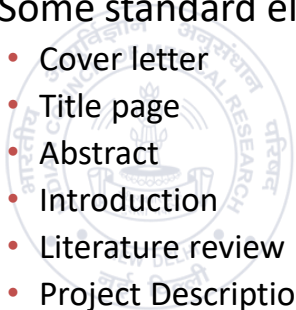
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Preparing the budget

- Meet agency's requirements
- Tabulate in spreadsheet under different heads/categories
- Add unit cost & no. of units, years
- Add justification for items
- Rules of purchase/ recruitment
- Avoid math errors

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Preparing the budget

- Categories
  - Recurring
    - Staff/ personnel
    - Consumables/ supplies
  - Non-recurring
    - Equipment
  - Others (travel, overhead)
- Task based budget

- These categories may differ from agency to agency

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Preparing the budget

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
STAFF (Recurring)						
Subtotal - Staff						
CONSUMABLES (Recurring)						
Subtotal - Consumables						
EQUIPMENT (Non-recurring)						
Subtotal - Equipment						
TRAVEL						
Subtotal - Travel						
Total						

Preparing the budget

- *Staff*
  - Justify in detail
  - Be explicit about the skill sets
  - Budget only for period required
  - Show people who are on regular pay as zero cost
  - Consider outsourcing/ consultancy
  - Most commonly cut item

Preparing the budget

- *Staff*

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
STAFF (Recurring)	Scientist D (Medical)	S/he will function as the Project coordinator. [MD Community medicine; 5 years of experience]	/month	80,000	12	960,000
	Technical Assistant	S/he will manage the IT related issues [Bachelor degree in IT; 2 years experience]	/month	31,000	12	372,000
Subtotal - Staff						1,332,000

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Preparing the budget

- *Equipment*
  - Justify need in detail
  - Be explicit about make and model
  - Use available equipment and show zero cost
  - Add maintenance cost

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Preparing the budget

- *Equipment*

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
EQUIPMENT (Non-recurring)	Laptop (model)	For the office staff	Nos.	50,000	2	100,000
	Statistical software (model)	For analysis of study data	Nos.	100,000	1	100,000
	Workstation furniture	Office establishment	Nos.	12,000	2	24,000
Subtotal - Equipment						224,000

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Preparing the budget

- *Consumables (supplies)*
  - Budget generously
  - Most likely to be accepted
  - Supplies with expiration dates should be evenly spaced
  - Examples - printer ink, syringes, vacutainers, paper, gloves, masks, stationery

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Preparing the budget

- ***Consumables***

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
CONSUMABLES (Recurring)	Office essentials	Files, folder, binders, highlighters, markers, whiteboard, printer cartridges	-	50,000	1	50,000
	Recruitment	Advertisement/ recruitment logistics costs	-	50000	1	50,000
	Meetings	A review committee will meet before the launch	-	25000	1	25,000
Subtotal - Consumables						125,000

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Preparing the budget

- ***Other costs***
  - Travel
  - Consultancy charges
  - Institutional overheads (Telephone, electricity, water, vehicle, space)

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Preparing the budget

- *Other costs*

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
TRAVEL	Travel for project monitoring	Local travel for staff		50,000	1	50,000
Subtotal - Travel						50,000
Institutional overhead (at 2%)						34,620

Preparing the budget

Heads	Item	Justification	Unit	Unit cost	Quantity	Total
STAFF (Recurring)	Scientist D (Medical)	S/he will function as the Project coordinator. [MD Community medicine; 5 years of experience]	/month	80,000	12	960,000
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Subtotal - Staff						1,332,000
EQUIPMENT (Non-recurring)	Laptop (model)	For the office staff	Nos.	50,000	2	100,000
	Statistical software (model)	For analysis of study data	Nos.	100,000	1	100,000
	Workstation furniture	Office establishment	Nos.	12,000	2	24,000
Subtotal - Equipment						224,000
CONSUMABLES (Recurring)	Office essentials	Files, folder, binders, highlighters, markers, whiteboard, printer cartridges	-	50,000	1	50,000
	Recruitment	Advertisement/ recruitment logistics costs	-	50000	1	50,000
	Meetings	A review committee will meet before the launch	-	25000	1	25,000
Subtotal - Consumables						125,000
TRAVEL	Travel for project monitoring	Local travel for staff	-	50,000	1	50,000
Subtotal - Travel						50,000
Institutional overhead (at 2%)						34,620
Grand total						1,765,620

Tying together parts of the proposal

- Establish connections between the parts
- Clearly and explicitly state the connections between your objectives, methodologies, and outcomes/deliverables
- Reduce burden on the reviewers

Funding agencies

SECTION IV

Indian agencies

Government Agencies	Private Agencies
• Indian Council of Medical Research • Department of Science and Technology • Department of Bio-Technology • Council of Scientific and Industrial Research • University Grants Commission • Defence Research and Development Organization	• Lady Tata Memorial Trust • Azim Premji Foundation • Societies for specific conditions like Alzheimer's, Autism, Cancer and others

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ICMR grants

• Extra-mural grants
• Other types
  • MD/MS/DM/MCh/MDS Thesis
  • Post Doctoral Research
  • International Travel
  • Research Workshops

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Who can apply for ICMR grants?

- Regular researchers/scientists in universities, medical colleges, postgraduate institutions, recognized laboratories, NGOs
- Intended to supplement facilities in host institutions

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International agencies

Some selected examples
- Howard Hughes Medical Institute
- National Institutes of Health
- European Union
- The Welcome Trust
- Department for International Development
- Ford Foundation
- Rockefeller Foundation

International funding collaborations require clearance from Health Ministry's Screening Committee

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Database of funding agencies

- India
  - Research & Development funding schemes of Central Government
  - Research Development Office (National Centre for Biological Sciences, Tata Institute of Fundamental Research)
- Others
  - grants.gov
  - healthresearchfunders.org

Additional tips

SECTION V

Beware of conflict of interest!

- Disclose both financial/ non-financial conflict of interest between you and the funder
- Vet your funding agencies
- Be careful of the role of funder (statement disclosing the role of funder in your project)

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Increasing the chances of success

- Read the call thoroughly
- Clarify any queries with the funding agencies a priori
- Strictly follow the application guidelines
- Be realistic in designing the project

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Increasing the chances of success

- Study successful proposals
- Collaborative network
- Multidisciplinary team
- Align with agency's goals
- Establish good track record before going large

Increasing the chances of success

- *Developing the proposal*
  - Start early and leave time for feedback
  - Feedback from a variety of experts
  - Consult statistician
  - Explicit connections between parts of the proposal

Increasing the chances of success

- *Developing the proposal*
  - Solid rationale
  - Highlight knowledge gap & novelty
  - Highlight impact of work in terms of societal benefit
  - Appropriate budget with a strong justification
  - Administrative parts in order

"Developing strong proposals takes time, effort and experience"

Take home messages

- Grant proposal writing is an important skill
- Strong proposals require practice
- Do not despair, if rejected
- Start small, establish track record
- Align with agency's priorities
- Beware of conflicts of interest

Thank you

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