

Building a proposal: purpose, principles, and persuasion



Purpose and persuasion

a research grant application aims to persuade the reviewer of

- the importance of your work
- your ability to do the work
- the high probability of success

and therefore funding the application

Building a proposal – content of your presentation

Key content of your proposal presentation

1. Title

2. Background

3. Hypothesis

4. Objectives

5. Methods

6. Clinical significance

+ one or two additional slides

* Details of preparing a full written proposal are in the handout

1. Title

Needs to be
specific
informative
interesting

we will learn more about this in
“Writing a research paper” later today

2. Background

State of knowledge

Review the state of knowledge

Identify key limits of understanding (scientific and / or clinical)

Explain why these limitations matter

Reasons for your new studies, and their likely impact

Preliminary data - other investigators – what is in the literature

Preliminary data – yours

Likely impact of your investigations

Your relevant experience and access to resources

3. Hypothesis / hypotheses

**Clearly state the hypothesis (singular) or hypotheses (plural)
that you will test**

4. Objectives / specific aims

State the overall goal of your research,
and then write out the individual objectives,
e.g. Objective 1a xxx, Objective 1b yyyyy, Objective 2a zzzz

Be specific, e.g. which research model, system, samples or patient populations will you study

Be logical – all objectives should contribute to the overall goal

Explain how the objectives address your hypothesis / hypotheses

Identify which aspects are innovative

5. Methods

Outline your study design

Explain the rationale for this approach

Distinguish between established methods and your new methods

How will you analyze and interpret the data, include statistical analysis

What are the outcome measures / benchmarks

What is the time plan

n.b. a flow chart can be very useful for the outcomes/benchmarks/time plan

Describe alternative approaches – what will you do if there are limitations?

6. Clinical significance

How will your proposed work fill our gaps in knowledge ?

How will your proposed work affect patient care?

What impact will your proposed work have on other fields of science,
and / or medicine
- what are the “added extras”?

Grant review criteria used by National Institutes of Health

Significance

Importance of the problem, new knowledge that will be gained,
Impact on scientific field or clinical care and prevention

Investigators

Investigator or team training, experience, past productivity

Innovation

Novel concepts, approaches, methods, technologies or interventions

Approach

Conceptual clinical framework, design, feasibility/risk management,
Methods, analytical plan, alternatives, human subjects protection and inclusion

Environment

Supportive scientific environment, unique subject populations,
collaborative arrangements, institutional support

Common reasons for disapproval of grant applications

Lack of new or original idea

Diffuse, superficial or unfocused research plan

Lack of knowledge of published, relevant work

Lack of preliminary data, and /or experience in essential methodologies

Uncertainty concerning the future directions

Questionable reasoning in experimental approach

Absence of an acceptable scientific rationale

Unrealistically large amount of work

Lack of sufficient experimental detail

Uncritical approach

Building a proposal – giving the presentation

Recommendations for giving an excellent oral presentation



How does interpersonal communication work?

non-verbal > verbal > technical content

non-verbal: facial expressions, posture, gestures

verbal: voice – quality, tone and speed

technical: content – words and images

**Non – verbal:
facial expression, posture, gestures**



Establish eye contact

- you can see your audience, they can see you!

Smile

- a powerful non-verbal signal that sends a positive message

Posture

- stand tall and in an open position

Gestures

- gestures can be used for emphasis

Verbal:

Voice – quality, tone and speed

Ensure sufficient volume and clarity

Vary the speed and volume for interest and emphasis

Use pauses as “punctuation”



Handling the questions

1. Encourage the audience to ask questions
2. Be sure you understand the question
3. Respond simply and directly
4. Stay calm
5. Closure



What if you do not know the answer ?

1. Try to make a positive response
2. Give as much of an answer as you can