Crafting Your R01 Proposal like the Pros: 10 Insider Tips Revealed

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Best Regards,
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UTHHealth

Getting started

• Idea/hypothesis to test.
• Important to do/fills a gap in understanding.
• You and your team are the ones to do the work.
• Approaches for each aim—doable and meaningful data to be obtained.
• Work will have impact.

Getting started

• Allow sufficient time—2-3 months.
• Not just writing, but thinking
• Try not to wait until last minute
• Create a schedule and follow it
• Know when to take a break.
Is RO1 mechanism right for you?

- Advanced degree at an appropriate institution.
- Have preliminary data/paper published related to topic.
- Need a longer period of time/bigger budget to accomplish.

Tip one: Determine if the work is HOT!

- Is your area of research hot?
- Really increases your chance of funding

Hot, Hot, Hot

- Look for similar papers
- Look for similar grants
- Find a niche with little information known
Tip 2: Rules, Rules, Rules

- Be sure to pay attention to the format
- Length, human subjects, vertebrate animals, budget
- Consult with your admin people as to their requirements and deadlines.
- Allow time for this—weeks usually

Features of the grant that get noticed/graded

- Hot hypothesis, believable data/papers
- Your quality as a scientist
- The story you tell
- The impact the work will have
- The approaches you will take

Tip 3: Make Specific aims count

- Specific Aims should relate, not depend!
- Each should be done regardless of the others
- Have data for each aim if possible
- Third aim can be more imaginative
Specific Aims

- Only a page, but must contain the essential idea and overall plan.
- Specific aims require honing—requires time.
- I prefer the format—test the hypothesis that....
- Basic strategy is given in each aim in brief, not in detail

Tip 4: Impact, Impact, Impact

- Why the work is important to do
- Why you are the one to do the work
- What the results will mean
- Why results will have IMPACT!!

Impact

- Impact is NOT significance.
- Impact means when the work is done, the results will have great meaning.
- Significance is whether the work is important to do at all.
Tip 5: Highlight Eureka!

- Point out how innovative the work is.
- Do in a separate section and in biosketch
- At end of grant, point it out again.

Innovation

- Hard to judge for most reviewers
- Take the initiative and TELL the reader WHY the work is innovative

Tip 5: Approaches=Score

- Make sure your approaches answer questions and are not just experiments.
- Follow rules of presentation
- Rationale, Experiments, expectations and pitfalls/alternative approaches
Approaches

- Make sure that the reader sees how you are thinking about the problem.
- The actual methods do not need spelling out—but rather the strategy and why it will give you answers.
- Look ahead and make the reader know that you will be able to interpret the experiments planned.
- Spell this out for the reader—let them see your mind.

Tip 6: Highlight your credentials

- Use the personal statement to point out what you have done that makes you perfect for the work.
- Point out the papers that support the work in the grant.

Personal statements

- Each grant needs a different one that is customized.
- Each person on the grant listed as a key person needs a different one.
- References cited need PMCID number not PMID
- Can find PMCID by using a PMID to PMCID converter
Tip 7: Data, Data, Data

- If you show data, make it believable
- Make it BIG
- Don't make the reader work
- ALWAYS interpret the data!
- Biggest mistake made by both new and old investigators!

Interpret data

- If you don’t interpret the data, the reader thinks
  - You don’t know what the data means
  - You are too lazy to tell the reader
  - Your mind is a hasty thing
- All of this makes the reader wary

Tip 8: Writing style matters

- Try to use words sparingly/go over Elements of Style!
- Use ACTION words, but be succinct.
- Channel Mark Twain
  - My letter would have been shorter, but I ran out of time.
Writing style

- Go over and over the grant
- Think about different ways to say the information.
- Make it active style/avoid passive voice

Active voice

Active emphasizes performer of the operation

   Performer-verb-receiver

   We have analyzed the results

Passive voice

Passive voice emphasizes the receiver of the action

   Receiver-verb-performer

   The results were analyzed (by us)
Awkward passive

Hedging—when the receiver of the action is an “it”

It is concluded that squirrels hide nuts in pots.

Dangling—verb at end of sentence.

To investigate mechanism, cells were compared.
To investigate mechanism, we compared cells.

A brilliant example from 1953

* We wish to suggest a structure for the salt of deoxyribose nucleic acid

* In this paper, a structure is suggested for the salt of deoxyribose nucleic acid

* Which sounds like a better sell?
* Opening sentence of Watson and Cricks classic paper.

Tip 9: Special considerations

* You must state if you use human/animals in the work

* AND you must have a description

* For human work—need an enrolment table—this means you know how many people you will use
* For mouse work—need to tell the reader how many animals you will use and their purpose—relate to experiments proposed.
Special considerations

- Must tell reader if the work involves select agents.
  www.selectagents.gov

If there is biohazardous material to be used/generated need to tell the reader about precautions to be taken.

Special considerations

- Data sharing plan—this is how you will deciminate the information (usually writing papers)
- More applicable for bigger grants/more players.

Tip 10: Go over, then let it go

- Go back over the grant.
- Ask others to read it
- Respond to feedback
- Give yourself enough time to change
Go over it again

- This is really why you need a lot of time.
- Not many can keep going on one thing for weeks/months—have other responsibilities.
- Need time to get away from it, to see in a new light
- This won't happen if you are pressed for time.

Psyche yourself up

- Think of writing this RoI as time spent thinking about the work you want to do.
- Try to put your work/ideas into context with the field.
- All learning has pay—offs—may not be immediate, but eventual.

Give yourself a break

- When it's submitted, get away from it for awhile.
- This will help you deal with the critique when you get it back.
- Do not expect to be funded the first time.
- Do not be intimidated—keep your eyes on the prize