

# Research Proposal (10 pages, double-spaced)

- Background
- Specific Aims
- Significance
- Innovation
- Approach

# Background

- Scientific context
  - Disease(s) or scientific question(s) to answer
  - Pathway(s) and/or molecular target(s)
  - Current challenges, issues, and status
  - Available solution(s) and technology(ies)
  - 1-2 pages
  - May include figure(s) and/or scheme(s) for illustration
    - Include citation if needed

# Specific Aims

- Research goals
  - What will be accomplished when completing the proposed work
- Typically, 2-3 specific aims
- Interdependent or independent
- A single sentence for each individual aim, followed by brief elaboration of what will be carried out for this aim
  - For example, aim 1: generation of an anti-ABC monoclonal antibody. ....(use 3-5 sentences to explain how the monoclonal antibody will be generated in this aim).
- Up to 1 page

# Significance

- A concise statement to articulate why this proposed research work would be important
- Highlight current limitations or gaps
- Lay out the expected findings or products
- Explain potential impact
- Half or 1 page

# Innovation

- Statement of why this proposal is original and creative
- Conceptually and/or technically
  - For example, a combination strategy? identification of novel pathways or therapeutic targets? development of new technologies?
- Need to systematically review reported prior work to determine how the proposed work is innovative
- Be concise
- Half page

# Approach

- A detailed research plan organized based on specific aims
- Can be structured by experimental plans for aim 1, aim 2, and aim 3, respectively; or the workflow of proposed research
- Use subsections to describe planned individual research experiments/assays/activities
  - For example, aim 1A: molecular cloning; aim 1B: expression and purification of fusion protein; aim 1C: characterization of fusion protein
- Be thoughtful and use schemes and figures for illustration
- Include a subsection on “expected results, potential issues, and alternative approaches”
- 5-6 pages

# References

- Include proper citation for text, figure, and scheme
- Not in the 10-page limit
- Listed numerically in the order they are cited in the text
- All authors should be included in reference lists unless there are more than six (6), in which case only the first three (3) authors should be given, followed by 'et al'
- Include article title, journal name, publication year, volume number, and page number