

FDSC 497A: Grant Proposal

Important Deadlines

Sept. 2	Two specific aims
Sept. 9	First half of grant (up to specific aims)
Sept. 16	First draft for peer review
Sept. 23	Peer reviews
Sept. 30	Final written submission / Oral presentation

Objectives

1. Convince reviewers that your research is important and worth funding!
2. Understand and explain the importance of your research – how does your research fit into “the big picture”?

Examples of the big picture: Food quality, food/consumer safety, human health – “By understanding x, we will be able to better to improve y”

Guidelines

General

- 1-page written, not including figures or references
- Up to 1 figure, supplementary to your ideas shared in the written portion (ex. a flow diagram to explain experimental design)
- Numbered references within the text.
Hint: Making your references ^{Superscript} saves a ton of space!
- Be organized – headings, clear paragraphs, easy to read

Finding “Your Voice”

- Be clear about how your research impacts the field
- Be excited about your research

Layout

Title	Catchy is best!	
Broad Introduction	3-4 sentences	Introduce the general topic
Present the Problem	2-3 sentences	What problem do you aim to solve?
Background	3-4 sentences	Share some supporting information about your research question. What do we already know?
Hypothesis	1-2 sentences	What do you expect to happen?
Specific Aims (2)	1-2 sentences each	What are you going to do to test your hypothesis?
Approach/Research Plan	6-7 sentences	What methods are you going to use? How will you analyze your data and what will your results mean?
Challenges and Pitfalls	2-3 sentences	What are some problems you might encounter? How will you work around them to complete your project anyways?
Impact and Future Directions	1-2 sentences	Bring everything back to your main point – how does this tie into the big picture? Upon success of this project, what will you do next?
Training	1-2 sentences	What will you get out this experience – as a student, as a researcher, as a future professional in the field of food science?
Budget Justification	1-2 sentences	How will you use \$500? What materials do you need?

Grant Review

We will be reviewing each others' grants in the format of a Study Section:

- Each grant will be read by two students – a primary and a secondary reviewer
- The primary reviewer will present the grant to the study section (i.e. the rest of the class) and give their “expert” opinion of it to the group
- The secondary reviewer will follow up with a brief review/opinion of the same grant
- The entire group, based on the primary and secondary reviewers, will decide whether or not a grant will be funded

Reviewer Criteria

Significance Will the study move the field forward? How? Does it address an important problem? What will the effect of these studies be on concepts, methods, technologies, treatments or services in the field?

Approach Are the experiments you propose sound and technically feasible? Does the applicant acknowledge potential problem areas and consider alternative tactics?

Innovation Are your ideas creative? Is your approach novel?

Investigator and Environment Can you accomplish your aims, given your training, resources and collaborations you describe? Will you benefit from being awarded the grant?

Additional Tips

1. You might be writing to someone who has no idea what you're talking about. Grants should provide a clear and concise project description that reviewers unfamiliar with the subject area can understand. Avoid using technical terms that will only be understood by individuals in the field. When using technical terms, try to briefly explain the meaning.
2. Have someone proofread your work. If your mentor and labmates don't understand it, neither will reviewers. Have friends from outside of your field read it too – if they understand, so will your reviewers.
3. Grammar counts! Poor grammar and spelling errors attract negative attention by pulling reviewers out of “the zone” when they're reading.
4. Make sure you're measuring what you want to be measuring. Be familiar with your methods and think specifically about what they're used for and how that relates to your research question.
5. Writing so little can be challenging. It might help to write out everything you want to say first and then editing it down.

The reviewers will rank the grant according to the following form – consider each aspect as you write your grant.

FDSC 497A Grant Review Form

1 = best 10 = worst

Significance: ____ / 10

Innovation: ____ / 10

Approach: ____ / 10

Investigator/Environment: ____ / 10

OVERALL IMPACT

____ / 40

Reviewers will provide an overall impact score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following **3 scored review** criteria. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

Overall Impact Write a paragraph that concisely answers the following questions...

1. What does the application propose to do?
2. What is the significance of the proposed work, i.e. what will we learn from it?
3. What is the potential impact of the proposed work to the field if the aims were to be completed?
4. How do strengths and weaknesses from the other criteria (investigator, innovation, approach and environment) ENHANCE and/or DETRACT from realizing this potential?) *Any scores of 3 or higher MUST have weaknesses articulated.*

SCORED REVIEW CRITERIA

Reviewers will consider each of the three review criteria below in the determination of scientific and technical merit, and give a separate score for each.

1. **Significance** *If successful, what is the impact of the work to this field? What is the impact of this work to the rest of the world? Where does this all fit in to "the big picture"?*

Score: __ / 10

Strengths

•

Weaknesses

•

2. **Innovation** *Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?*

Score: __ / 10

Strengths

•

Weaknesses

•

3. **Approach** *Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed?*

Score: __ / 10

Strengths

-

Weaknesses

-

4. **Environment** *Do the described research facilities feature the necessary items to achieve the goals of this project? Does the writer have the background, capability and resources/support to complete this research?*

Score: __ / 10

Strengths

-

Weaknesses

-